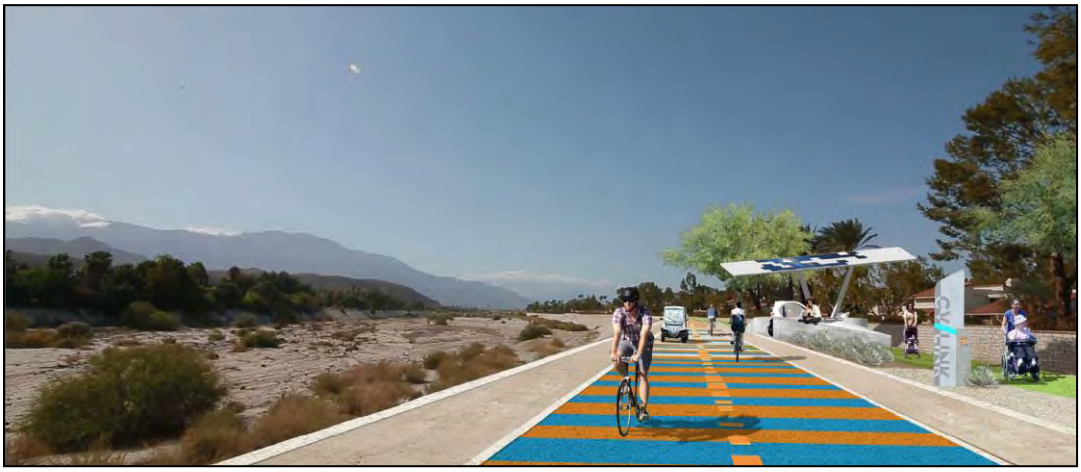
CV Link Project

RIVERSIDE COUNTY, CALIFORNIA
District 8-Riv-CVAG
Federal Project Number: ATPL 6164(022)

Environmental Assessment



Prepared by the
State of California Department of Transportation
And Coachella Valley Association of Governments

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

December 2017

General Information about this Document

What's in this document:
The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), in cooperation with Coachella Valley Association of Governments (CVAG), has prepared this Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Riverside County, California. The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:
- Please read this document.
- Additional copies of this document, and the related technical studies, are available for review at Caltrans, District 8, 464 W. Fourth Street, 6th Floor, MS 760, San Bernardino, CA 92401, CVAG offices, 73710 Fred Waring Drive, Palm Desert, CA 92260, and two libraries; Cathedral City Library, 33520 Date Palm Drive, Cathedral City, CA 92234 and La Quinta Library, 78275 Calle Tampico, La Quinta, CA 92253.
- This document may be downloaded at the following website (www.cvag.org).
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to CVAG offices, 73710 Fred Waring Drive, Palm Desert, CA 92260, or by e-mail to mmagana@cvag.org, by the deadline which is January 29, 2018 by 5:00 p.m.

What happens next:
After comments are received from the public and reviewing agencies, the Department, as assigned by the FHWA, and in cooperation with CVAG may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, the Department and/or CVAG could design and construct all or part of the project.

Alternative formats:
The document can also be obtained in alternative formats, Caltrans' District California Relay Service TTY number (http://www.dot.ca.gov/tty.htm) or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

SCH# 2013111050
08-Riv-CVAG
FPN: ATPL 6164(022)

CV Link Integrated Multi-modal Trail Project in Coachella Valley from the city of Palm Springs to the city of Coachella

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to:
(Federal) 42 USC 4332(2)(C) and 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation
and
Coachella Valley Association of Governments

12-21-2017
Date of Approval

for: Benella Cloud
David Bricker
Deputy/District Director, District 8
Division of Environmental Planning
California Department of Transportation
NEPA Lead Agency

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CV Link Project
Federal Project Number: ATPL 6164(022)

RIVERSIDE COUNTY, CALIFORNIA
Coachella Valley

Draft Environmental Assessment

TABLE OF CONTENTS

List of Exhibits

List of Figures

List of Tables

List of Charts

List of Appendices

Chapter 1 – Proposed Project

1-0 NEPA ASSIGNMENT

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

1-1 INTRODUCTION

The proposed CV Link project will enhance connectivity between major employment, residential, recreational, and institutional centers throughout the valley, while promoting the use of alternative modes of transportation. In May of 2012, economist Dr. John Husing completed a study on CV Link, previously referred to as Parkway 1e11, determining that the proposed corridor would have profound impacts on the Coachella Valley region, including the local economy and valley residents[1]. Economic benefits include, but are not limited to, tourism, increased business and residential values within ½ mile, gasoline savings, construction projects, and reduced medical costs from reduced obesity and other health issues.

The Coachella Valley Association of Governments (CVAG) in Riverside County, California has prepared plans for CV Link Project, a 49± mile multi-modal transportation path that will extend from the City of Palm Springs on the west to the City of Coachella on the east, in the Coachella Valley in Riverside County. The path is generally proposed along the levees of various watercourses and on local streets. Exhibits 1 and 2 show project location and vicinity maps. Please see Appendix D: Project Planning Area Maps for a comprehensive mapping of all CV Link alternatives and alignment variations extending from Palm Springs to Coachella.

This project is included in the 2017 Federal Statewide Transportation Improvement Program (FSTIP) and is proposed for funding from the NCN25 program (Non-Capacity Improvements: Bicycle and Pedestrian Facilities – New).

Project Terminology

- Project "**Alternatives"** consider potentially feasible project options that meet most or all of the objectives of the Project Alternatives, and avoid or substantially reduce the impacts of the Project Alternatives. Three project alternatives are further discussed in this document.
- "**Route**" is the totality of the project, from Palm Springs in the west to Coachella in the east.
- The route includes "**alignment variations**" at four locations along the Route. Alignments or alignment variations are multiple options possible within the Route depicted in the CV Link

[1] "*Economic Impact of The Parkway 1e11*" prepared by John Husing, 2012.

Conceptual Master Plan. For example, an alignment may be depicted to occur at the top of a levee and on the wash bottom at the same location. These alignment variations are discrete and are discussed individually where their impacts may differ on any particular environmental issue area.

- Within each alignment, there are "**segments**." Segments are subsections of an alignment called out in the CV Link Conceptual Master Plan.
- "**Terminus**" or "**termini**" are the ends of the route, and also include locations on the west and east boundaries of Rancho Mirage where the route would end, because Rancho Mirage is not part of the Proposed Project Alternative. Under Alternative 1, termini are also proposed on the west and east boundary of Indian Wells, because it is not included in Alternative 1.

1-2 PURPOSE AND NEED

Purpose

The Purpose of the project is to address the lack of integrated multi-modal transportation facilities from the North end of the City of Palm Springs to the City of Coachella within Coachella Valley. CV Link will enhance connectivity between major employment, residential, recreational, and institutional centers throughout the valley, while facilitating and promoting the use of alternative modes of transportation, including walking, bicycles, mobility assistance devices, and low-speed electric vehicles (LSEVs). Low-speed electric vehicles include golf carts and neighborhood electric vehicles.

The following transportation related goals and objectives are proposed and considered for the design of the project alternatives:

- Create a regional multi-modal transportation facility that interconnects the highest intensity land use corridor in the Coachella Valley with neighborhoods, schools, parks, tourist destinations, retail centers, high density residential development, and employment centers, to enhance community livability and cohesiveness.

- Limit conflicts between motor vehicle traffic, pedestrians and bicyclists, reduce injuries and fatalities, and create a pleasant user experience by providing grade-separated crossings (bridges and undercrossings) of major roadways to the greatest extent possible.

- Support "safe routes to schools" efforts by providing connections to K-12 schools in three school districts and to higher education opportunities.

CV Link is consistent with the above transportation goals because the project implements important federal transportation plans as "Complete Streets", which serve to enhance roadway access to and use by all modes of transportation, including pedestrian, bicyclists and LSEVs. Not only does the project support mobility, it will increase user safety by creating an interface between automobiles and alternative modes of transportation. The project is considered achievable and a reasonable expenditure of public funds because CV Link has been developed within the framework of local and regional transportation planning and policy that supports alternative modes of transportation and safety. The project will also encourage necessary modal interrelationships and system linkages, as further discussed below.

Need

Consistent with the transportation goals and objectives above, the primary need of the project is to encourage modal interrelationships and system linkages throughout the Coachella Valley. Currently, much of the multi-modal path network in the project area is disjointed and does not provide continuous travel between communities. Existing off-street paths are generally dirt and are often fragmented by discontinuities, vegetation, curbs, and streets. CV Link will provide the cohesive multi-modal network the

Valley currently lacks. The following topics further discuss the correlation between CV Link, and modal interrelationships and system linkages:

a. Project interface with airports, rail, ports, and mass transit facilities

The project will have no direct interface with airports, rail, ports, or mass transit facilities. Portions of CV Link will interface with existing roadways that are frequently used for SunLine Transit Agency's bus routes. However, the CV Link corridor will not disrupt existing transit routes.

b. Connecting transportation link

CV Link is intended to facilitate safer, more attractive, and economically thriving non-motorized and low-speed electric vehicle linkages for residents and visitors throughout the Coachella Valley. In this regard, the project provides alternative modes of transportation and routes of access between such uses as home, school, recreation, employment, and commercial services.

c. Existing transportation system

CV Link fits into the existing transportation system by correcting existing multi-modal deficiencies and enhancing the multi-modal connectivity in the valley. To the extent possible, CV Link will be constructed on top of levees and at the top of stormwater channel slopes. Grade-separated crossings (bridges or undercrossings) of major roadways shall be provided. In areas where the Whitewater corridor is inaccessible, on-street routes will be used. On-street segments will generally provide a higher level of protection than conventional LSEV/bike lanes. Routes are to be separated from roadways via curbs and planted buffers, similar to cycle track designs.

In addition, the project is expected to contribute to reductions in motor vehicle congestion along local roadways, including State Highway 111 - the valley's principal motorized connector route. It should be noted that only that portion of Highway 111 within the limits of CV Link located in north Palm Springs and north of Tramway Road is under Caltrans jurisdiction, that balance having been relinquished to local jurisdictions. The associated reductions in vehicle miles traveled will also reduce pollutant emissions and result in air quality improvements. The project will enhance the valley's active transportation network and also provide new health and recreational opportunities for pathway users.

CV Link will provide additional capacity for pedestrians and bicyclists to use as opposed to being on the roadway with traffic. This will provide a safer pathway where pedestrians and bicyclists will have to share the path with traffic. Even the electric vehicles that will use CV Link will have their own dedicated path so as not to mix with pedestrians.

In summary, CVAG and its member jurisdictions have identified a substantial need for cohesive multi-modal transportation facilities that maximizes safety, convenience, functionality and attractiveness of use. CV Link is a reasonable expenditure of public funds because it will provide necessary upgrades to the currently deficient multi-modal connectivity and supports diversified modes of transportation in the valley. This need for a backbone multi-modal facility that can serve as the core for both local and regional access has been assessed in the CVAG Active Transportation Plan. A multi-modal facility of the scale and route proposed by CV Link is both achievable and essential if alternative modes of transportation are to gain greater use in the planning area.

1-3 PROJECT DESCRIPTION

The project is located in the Coachella Valley and extends 49± miles across eight (8) municipalities, unincorporated county lands, and reservation land of three (3) Native American Tribes. All alignments analyzed total 64.34± miles in length. The estimated cost of the project is $100 million. Currently the project area lacks multi-modal connectivity throughout the valley and access between such uses as home, school, recreation, employment, and commercial services. The purpose of the project is to address this lack of integrated multi-modal access throughout the valley and enhance the active transportation network from the City of Palm Springs to the City of Coachella. Generally, it will feature a broad paved path for LSEVs and bicycles, and softer-surface narrower paths for pedestrians.

The CV Link route largely follows and is to be built primarily atop the embankments and levees of the region's principal watercourses, including Whitewater Floodplain, Tahquitz Creek, Chino Creek, and the Whitewater and Coachella Valley Stormwater Channels. In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues.

To the extent possible, CV Link will be constructed on service roads atop flood control levees of Tahquitz Creek, the Whitewater River Stormwater Channel (WWR) and the Coachella Valley Stormwater Channel (CVSC). Grade-separated crossings (bridges or under-crossings) of major roadways are also proposed. In areas where these major drainage corridors are inaccessible, on-street routes are proposed. Route alignments using the street network are considered in challenging areas and will provide options for near and long-term implementation.

CV Link will also incorporate and expand the Tahquitz Creek Trail in Palm Springs between South Palm Canyon Drive and the Whitewater Channel. The western termini are at Highway 111 (North Palm Canyon Drive) in northern Palm Springs (the Palm Springs Visitor Center at Tramway Road – access point for the Aerial Tram) and at South Palm Canyon Drive in central Palm Springs (providing access to adjacent commercial services and to Downtown Palm Springs, as well as the Tahquitz Canyon Visitor Center. (See exhibit 15).

The eastern terminus of the Project is at Airport Boulevard (Ave 56) and the Coachella Valley Stormwater Channel (CVSC) in the City of Coachella and the unincorporated community of Thermal (See exhibit 16). Please see Appendix D: Project Planning Area Maps for a comprehensive mapping of all CV Link alignments extending from Palm Springs to Coachella, including those planned for the cities of Rancho Mirage and Indian Wells.

<u>CV Link Design Overview</u>

A multi-modal transportation facility along the Coachella Valley's major drainages has been reflected in the planning documents of Coachella Valley cities and the County for decades. The Valley's stormwater channels have been viewed as a natural location for a facility of this type but planning for a CV Link-like facility has been frustrated by the challenges of concurrent channel management and maintenance, existing in-channel development, and property ownership patterns.

The overall CV Link design optimizes the use of channel alignments and provides a variety of on-street and existing facilities to provide continuous routes (see exhibits 3-14). CV Link has been designed to accommodate the widest possible range of users, including pedestrians, bicyclists, mobility device users (wheelchairs and electric scooters), and Low Speed Electric Vehicles (LSEVs). Where built along drainage channels, Project design also makes provision for Link maintenance, and for channel maintenance.

To address the challenges associated with crossing major roadways along the CV Link Route, the design provides for carefully conceived at-grade crossings, as well as roadway undercrossings (at channels)

and overcrossings (bridges) (see exhibits 3-14). These components of project design, described in detail in Section 2, maximize travel flow and provide an enhanced user experience, which also avoids, minimizes and mitigates for potential conflicts between CV Link users and motor vehicle traffic. Link facilities will use color schemes, signage, route markers and other elements to facilitate way-finding and maximizing Link user safety on public streets.

CV Link is an innovative transportation project to construct, operate and maintain a valley-wide, multimodal facility between the cities of Palms Springs and the City of Coachella. CV Link is expected to provide significant environmental, health, wellness and economic benefits to the entire Coachella Valley and surrounding unincorporated areas. It will "link" the communities of the Coachella Valley with an alternative transportation corridor, providing residents and visitors the option to safely travel by foot, bike, mobility device, or low-speed electric vehicle, instead of by automobile.

Route Alignment and Access

The Route alignment generally extends along the levees of Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. Some segments extend into the channel bottoms, and others share road rights-of-way in close proximity to the channels, to provide direct access to recreational, institutional, and commercial venues.

Preliminary plans provide for a total of forty-seven (47) designated access points along the length of the pathway, including: 20 regional access points at central gathering places; 12 local access points at parks and community facilities; 5 commercial access points serving high-volume commercial corridors; and 10 neighborhood access points (some of which will be gated) providing access to/from neighborhoods adjacent to the pathway. An additional twenty-six (26) at-grade roadway crossings are planned to provide more access. Grade-separated crossings (bridges and undercrossings) of major roadways will be provided where necessary. (See exhibit 17).

Permitted Uses

CV Link will accommodate a variety of alternative modes of transportation, including pedestrians, bicycles, wheelchairs, electric mobility devices, and LSEVs. Portions will also be constructed to accommodate levee maintenance vehicles and emergency response vehicles.

Pathway Design

Wherever possible, CV Link will be a dual path system that includes a path for faster modes of travel, such as bicycles and LSEVs, and a separate path for slower modes, including pedestrians. Path widths will vary depending upon right-of-way availability and terrain. A range of surface materials have been evaluated for their durability, cost, aesthetics, and functionality, and materials may vary with location and purpose.

Shade structures, restrooms, drinking fountains, signage, street furniture, electric vehicle charging stations, and other accessory features will be built to support the needs of travelers. Landscaping and security measures, including fencing, barriers, lighting, and emergency access, will be integrated into project design. The pathway will also incorporate informational kiosks and public art at appropriate locations, particularly at important access and intersection points to assist users with way-finding. Drainage improvements will be installed, and access for emergency, utility, and channel maintenance vehicles will be provided, where necessary.

CV Link is designed to serve as the spine for an alternative transportation network that will ultimately interconnect diverse parts of the Coachella Valley. The list of jurisdictions the CV Link Route will pass through are provided below in Table 1-1. Note that Native American lands quantified in the following table are also included in municipal boundaries (see exhibit 22); therefore the total exceeds 100%.

Table 1-1
CV Link Mileage within Each Jurisdiction

Jurisdiction	Route Linear Mileage (Approx.)
City of Palm Springs	15.3
Agua Caliente Band of Cahuilla Indians	(2.88)
City of Cathedral City	5.18
City of Rancho Mirage[1]	(5.25)
City of Palm Desert	4.54
City of Indian Wells	3.54
City of La Quinta	2.1
City of Indio	5.9
Cabazon Band of Mission Indians	(1.36)
Twenty-Nine Palms Band of Mission Indians	(0.45)
City of Coachella	5.1
County of Riverside	2.4
Total Mileage:	49.31±

Source: Table 10: List of Segments and Lengths, "CV Link Master Plan," CVAG, February 2016, as amended.
Note: Native American lands included in municipal numbers. Portions of State Highway 111 (within the limits of "CV Link"), from 0.5 mile east of Golf Club Drive in Palm Springs to Airport Boulevard in Coachella have been relinquished to the local communities and are no longer under the jurisdiction of Caltrans.
[1] Limited to "Alternative 2: All Cities.

The CV Link Route follows the course of Chino Wash, the Whitewater River flood plain, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel as they extend through the Valley (see exhibits 3-14). More specifically, the channel route extends from the intersection of Chino Wash and State Highway 111 (also known as North Palm Canyon Drive) in Palm Springs on the west, to the intersection of the Coachella Valley Stormwater Channel and Airport Boulevard in Coachella on the east. It also includes a westerly extension along the existing Tahquitz Creek Trail in Palm Springs, from South Palm Canyon Drive on the west to the Whitewater River Stormwater Channel on the east. (see exhibit 6).

RIVERSIDE COUNTY

N

07.25.16

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CV Link Project
Regional Location Map
Coachella Valley
Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit

1

Source: Google Earth, 2016

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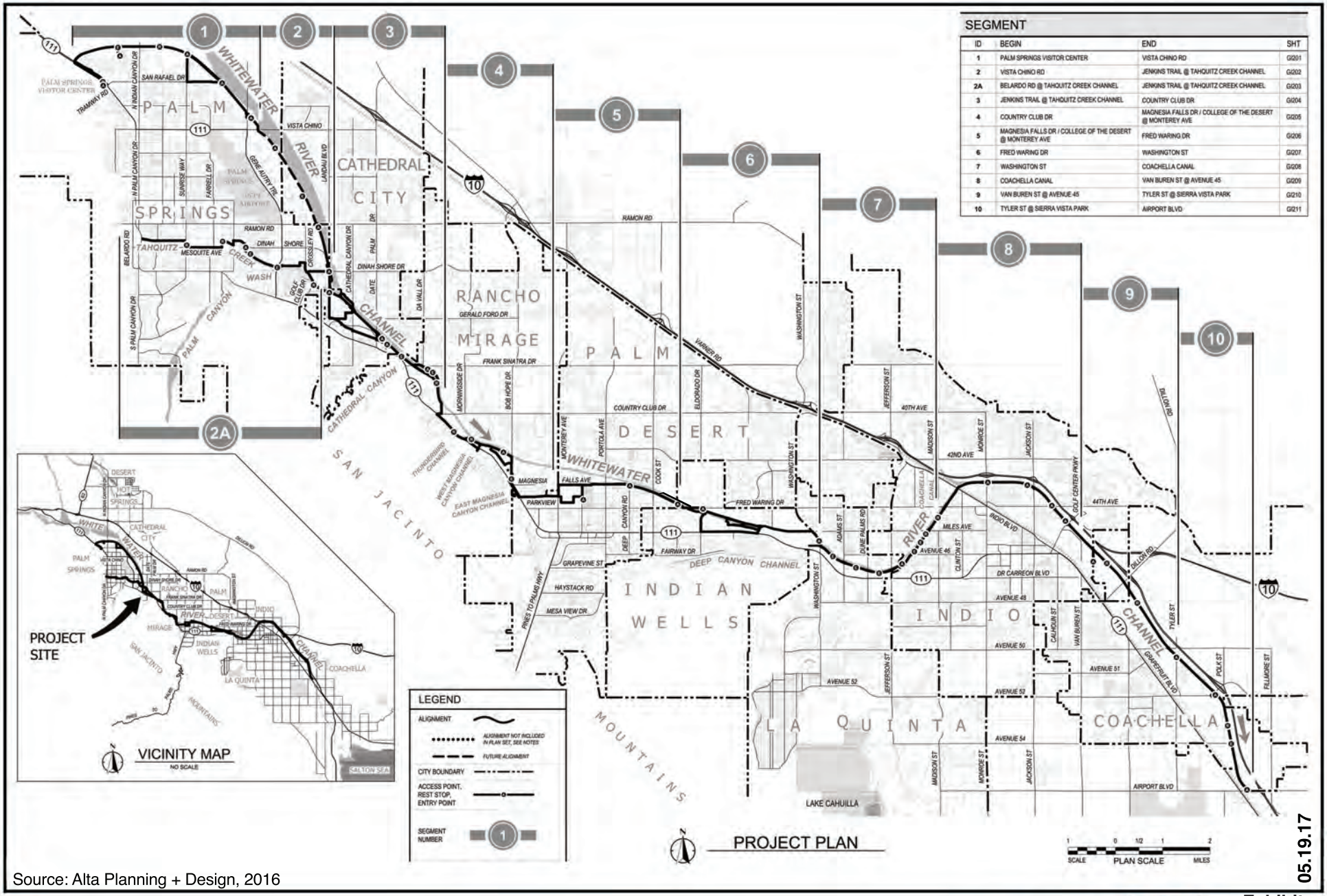
CV Link Project
Project Vicinity Map
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
2



Source: Alta Planning + Design, 2016

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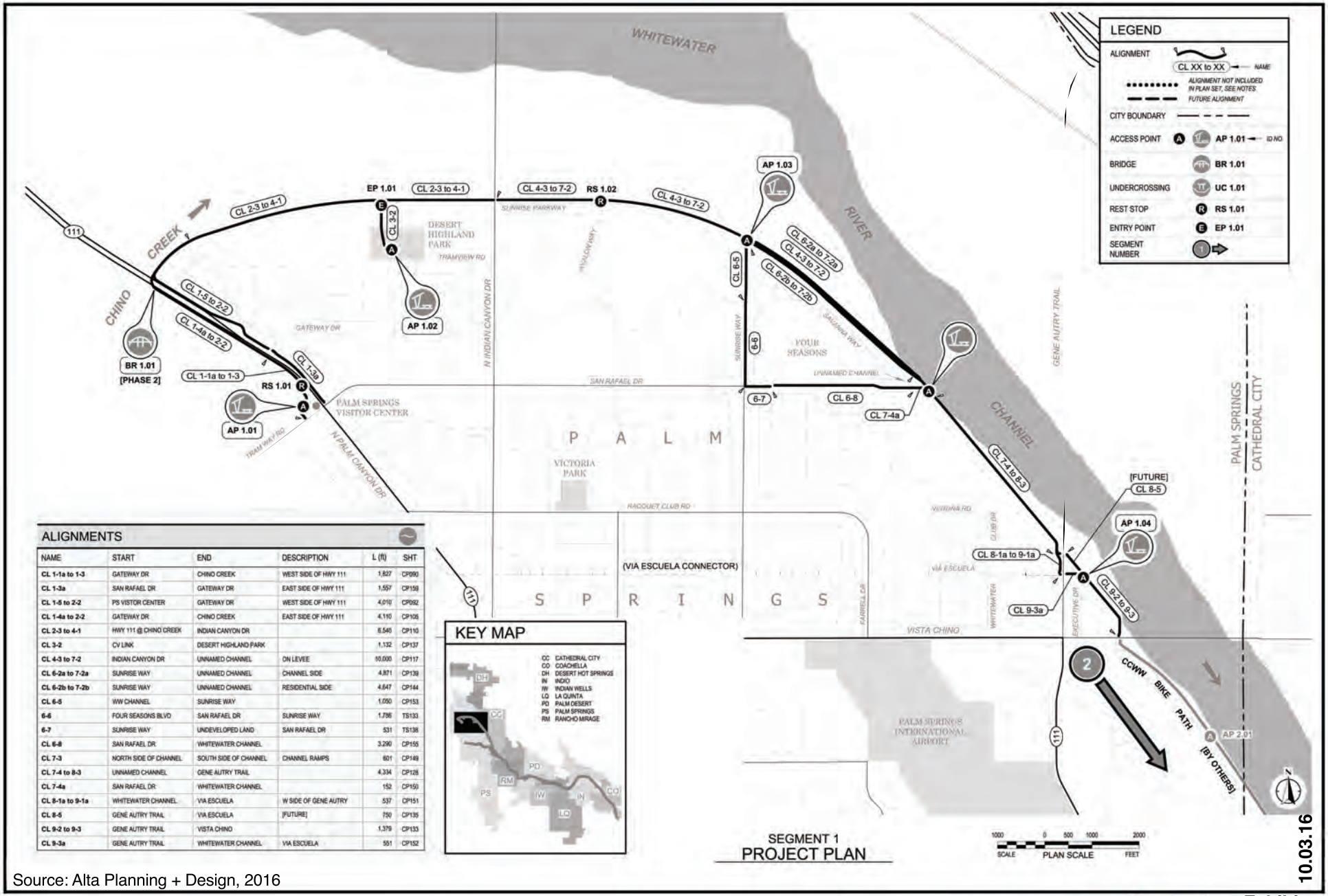
CV Link Project
Project Alignment Index
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
3



Source: Alta Planning + Design, 2016

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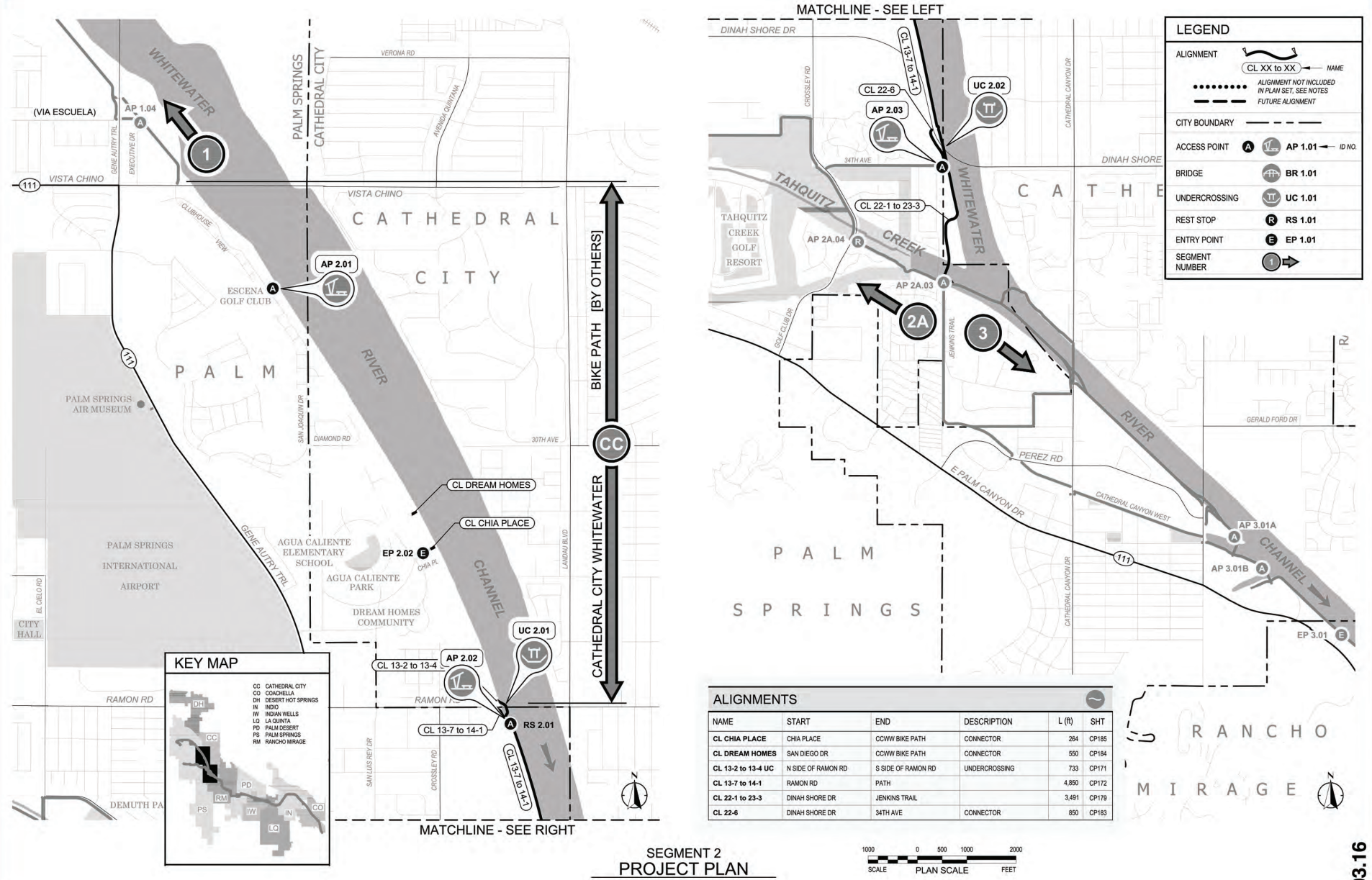
CV Link Project
Project Segment 1
Coachella Valley Association of Governments

CV/LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
4



Source: Alta Planning + Design, 2016

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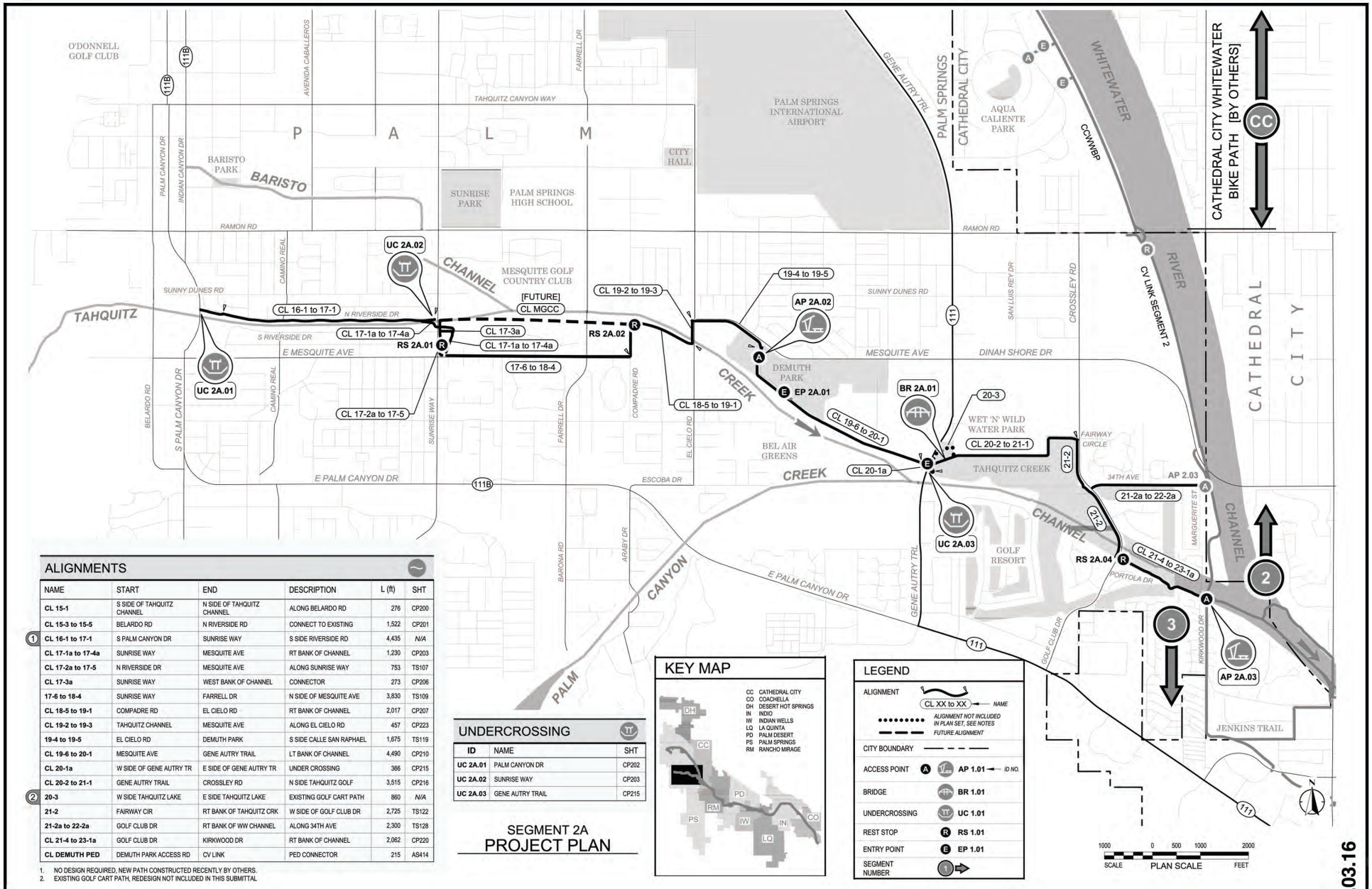
CV Link Project
Project Segment 2
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
5



ALIGNMENTS

	NAME	START	END	DESCRIPTION	L (ft)	SHT
	CL 15-1	S SIDE OF TAHQUITZ CHANNEL	N SIDE OF TAHQUITZ CHANNEL	ALONG BELARDO RD	276	CP200
	CL 15-3 to 15-5	BELARDO RD	N RIVERSIDE RD	CONNECT TO EXISTING	1,522	CP201
1	CL 16-1 to 17-1	S PALM CANYON DR	SUNRISE WAY	S SIDE RIVERSIDE RD	4,435	N/A
	CL 17-1a to 17-4a	SUNRISE WAY	MESQUITE AVE	RT BANK OF CHANNEL	1,230	CP203
	CL 17-2a to 17-5	N RIVERSIDE DR	MESQUITE AVE	ALONG SUNRISE WAY	753	TS107
	CL 17-3a	SUNRISE WAY	WEST BANK OF CHANNEL	CONNECTOR	273	CP206
	17-6 to 18-4	SUNRISE WAY	FARRELL DR	N SIDE OF MESQUITE AVE	3,830	TS109
	CL 18-5 to 19-1	COMPADRE RD	EL CIELO RD	RT BANK OF CHANNEL	2,017	CP207
	CL 19-2 to 19-3	TAHQUITZ CHANNEL	MESQUITE AVE	ALONG EL CIELO RD	457	CP223
	19-4 to 19-5	EL CIELO RD	DEMUTH PARK	S SIDE CALLE SAN RAPHAEL	1,675	TS119
	CL 19-6 to 20-1	MESQUITE AVE	GENE AUTRY TRAIL	LT BANK OF CHANNEL	4,490	CP210
	CL 20-1a	W SIDE OF GENE AUTRY TR	E SIDE OF GENE AUTRY TR	UNDER CROSSING	366	CP215
	CL 20-2 to 21-1	GENE AUTRY TRAIL	CROSSLEY RD	N SIDE TAHQUITZ GOLF	3,515	CP216
2	20-3	W SIDE TAHQUITZ LAKE	E SIDE TAHQUITZ LAKE	EXISTING GOLF CART PATH	860	N/A
	21-2	FAIRWAY CIR	RT BANK OF TAHQUITZ CRK	W SIDE OF GOLF CLUB DR	2,725	TS122
	21-2a to 22-2a	GOLF CLUB DR	RT BANK OF WW CHANNEL	ALONG 34TH AVE	2,300	TS128
	CL 21-4 to 23-1a	GOLF CLUB DR	KIRKWOOD DR	RT BANK OF CHANNEL	2,062	CP220
	CL DEMUTH PED	DEMUTH PARK ACCESS RD	CV LINK	PED CONNECTOR	215	AS414

1. NO DESIGN REQUIRED, NEW PATH CONSTRUCTED RECENTLY BY OTHERS.
2. EXISTING GOLF CART PATH, REDESIGN NOT INCLUDED IN THIS SUBMITTAL

UNDERCROSSING

ID	NAME	SHT
UC 2A.01	PALM CANYON DR	CP202
UC 2A.02	SUNRISE WAY	CP203
UC 2A.03	GENE AUTRY TRAIL	CP215

KEY MAP

CC CATHEDRAL CITY
CO COACHELLA
DH DESERT HOT SPRINGS
IN INDIO
IW INDIAN WELLS
LQ LA QUINTA
PD PALM DESERT
PS PALM SPRINGS
RM RANCHO MIRAGE

LEGEND

ALIGNMENT — CL XX to XX — NAME
ALIGNMENT NOT INCLUDED IN PLAN SET, SEE NOTES
FUTURE ALIGNMENT
CITY BOUNDARY
ACCESS POINT — A — AP 1.01 — ID NO.
BRIDGE — BR 1.01
UNDERCROSSING — UC 1.01
REST STOP — R — RS 1.01
ENTRY POINT — E — EP 1.01
SEGMENT NUMBER — 1

SEGMENT 2A
PROJECT PLAN

10.03.16

Source: Alta Planning + Design, 2016

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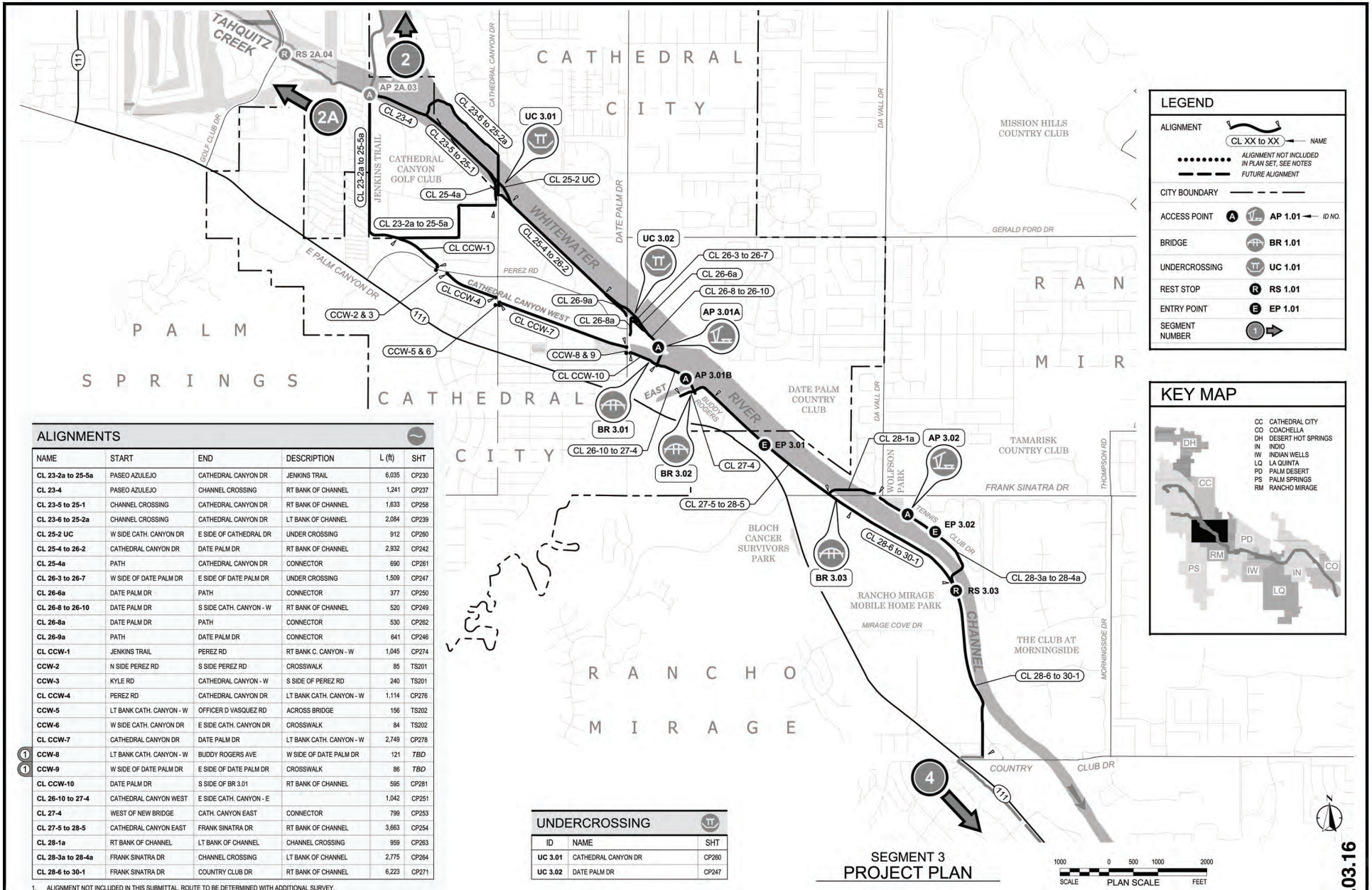
CV Link Project
Project Segment 2A
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
6



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 23-2a to 25-5a	PASEO AZULEJO	CATHEDRAL CANYON DR	JENKINS TRAIL	6,035	CP230
CL 23-4	PASEO AZULEJO	CHANNEL CROSSING	RT BANK OF CHANNEL	1,241	CP237
CL 23-5 to 25-1	CHANNEL CROSSING	CATHEDRAL CANYON DR	RT BANK OF CHANNEL	1,633	CP258
CL 23-6 to 25-2a	CHANNEL CROSSING	CATHEDRAL CANYON DR	LT BANK OF CHANNEL	2,084	CP239
CL 25-2 UC	W SIDE CATH. CANYON DR	E SIDE OF CATHEDRAL DR	UNDER CROSSING	912	CP260
CL 25-4 to 26-2	CATHEDRAL CANYON DR	DATE PALM DR	RT BANK OF CHANNEL	2,932	CP242
CL 25-4a	PATH	CATHEDRAL CANYON DR	CONNECTOR	690	CP261
CL 26-3 to 26-7	W SIDE OF DATE PALM DR	E SIDE OF DATE PALM DR	UNDER CROSSING	1,509	CP247
CL 26-6a	DATE PALM DR	PATH	CONNECTOR	377	CP250
CL 26-8 to 26-10	DATE PALM DR	S SIDE CATH. CANYON - W	RT BANK OF CHANNEL	520	CP249
CL 26-8a	DATE PALM DR	PATH	CONNECTOR	530	CP262
CL 26-9a	PATH	DATE PALM DR	CONNECTOR	641	CP246
CL CCW-1	JENKINS TRAIL	PEREZ RD	RT BANK C. CANYON - W	1,045	CP274
CCW-2	N SIDE PEREZ RD	S SIDE PEREZ RD	CROSSWALK	85	TS201
CCW-3	KYLE RD	CATHEDRAL CANYON - W	S SIDE OF PEREZ RD	240	TS201
CL CCW-4	PEREZ RD	CATHEDRAL CANYON DR	LT BANK CATH. CANYON - W	1,114	CP276
CCW-5	LT BANK CATH. CANYON - W	OFFICER D VASQUEZ RD	ACROSS BRIDGE	156	TS202
CCW-6	W SIDE CATH. CANYON DR	E SIDE CATH. CANYON DR	CROSSWALK	84	TS202
CL CCW-7	CATHEDRAL CANYON DR	DATE PALM DR	LT BANK CATH. CANYON - W	2,749	CP278
(1) CCW-8	LT BANK CATH. CANYON - W	BUDDY ROGERS AVE	W SIDE OF DATE PALM DR	121	*TBD*
(1) CCW-9	W SIDE OF DATE PALM DR	E SIDE OF DATE PALM DR	CROSSWALK	86	*TBD*
CL CCW-10	DATE PALM DR	S SIDE OF BR 3.01	RT BANK OF CHANNEL	595	CP281
CL 26-10 to 27-4	CATHEDRAL CANYON WEST	E SIDE CATH. CANYON - E		1,042	CP251
CL 27-4	WEST OF NEW BRIDGE	CATH. CANYON EAST	CONNECTOR	799	CP253
CL 27-5 to 28-5	CATHEDRAL CANYON EAST	FRANK SINATRA DR	RT BANK OF CHANNEL	3,663	CP254
CL 28-1a	RT BANK OF CHANNEL	LT BANK OF CHANNEL	CHANNEL CROSSING	959	CP263
CL 28-3a to 28-4a	FRANK SINATRA DR	CHANNEL CROSSING	LT BANK OF CHANNEL	2,775	CP264
CL 28-6 to 30-1	FRANK SINATRA DR	COUNTRY CLUB DR	RT BANK OF CHANNEL	6,223	CP271

1. ALIGNMENT NOT INCLUDED IN THIS SUBMITTAL. ROUTE TO BE DETERMINED WITH ADDITIONAL SURVEY.

UNDERCROSSING

ID	NAME	SHT
UC 3.01	CATHEDRAL CANYON DR	CP260
UC 3.02	DATE PALM DR	CP247

Source: Alta Planning + Design, 2016

*** Rancho Mirage Alignments in Alternative 2 Only**

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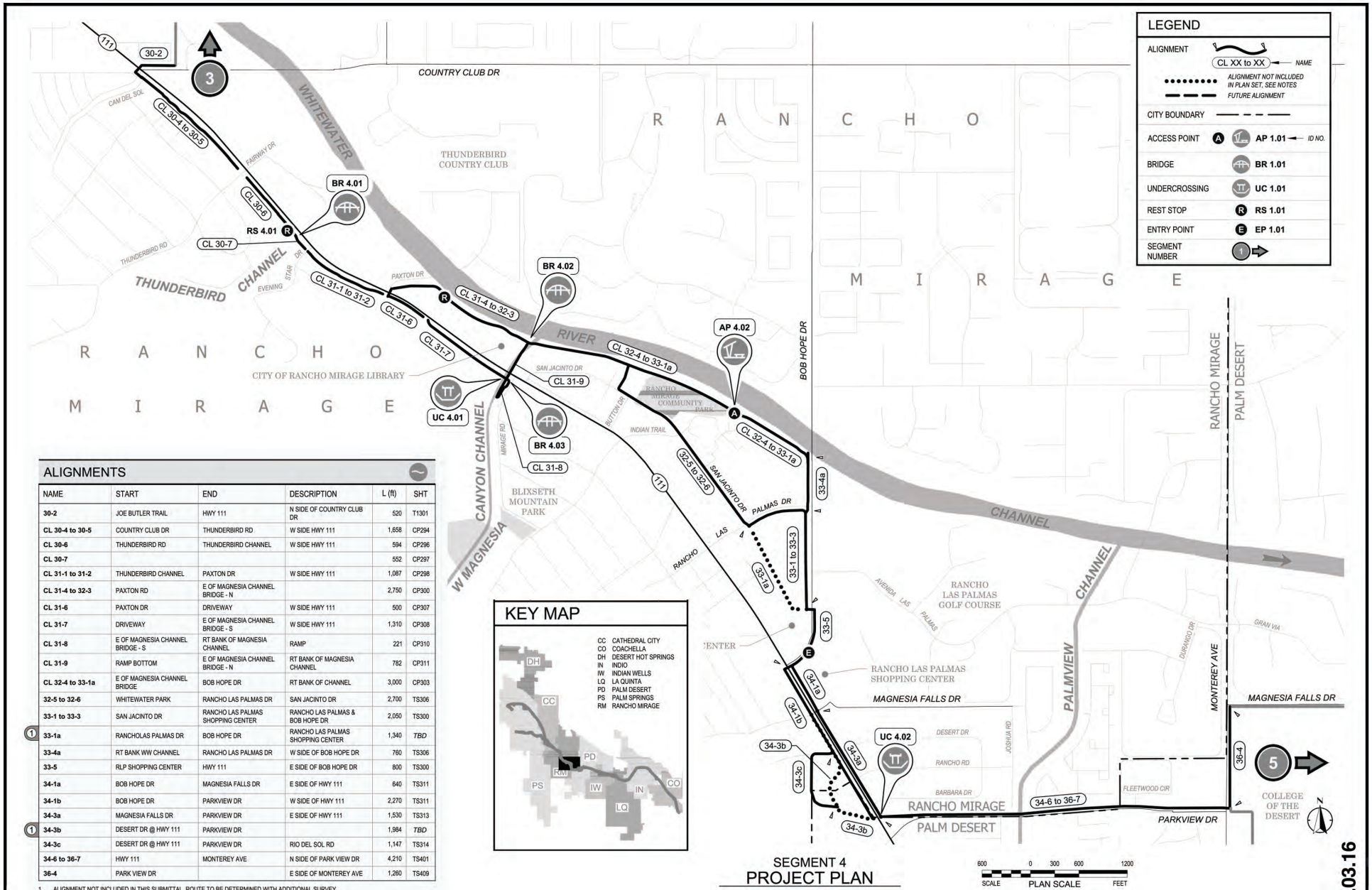
CV Link Project
Project Segment 3
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
7



ALIGNMENTS

	NAME	START	END	DESCRIPTION	L (ft)	SHT
	30-2	JOE BUTLER TRAIL	HWY 111	N SIDE OF COUNTRY CLUB DR	520	T1301
	CL 30-4 to 30-5	COUNTRY CLUB DR	THUNDERBIRD RD	W SIDE HWY 111	1,658	CP294
	CL 30-6	THUNDERBIRD RD	THUNDERBIRD CHANNEL	W SIDE HWY 111	594	CP296
	CL 30-7				552	CP297
	CL 31-1 to 31-2	THUNDERBIRD CHANNEL	PAXTON DR	W SIDE HWY 111	1,087	CP298
	CL 31-4 to 32-3	PAXTON RD	E OF MAGNESIA CHANNEL BRIDGE - N		2,750	CP300
	CL 31-6	PAXTON DR	DRIVEWAY	W SIDE HWY 111	500	CP307
	CL 31-7	DRIVEWAY	E OF MAGNESIA CHANNEL BRIDGE - S	W SIDE HWY 111	1,310	CP308
	CL 31-8	E OF MAGNESIA CHANNEL BRIDGE - S	RT BANK OF MAGNESIA CHANNEL	RAMP	221	CP310
	CL 31-9	RAMP BOTTOM	E OF MAGNESIA CHANNEL BRIDGE - N	RT BANK OF MAGNESIA CHANNEL	782	CP311
	CL 32-4 to 33-1a	E OF MAGNESIA CHANNEL BRIDGE	BOB HOPE DR	RT BANK OF CHANNEL	3,000	CP303
	32-5 to 32-6	WHITEWATER PARK	RANCHO LAS PALMAS DR	SAN JACINTO DR	2,700	TS306
	33-1 to 33-3	SAN JACINTO DR	RANCHO LAS PALMAS SHOPPING CENTER	RANCHO LAS PALMAS & BOB HOPE DR	2,050	TS300
1	**33-1a**	RANCHOLAS PALMAS DR	BOB HOPE DR	RANCHO LAS PALMAS SHOPPING CENTER	1,340	*TBD*
	33-4a	RT BANK WW CHANNEL	RANCHO LAS PALMAS DR	W SIDE OF BOB HOPE DR	760	TS306
	33-5	RLP SHOPPING CENTER	HWY 111	E SIDE OF BOB HOPE DR	800	TS300
	34-1a	BOB HOPE DR	MAGNESIA FALLS DR	E SIDE OF HWY 111	640	TS311
	34-1b	BOB HOPE DR	PARKVIEW DR	W SIDE OF HWY 111	2,270	TS311
	34-3a	MAGNESIA FALLS DR	PARKVIEW DR	E SIDE OF HWY 111	1,530	TS313
1	**34-3b**	DESERT DR @ HWY 111	PARKVIEW DR		1,984	*TBD*
	34-3c	DESERT DR @ HWY 111	PARKVIEW DR	RIO DEL SOL RD	1,147	TS314
	34-6 to 36-7	HWY 111	MONTEREY AVE	N SIDE OF PARK VIEW DR	4,210	TS401
	36-4	PARK VIEW DR		E SIDE OF MONTEREY AVE	1,260	TS409

1. ALIGNMENT NOT INCLUDED IN THIS SUBMITTAL. ROUTE TO BE DETERMINED WITH ADDITIONAL SURVEY.

Source: Alta Planning + Design, 2016

*** Rancho Mirage Alignments in Alternative 2 Only**

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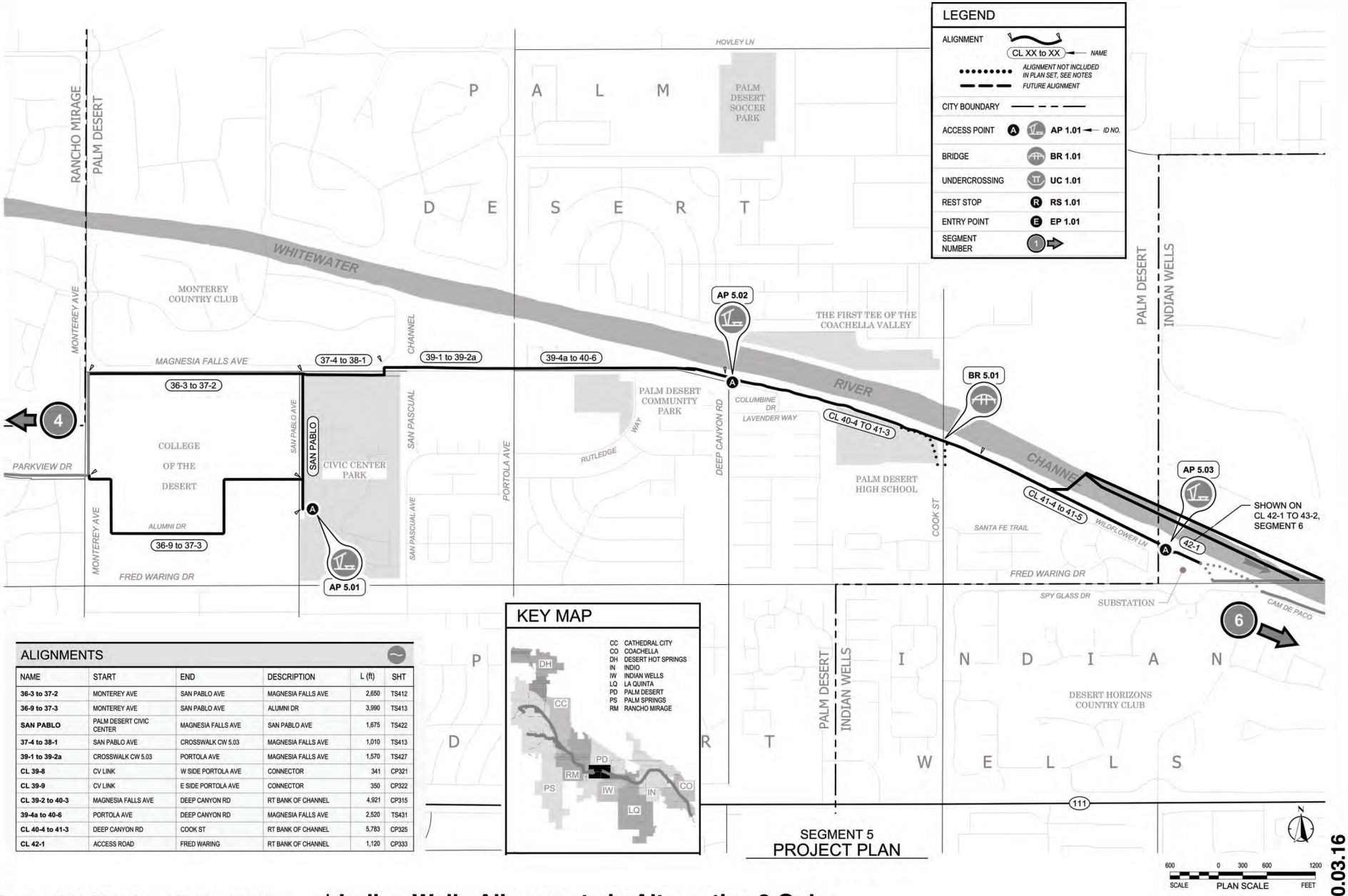
CV Link Project
Project Segment 4
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
8



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
36-3 to 37-2	MONTEREY AVE	SAN PABLO AVE	MAGNESIA FALLS AVE	2,650	TS412
36-9 to 37-3	MONTEREY AVE	SAN PABLO AVE	ALUMNI DR	3,990	TS413
SAN PABLO	PALM DESERT CIVIC CENTER	MAGNESIA FALLS AVE	SAN PABLO AVE	1,675	TS422
37-4 to 38-1	SAN PABLO AVE	CROSSWALK CW 5.03	MAGNESIA FALLS AVE	1,010	TS413
39-1 to 39-2a	CROSSWALK CW 5.03	PORTOLA AVE	MAGNESIA FALLS AVE	1,570	TS427
CL 39-8	CV LINK	W SIDE PORTOLA AVE	CONNECTOR	341	CP321
CL 39-9	CV LINK	E SIDE PORTOLA AVE	CONNECTOR	350	CP322
CL 39-2 to 40-3	MAGNESIA FALLS AVE	DEEP CANYON RD	RT BANK OF CHANNEL	4,921	CP315
39-4a to 40-6	PORTOLA AVE	DEEP CANYON RD	MAGNESIA FALLS AVE	2,520	TS431
CL 40-4 to 41-3	DEEP CANYON RD	COOK ST	RT BANK OF CHANNEL	5,783	CP325
CL 42-1	ACCESS ROAD	FRED WARING	RT BANK OF CHANNEL	1,120	CP333

Source: Alta Planning + Design, 2016

*** Indian Wells Alignments in Alternative 2 Only**

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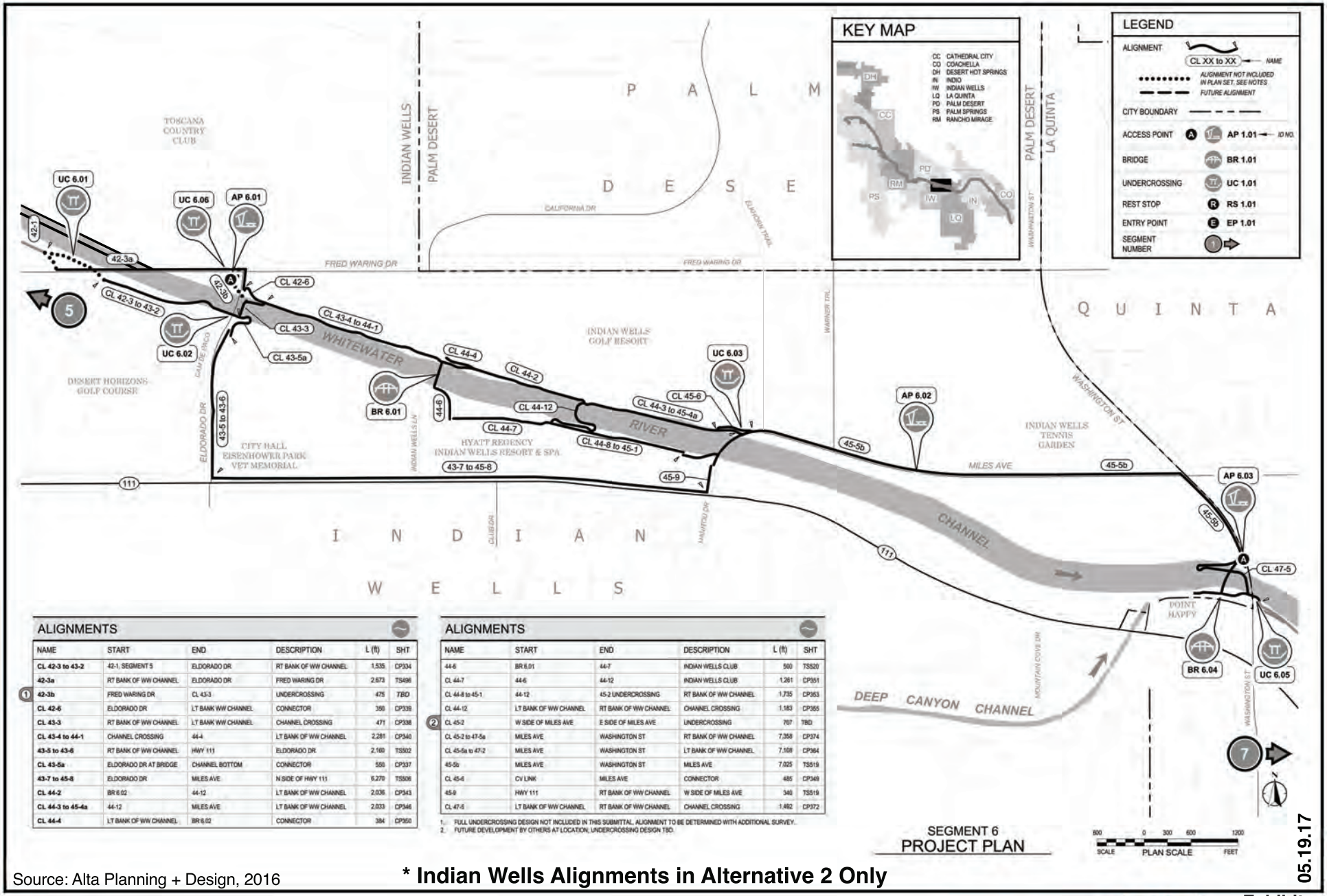
CV Link Project
Project Segment 5
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
9



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 42-3 to 43-2	42-1, SEGMENT 5	ELDORADO DR	RT BANK OF WW CHANNEL	1,535	CP334
42-3a	RT BANK OF WW CHANNEL	ELDORADO DR	FRED WARING DR	2,673	TS496
1 42-3b	FRED WARING DR	CL 43-3	UNDERCROSSING	475	TBD
CL 42-6	ELDORADO DR	LT BANK WW CHANNEL	CONNECTOR	350	CP339
CL 43-3	RT BANK OF WW CHANNEL	LT BANK WW CHANNEL	CHANNEL CROSSING	471	CP338
CL 43-4 to 44-1	CHANNEL CROSSING	44-4	LT BANK OF WW CHANNEL	2,281	CP340
43-5 to 43-6	RT BANK OF WW CHANNEL	HWY 111	ELDORADO DR	2,160	TS502
CL 43-5a	ELDORADO DR AT BRIDGE	CHANNEL BOTTOM	CONNECTOR	550	CP337
43-7 to 45-8	ELDORADO DR	MILES AVE	N SIDE OF HWY 111	5,270	TS506
CL 44-2	BR 6.02	44-12	LT BANK OF WW CHANNEL	2,036	CP343
CL 44-3 to 45-4a	44-12	MILES AVE	LT BANK OF WW CHANNEL	2,033	CP346
CL 44-4	LT BANK OF WW CHANNEL	BR 6.02	CONNECTOR	384	CP350

ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
44-6	BR 6.01	44-7	INDIAN WELLS CLUB	560	TS520
CL 44-7	44-6	44-12	INDIAN WELLS CLUB	1,261	CP351
CL 44-8 to 45-1	44-12	45-2 UNDERCROSSING	RT BANK OF WW CHANNEL	1,735	CP353
CL 44-12	LT BANK OF WW CHANNEL	RT BANK OF WW CHANNEL	CHANNEL CROSSING	1,183	CP355
2 CL 45-2	W SIDE OF MILES AVE	E SIDE OF MILES AVE	UNDERCROSSING	707	TBD
CL 45-2 to 47-5a	MILES AVE	WASHINGTON ST	RT BANK OF WW CHANNEL	7,358	CP374
CL 45-5a to 47-2	MILES AVE	WASHINGTON ST	LT BANK OF WW CHANNEL	7,108	CP364
45-5b	MILES AVE	WASHINGTON ST	MILES AVE	7,025	TS519
CL 45-6	CV LINK	MILES AVE	CONNECTOR	485	CP349
45-9	HWY 111	RT BANK OF WW CHANNEL	W SIDE OF MILES AVE	340	TS519
CL 47-5	LT BANK OF WW CHANNEL	RT BANK OF WW CHANNEL	CHANNEL CROSSING	1,462	CP372

1. FULL UNDERCROSSING DESIGN NOT INCLUDED IN THIS SUBMITTAL. ALIGNMENT TO BE DETERMINED WITH ADDITIONAL SURVEY.
2. FUTURE DEVELOPMENT BY OTHERS AT LOCATION, UNDERCROSSING DESIGN TBD.

Source: Alta Planning + Design, 2016

*** Indian Wells Alignments in Alternative 2 Only**

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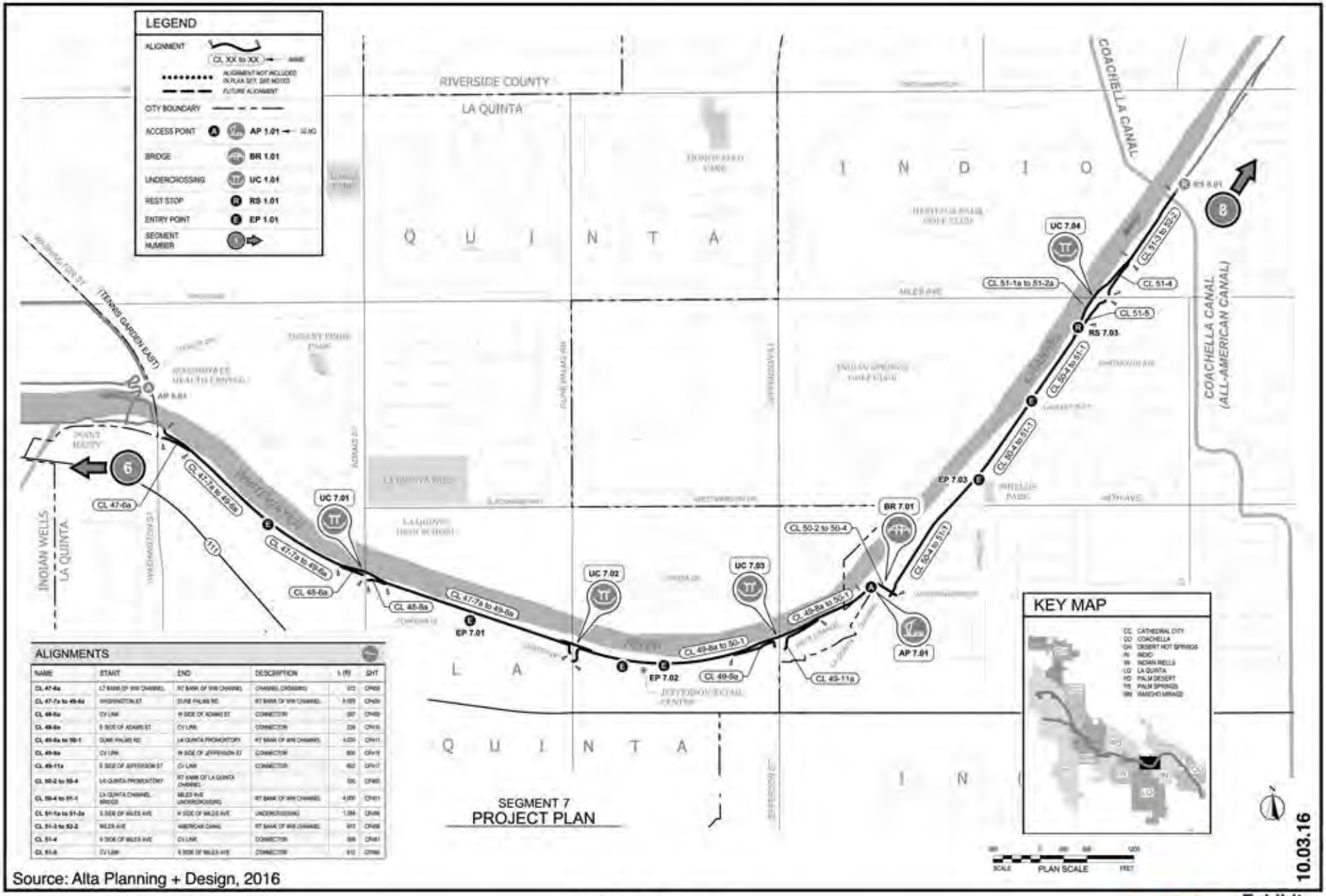
CV Link Project
Project Segment 6
Coachella Valley Association of Governments

CV LINK CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit **10**



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 47-6a	LT BANK OF WW CHANNEL	RT BANK OF WW CHANNEL	CHANNEL CROSSING	572	CP002
CL 47-7a to 49-8a	WASHINGTON ST	DUNE PALMS RD	RT BANK OF WW CHANNEL	5,055	CP003
CL 48-6a	CV LINK	W SIDE OF ADAMS ST	CONNECTOR	297	CP003
CL 48-8a	E SIDE OF ADAMS ST	CV LINK	CONNECTOR	229	CP010
CL 49-8a to 50-1	DUNE PALMS RD	LA QUINTA PROMONTORY	RT BANK OF WW CHANNEL	4,230	CP011
CL 49-9a	CV LINK	W SIDE OF JEFFERSON ST	CONNECTOR	800	CP019
CL 49-11a	E SIDE OF JEFFERSON ST	CV LINK	CONNECTOR	462	CP017
CL 50-2 to 50-4	LA QUINTA PROMONTORY	RT BANK OF LA QUINTA CHANNEL		530	CP005
CL 50-4 to 51-1	LA QUINTA CHANNEL BRIDGE	MILES AVE UNDERCROSSING	RT BANK OF WW CHANNEL	4,000	CP001
CL 51-1a to 51-2a	E SIDE OF MILES AVE	W SIDE OF MILES AVE	UNDERCROSSING	1,584	CP006
CL 51-3 to 52-2	MILES AVE	AMERICAN CANAL	RT BANK OF WW CHANNEL	913	CP008
CL 51-4	W SIDE OF MILES AVE	CV LINK	CONNECTOR	595	CP001
CL 51-5	CV LINK	E SIDE OF MILES AVE	CONNECTOR	612	CP006

Source: Alta Planning + Design, 2016

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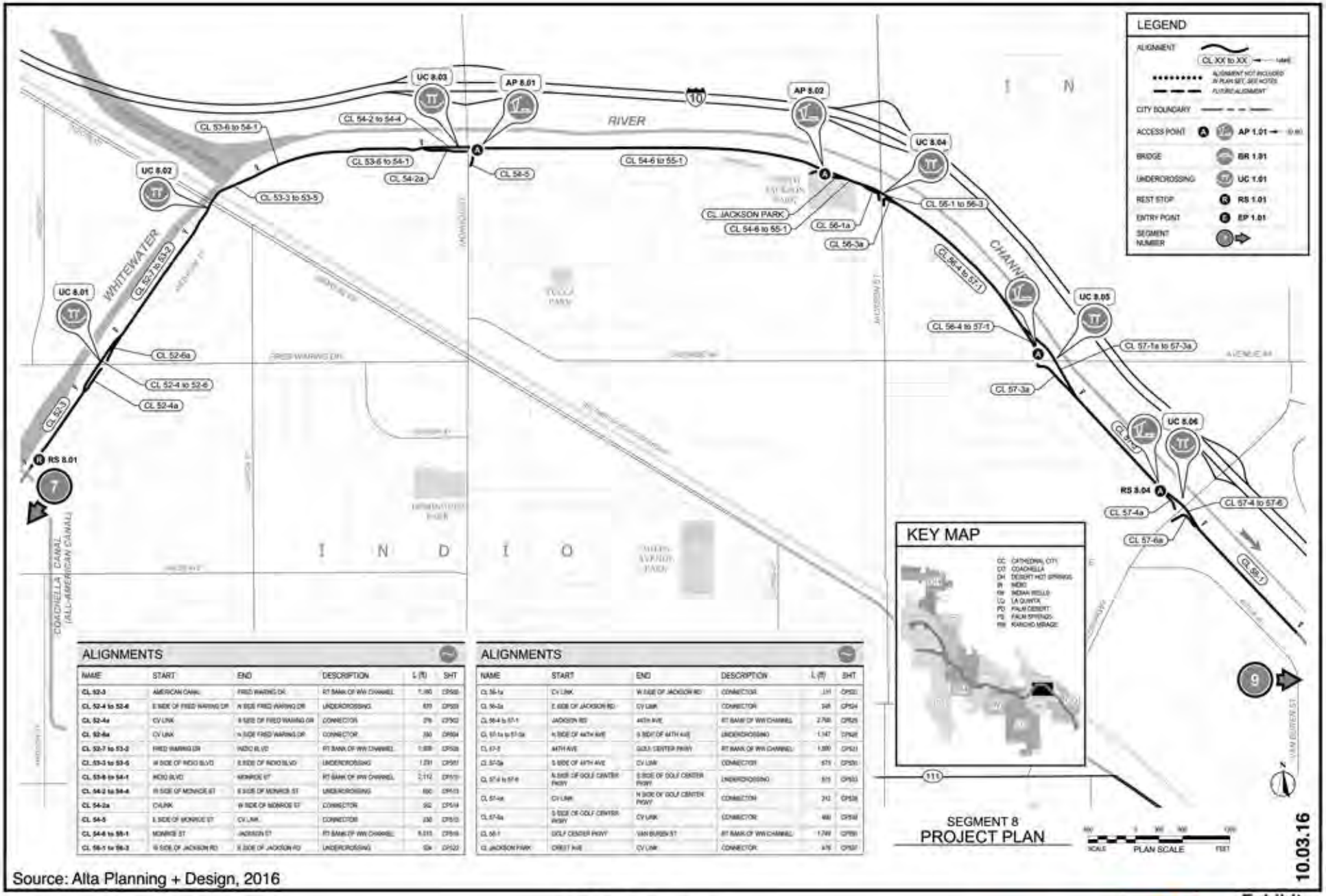
CV Link Project
Project Segment 7
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
11



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 52-3	AMERICAN CANAL	FRED WARING DR	RT BANK OF WW CHANNEL	1,180	CP520
CL 52-4 to 52-6	E SIDE OF FRED WARING DR	W SIDE FRED WARING DR	UNDERCROSSING	670	CP523
CL 52-4a	CV LINK	E SIDE OF FRED WARING DR	CONNECTOR	276	CP522
CL 52-6a	CV LINK	W SIDE FRED WARING DR	CONNECTOR	350	CP524
CL 52-7 to 53-2	FRED WARING DR	INDIO BLVD	RT BANK OF WW CHANNEL	1,609	CP526
CL 53-3 to 53-5	W SIDE OF INDIO BLVD	E SIDE OF INDIO BLVD	UNDERCROSSING	1,731	CP531
CL 53-6 to 54-1	INDIO BLVD	MONROE ST	RT BANK OF WW CHANNEL	2,112	CP533
CL 54-2 to 54-4	W SIDE OF MONROE ST	E SIDE OF MONROE ST	UNDERCROSSING	690	CP535
CL 54-2a	CV LINK	W SIDE OF MONROE ST	CONNECTOR	302	CP534
CL 54-5	E SIDE OF MONROE ST	CV LINK	CONNECTOR	230	CP532
CL 54-6 to 55-1	MONROE ST	JACKSON ST	RT BANK OF WW CHANNEL	5,015	CP536
CL 56-1 to 56-3	W SIDE OF JACKSON RD	E SIDE OF JACKSON RD	UNDERCROSSING	924	CP537

ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 56-1a	CV LINK	W SIDE OF JACKSON RD	CONNECTOR	231	CP532
CL 56-3a	E SIDE OF JACKSON RD	CV LINK	CONNECTOR	348	CP534
CL 56-4 to 57-1	JACKSON RD	44TH AVE	RT BANK OF WW CHANNEL	2,768	CP535
CL 57-1a to 57-3a	N SIDE OF 44TH AVE	S SIDE OF 44TH AVE	UNDERCROSSING	1,147	CP536
CL 57-2	44TH AVE	GOLF CENTER PKWY	RT BANK OF WW CHANNEL	1,300	CP531
CL 57-3a	S SIDE OF 44TH AVE	CV LINK	CONNECTOR	573	CP530
CL 57-4 to 57-6	N SIDE OF GOLF CENTER PKWY	S SIDE OF GOLF CENTER PKWY	UNDERCROSSING	615	CP533
CL 57-4a	CV LINK	N SIDE OF GOLF CENTER PKWY	CONNECTOR	312	CP538
CL 57-6a	S SIDE OF GOLF CENTER PKWY	CV LINK	CONNECTOR	468	CP539
CL 58-1	GOLF CENTER PKWY	VAN BUREN ST	RT BANK OF WW CHANNEL	1,749	CP531
CL JACKSON PARK	CREST AVE	CV LINK	CONNECTOR	476	CP537

Source: Alta Planning + Design, 2016

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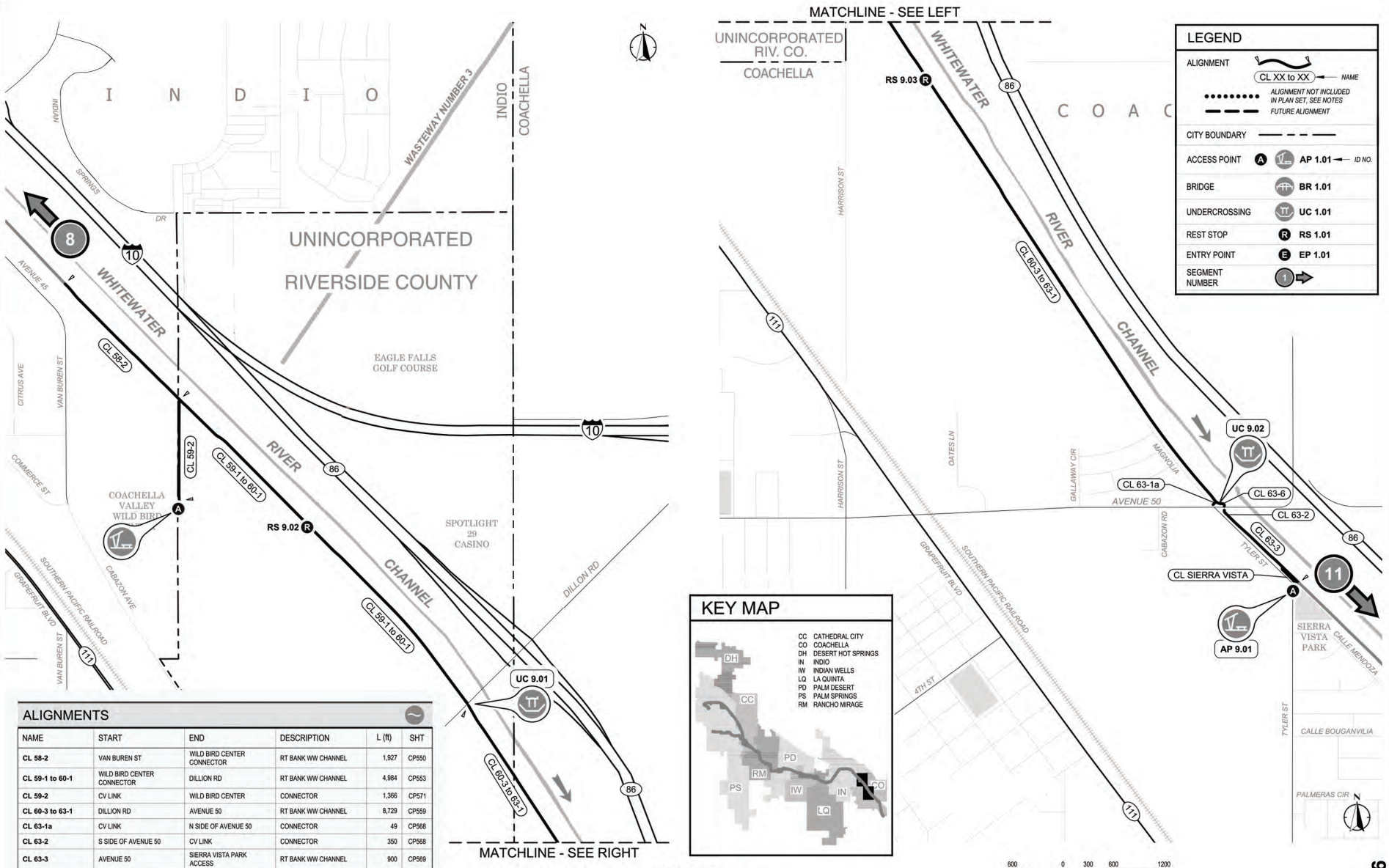
CV Link Project
Project Segment 8
Coachella Valley Association of Governments

CV/LINK
CVAG

Exhibit
12



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 58-2	VAN BUREN ST	WILD BIRD CENTER CONNECTOR	RT BANK WW CHANNEL	1,927	CP550
CL 59-1 to 60-1	WILD BIRD CENTER CONNECTOR	DILLION RD	RT BANK WW CHANNEL	4,984	CP553
CL 59-2	CV LINK	WILD BIRD CENTER	CONNECTOR	1,366	CP571
CL 60-3 to 63-1	DILLION RD	AVENUE 50	RT BANK WW CHANNEL	8,729	CP559
CL 63-1a	CV LINK	N SIDE OF AVENUE 50	CONNECTOR	49	CP568
CL 63-2	S SIDE OF AVENUE 50	CV LINK	CONNECTOR	350	CP568
CL 63-3	AVENUE 50	SIERRA VISTA PARK ACCESS	RT BANK WW CHANNEL	900	CP569
CL 63-6	CV LINK	AVENUE 50	CONNECTOR	241	CP568
CL SIERRA VISTA	CV LINK	SIERRA VISTA PARK	CONNECTOR	282	CP570

SEGMENT 9
PROJECT PLAN

Source: Alta Planning + Design, 2016

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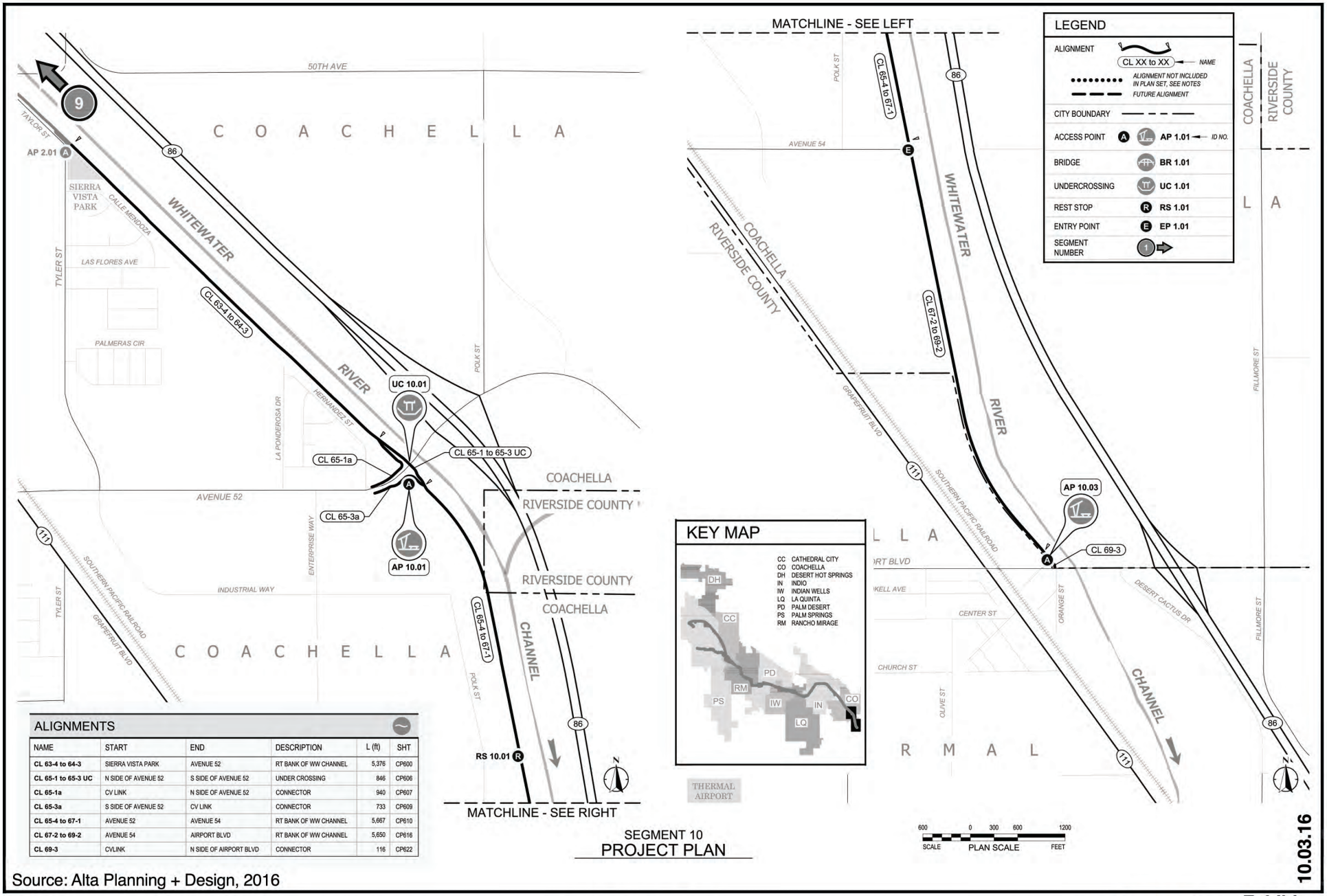
CV Link Project
Project Segment 9
Coachella Valley Association of Governments

CV/LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
13



ALIGNMENTS

NAME	START	END	DESCRIPTION	L (ft)	SHT
CL 63-4 to 64-3	SIERRA VISTA PARK	AVENUE 52	RT BANK OF WW CHANNEL	5,376	CP600
CL 65-1 to 65-3 UC	N SIDE OF AVENUE 52	S SIDE OF AVENUE 52	UNDER CROSSING	846	CP606
CL 65-1a	CV LINK	N SIDE OF AVENUE 52	CONNECTOR	940	CP607
CL 65-3a	S SIDE OF AVENUE 52	CV LINK	CONNECTOR	733	CP609
CL 65-4 to 67-1	AVENUE 52	AVENUE 54	RT BANK OF WW CHANNEL	5,667	CP610
CL 67-2 to 69-2	AVENUE 54	AIRPORT BLVD	RT BANK OF WW CHANNEL	5,650	CP616
CL 69-3	CVLINK	N SIDE OF AIRPORT BLVD	CONNECTOR	116	CP622

SEGMENT 10
PROJECT PLAN

10.03.16

Source: Alta Planning + Design, 2016

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CV Link Project
Project Segment 10
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit
14

CV LINK START POINT - North Palm Canyon Drive
PALM SPRINGS, CA

CV LINK START POINT - South Palm Canyon Drive
PALM SPRINGS, CA

CV Link Route

N

02.07.17

Source: Google Earth, 2017; CVAG, 2016

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CV Link Project
Western Termini - Palm Springs, CA
Coachella Valley
Association of Governments

CV/LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
15

Source: Google Earth, 2017

02.10.17

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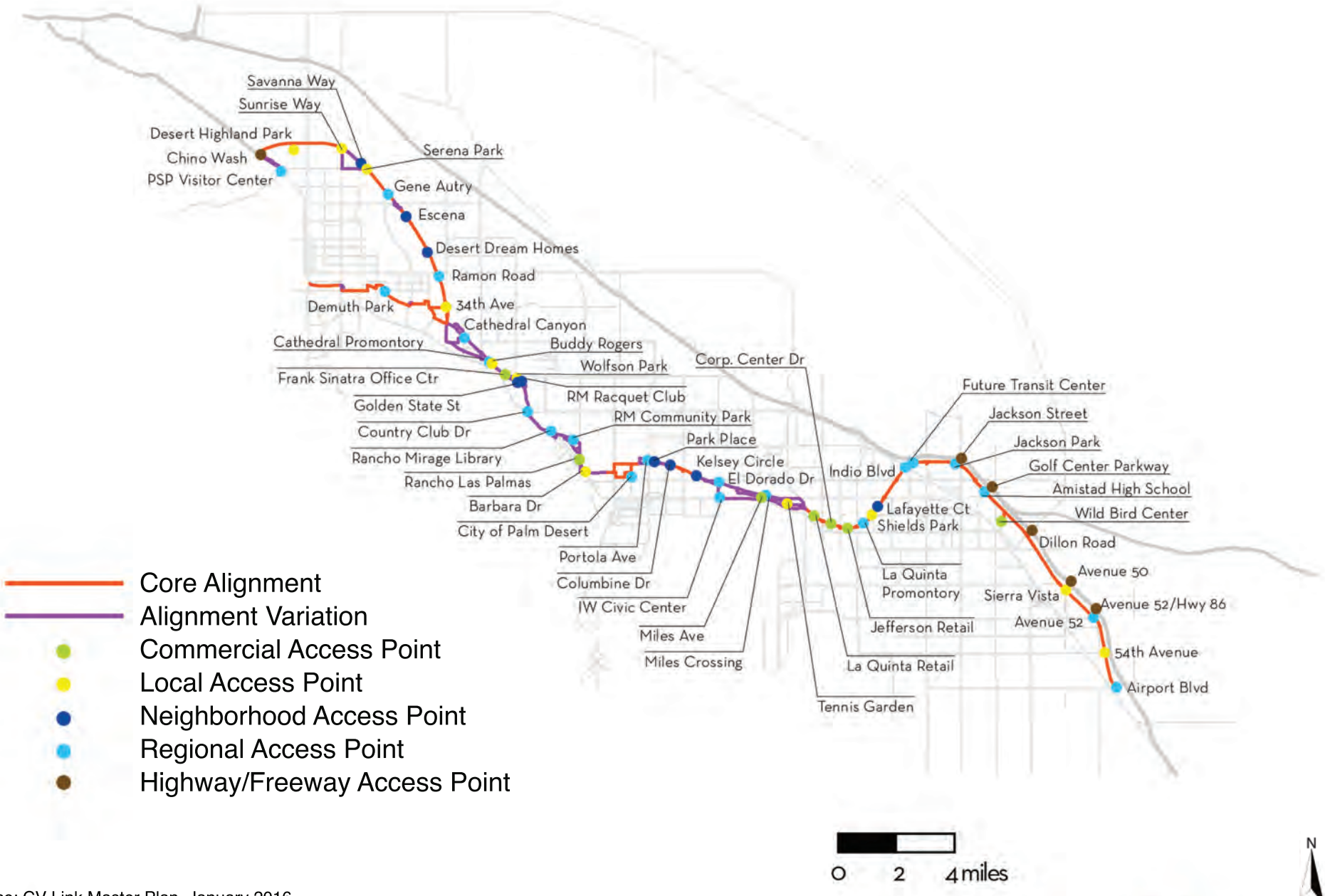
CV Link Project
Eastern Terminus - Coachella, CA
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
16



Source: CV Link Master Plan, January 2016

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CV Link Project
Access Points
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit

17

1-4 PROJECT ALTERNATIVES

Three “build” alternatives and one “no project” alternative were proposed for consideration, based on the project objectives and physical consideration of the environment in which the project occurs. These include the Proposed Project Alternative (w/o Rancho Mirage), Alternative 1 (w/o Rancho Mirage and Indian Wells), Alternative 2 (With All Jurisdictions), and Alternative 3: No Build Alternative. The criteria for which alternatives were evaluated are presented below:

Transportation Related Objectives

- Create a regional multi-modal transportation facility that interconnects the highest intensity land use corridor in the Coachella Valley with neighborhoods, schools, parks, tourist destinations, retail centers, high density residential development, and employment centers, to enhance community livability and cohesiveness.

- Limit conflicts between motor vehicle traffic, pedestrians and bicyclists, reduce injuries and fatalities, and create a pleasant user experience by providing grade-separated crossings (bridges and undercrossings) of major roadways to the greatest extent possible; and

- Support “safe routes to schools” efforts by providing connections to K-12 schools in three school districts and to higher education opportunities.

Other Environmental Considerations

- Help the Coachella Valley comply with the Global Warming Solutions Act (AB 32) and the Sustainable Communities and Climate Protection Act (SB 375) by encouraging zero-emission transportation technologies, transit, and active transportation.

- Promote healthy lifestyles through the provision of infrastructure where people can safely travel and recreate by means of active transportation, which in turn can help to address public health problems such as childhood obesity and diabetes.

- Optimize the use of underutilized flood control rights-of-way, enhance stormwater maintenance infrastructure, and improve emergency response access.

The following table summarizes the length of the Route and cumulative length of all alignments for each of the build alternatives for reference.

Table 1-2
CV Link Project Alternatives Summary

CV Link Route Length	
Proposed Project Alternative (w/o Rancho Mirage) 44± miles	
Alternative 1 (w/o Rancho Mirage and Indian Wells)	40± miles
Alternative 2 (All Jurisdictions)	49± miles
Alternative 3 (No Build)	NA
CV Link Route Length (including alignments and variations)	
Proposed Project Alternative (w/o Rancho Mirage) 57.6± miles	
Alternative 1 (w/o Rancho Mirage and Indian Wells)	48.2± miles
Alternative 2 (All Jurisdictions)	64.3± miles
Alternative 3 (No Build)	NA

Common Design Features of the Build Alternatives
All build alternative designs and routes will be identical within the cities of Palm Springs, Cathedral City, Palm Desert, La Quinta, Indio, Coachella, and within all tribal lands. Utilities will not need to be relocated under any build alternative. Construction staging areas within the cities of Palm Springs, Cathedral City, Palm Desert, La Quinta, Indio, Coachella, and within all tribal lands will be the same for all build alternatives. See Appendix D: Project Planning Area Maps for locations of construction staging areas, access points and rest areas.

CV Link Facility Cross-Sections
CV Link will add connectivity between major employment, residential, recreational, and institutional centers throughout the Valley, while facilitating and promoting the use of alternative modes of transportation, including foot traffic, bicycles, mobility assistance devices, and low-speed electric vehicles (LSEVs). Low-speed electric vehicles include golf carts and neighborhood electric vehicles. It is anticipated that the typical LSEV trips on CV Link would include moving between home and a golf course, visiting friends, running errands and accessing services and businesses along the CV Link Route. The CV Link Master Plan provides design parameters and guidelines for both on-street and off-street facilities, illustrations of which are provided on the following page.

On-Street Facilities
On-street or within road right-of-way facilities are designed to provide a safe and comfortable facility that maintains consistency in the experience of CV Link. Where traffic volumes and speeds are high and space is available, protected or buffered LSEV/bike facilities have been designed. Depending on roadway width available, this could be as elaborate as a planted strip between concrete curbs, to elements as simple as a two-foot wide painted buffer area.

Each potential within road right-of-way alignment needs to be closely assessed for the optimum cross section configuration. On roadways with higher vehicle volumes and/or higher posted vehicle speeds, a greater level of protection has been designed into the alignment. On roadways with drainage issues or where numerous driveway or roadway intersections occur, separation techniques may be limited to the use of painted buffers.

Where physical space is constrained, LSEV/bicycle lanes or boulevard type treatments may be used to achieve the pathway system. LSEV/bike facilities are a portion of the right-of-way that have been designated by either vertically separated concrete path/cycletrack (preferred) or striping, signing, and pavement markings for the use of LSEVs and bicyclists. LSEV/Bicycle facilities will be located on both

sides of the road, except on one-way streets, and carry users in the same direction as adjacent motor vehicle traffic.

Off-Street Facilities

As noted in elsewhere, CV Link is designed to accommodate a wide range of users including pedestrians, persons in wheelchairs, motorized mobility devices, bicyclists of varied abilities including family cycling, and LSEVs. Due to the speed differential between pathway users, CV Link will be a dual path system whenever possible incorporating a shared use path for faster modes of travel including bicycles and electric mobility devices and LSEVs (up to 25 mph) and a separate pedestrian path for slower modes.

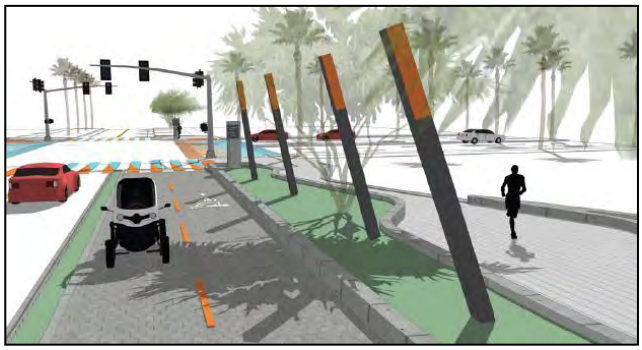
Shared Use Path Design: Shared use paths are completely separated from motorized vehicular traffic and are constructed in their own corridor, or within an open-space area.

The design speed for the shared use path should be 25 miles per hour, maximum. Speed bumps or other surface irregularities or obstacles should not be used to slow bicycles. Slower speeds may be posted for areas that have at least one of the following: higher typical user volumes, constrained or substandard pathway conditions.

Pedestrian Path Design: Pedestrian paths are also separated from motorized vehicular traffic but are usually narrower than shared use paths. Stabilized decomposed granite is the recommended surface treatment. The typical cross section is 4-8' wide.

Bridges: Several bridges over arterial roadways and around constrained areas along the Route are an important part of the CV Link project. Bridges range from simple post and beam-type of construction to pylon-anchored, cable-stay structures.

CV Link Design Process



The design of the CV Link cross-section will vary based on the width of available right-of-way, variations in levee or channel structure, street configurations, and local conditions. Generally, it will feature a broad paved path for Low Speed Electric Vehicles (LSEVs) and bicycles, and softer-surface narrower paths for pedestrians. Shade structures, drinking fountains, wayfinding, EV chargers and safety features will enhance the user experience. CV Link is a planned within and along existing flood control and transportation infrastructure, and nearly all permanent impacts will occur on previously graded levees or paved roadways.

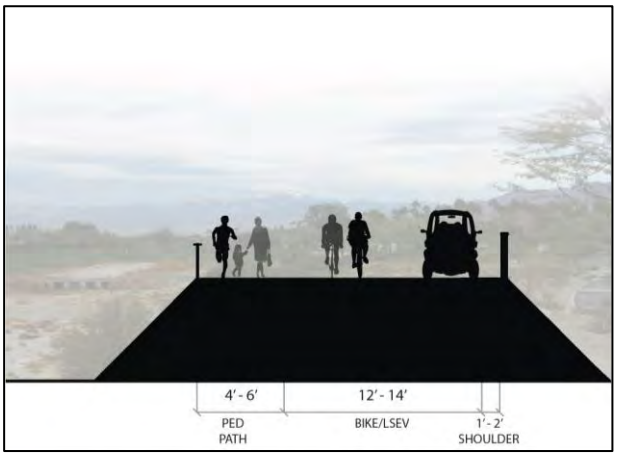
CV Link diverges from channel alignments and is planned within road right-of-way in some areas for several reasons: severe channel constraints, land access issues, or because an on-street alignment provides better connectivity to area destinations. See Section II for a detailed description of CV Link.

The CV Link on-street experience is intended to remain as safe, comfortable and rewarding an experience as the Link's off-street segments. On-street segments are designed to provide a higher level of protection than conventional LSEV/bike lanes. Routes are to be separated from roadways via curbs and planted buffers, similar to cycle track designs. Although on-street alignments have numerous challenges, the CV Link engineering team continues to work with each city involved to identify the best possible outcomes. In some instances, a range of options have been developed and analyzed that will give CVAG and the other implementing agencies flexibility in implementing the plan.

The design is intended to be distinctly recognizable as CV Link. Materials, forms, and color palette have been proposed to be consistent with off-street segments. Patterns and colors in the pathway surface are also designed to be consistent as well as distinct from adjacent sidewalks, resulting in an intuitive navigational experience. Wayfinding signs are planned to further clarify the Route and directional changes.

CV Link users traveling on-street lanes will utilize existing signal displays via dedicated through-lanes, two-stage turn boxes, and other innovations. CV Link users traveling on a pathway alongside the road may utilize independent phases in an adaptation of the Federal Highway Administration MUTCD Interim Approval for Optional Use of a Bicycle Signal Face (IA-16), subject to engineering feasibility study and relevant agency approvals.

Blue and orange colored, high visibility "ladder style" crosswalks are proposed to unify the overall design along the entire Route and help with wayfinding. The use of non-standard crosswalk colors is subject to approval by the California Traffic Control Devices Committee. Should approval not be granted, standard transverse white lines will be used with a more muted pattern between the white lines.



Rectangular Rapid Flashing Beacons (RRFB) or Pedestrian Hybrid Beacons (a regulatory signal also known as a HAWK) are Caltrans- and FHWA-approved devices that are planned at locations where no traffic signal currently exists and where traffic volumes warrant. The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Where standard traffic signal 'warrants' prevent the installation of standard three-color traffic signals, the HAWK beacon provides an alternative. A HAWK beacon is used only for marked crosswalks. CVAG is working with each city and the county to determine where signals and other traffic control and warning devices may be appropriate. Pedestrian beacons will greatly enhance safety for all roadway users and allow greater flexibility in affecting road crossings.

Unique Features of Build Alternatives

The major difference between build alternatives is the inclusion or removal of the CV Link corridor within certain jurisdictional boundaries or most portions thereof. All of the common CV Link components are distributed along the full CV Link Route. The most unique design feature that would be lost with the Alternative 1 scenario would be the suspension bridge around the rocky tip of Point Happy in Indian Wells, although there is a bridge of similar design planned at the Cook Street overcrossing that is common to all of the build alternatives.

1-4.1 Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative includes all of the Link alignments, excepting those in Rancho Mirage generally extending southeasterly from Frank Sinatra Drive and along the stormwater channel and public streets to the corner of Highway 111 and Parkview Drive at the eastern city limits. With the deletion of CV Link segments through Rancho Mirage, the Proposed Project Alternative requires proposed logical termini at and in the vicinity of the Rancho Mirage city limits. The deleted segments and the east and west Rancho Mirage termini are described below and shown on Exhibit 2-19. For the Proposed Project Alternative, the Route length is 44.05± miles, and the total length of all Proposed Project Alternative alignments is 57.62± miles. The following Rancho Mirage segments are excluded from the Proposed Project Alternative.

Table 1-3
CV Link Rancho Mirage Segments
(Not a Part of Proposed Project Alternative)

Rancho Mirage	**From Frank Sinatra Drive**	**To Parkview Drive**	**Segments** **27.5-28.2**	**Length** **7.7**	**Land Uses** **Mixed**
Wolfson Park / Bulter-Abrams Trail	*Frank Sinatra Drive*	*Country Club Drive*	*28.3a-30.2*	*1.6*	*Mixed*
Highway 111	*Country Club Drive*	*Hwy 111 at Paxton Drive*	*30.3-31.3*	*3.8*	*Adjacent to Road*
Highway 111 Section	*Hwy 111 at Paxton Drive*	*Mirage Road*	*31.3-34.1*	*0.7*	*Sidewalk*
Whitewater River Channel	*Paxton Drive*	*Bob Hope Drive*	*31.3-34.1*	*0.7*	*Top of Levee*
Bob Hope Drive & Hwy 111	*Bob Hope Drive*	*Parkview/Hwy 111*	*34.7-34.5a*	*0.9*	*Adjacent to Road*

East Rancho Mirage Terminus

The east terminus developed for the Proposed Project Alternative has been designed to bring CV Link users to a diverse activity area with an array of dining and commercial services, and access to hiking and mountain biking trails. It also optimizes the ability of CV Link users to continue westward on existing and future facilities, and Rancho Mirage residents and visitors to continue eastward along CV Link improvements into Palm Desert.

Therefore, the east Rancho Mirage terminus has been placed at the city limits with Palm Desert on Highway 111 at Parkview Drive. The terminus will be reached by CV Link improvements within and along the north and south alignment of Parkview Drive west of Monterey Avenue and College of the Desert. The north Parkview Drive alignment ends at the city limits but travelers can continue west on existing bike lanes in Rancho Mirage and extending west to Highway 111. Signage will be posted notifying CV Link users about the terminus at this location. The very west end of Parkview Drive turns southwest and back into the City of Palm Desert, where Link improvements will also be provided to Highway 111. The south Parkview Drive alignment also continues west along existing bike path and sidewalk improvements to the intersection with Highway 111, where CV Link intersection improvements are planned.

West Rancho Mirage Termini

The deletion of the above-described Rancho Mirage CV Link alignments will also affect how the Link is terminated on the west side of the city. To this end, two possible termini were considered that depend upon different end points. Each of the two termini being considered is briefly described below and is also shown on Exhibit 2-19.

Terminus A: This terminus would be located within the Cathedral City city limits and just off of the south (right) bank of the channel at Buddy Rogers Avenue, which returns to Highway 111 a short distance to the south. From this location, CV Link travelers can choose to continue on existing Rancho Mirage on-street and channel paths, or return to the nearby Cathedral City downtown, which provides a variety of dining and commercial services, theaters, public open space and gathering space. Signage will be posted notifying CV Link users about the terminus at this location.

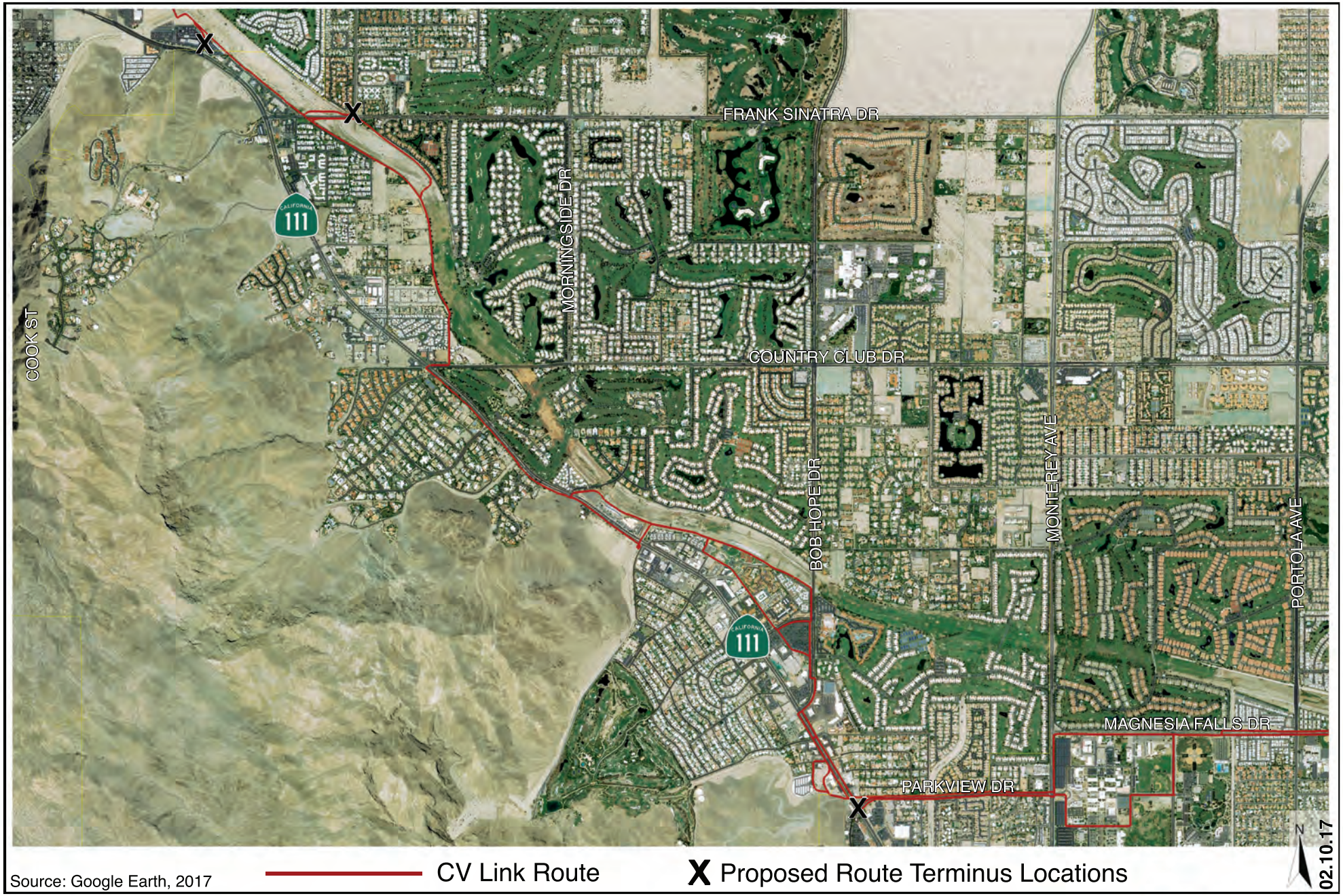
Terminus B: This terminus would be located at the northwest corner of Frank Sinatra Drive and DaVall Drive (adjacent to the wash) within the Rancho Mirage city limits. It would be accessed from the northwest by an extension of the CV Link right bank channel alignment, would cross the Whitewater River channel along the bottom at approximately the same location as an existing pedestrian/bicycle channel crossing, and end at the aforementioned intersection. From this location, CV Link travelers can choose to continue on existing Rancho Mirage on-street bike paths and sidewalks, and channel paths adjacent to Wolfson Park. Again, signage will be posted notifying CV Link users about the terminus at this location.

1-4.2 Alternative 1: Project Without Rancho Mirage and Indian Wells

This alternative was developed to analyze the environmental consequences of CV Link buildout but without the participation of the cities of Rancho Mirage and Indian Wells. The primary difference between the Proposed Project Alternative and Alternative 1 is the deletion of CV Link improvements in the City of Indian Wells and the provision of logical termini at and in the vicinity of respective city limits. A categorical evaluation of potential impacts associated with this alternative are set forth in Chapter 2 of this EA.

Under Alternative 1, the CV Link segments generally extending from Frank Sinatra Drive and along the stormwater channel and public streets to Palm Desert city limits are not included. Neither are those street and channel alignments planned in Indian Wells, generally extending from Fred Waring Drive on the west to Washington Street (La Quinta) on the east. With the deletion of CV Link segments through Rancho Mirage and Indian Wells, Alternative 1 requires proposes logical termini at Indian Wells, as have been proposed for Rancho Mirage under the Proposed Project Alternative (see exhibits 18 and 19). Four termini have been designed for the West-End terminus in the vicinity of Fred Waring Drive and the WWR Channel (Palm Desert), and one for the East-End Terminus at Highway 111 just west of Washington Street (La Quinta) (see exhibits 20 and 21). The east and west Indian Wells termini are described below and shown on Exhibit 16. For Alternative 1, the route length is 40± miles and the total length of all alignments is 48.2± miles.

In addition to the establishment of logical termini in Rancho Mirage described in the Proposed Project Alternative, Alternative 1 also provides logical termini at and in the vicinity of the Indian Wells city limits. Alternative 1 assumes that CV Link users approaching from Palm Desert and La Quinta will be able to continue to pass through Rancho Mirage and Indian Wells on existing sidewalks, bike paths, and streets in accordance with applicable state and federal requirements that local jurisdictions ensure multi-modal access (see California's Complete Streets Act, Government Code (65302(b)(2)(A), etc.). Therefore, and where appropriate, multiple termini have been developed for analysis to provide options.



Source: Google Earth, 2017

CV Link Route

X Proposed Route Terminus Locations

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CV Link Project
Rancho Mirage Termini Overview
Coachella Valley Association of Governments

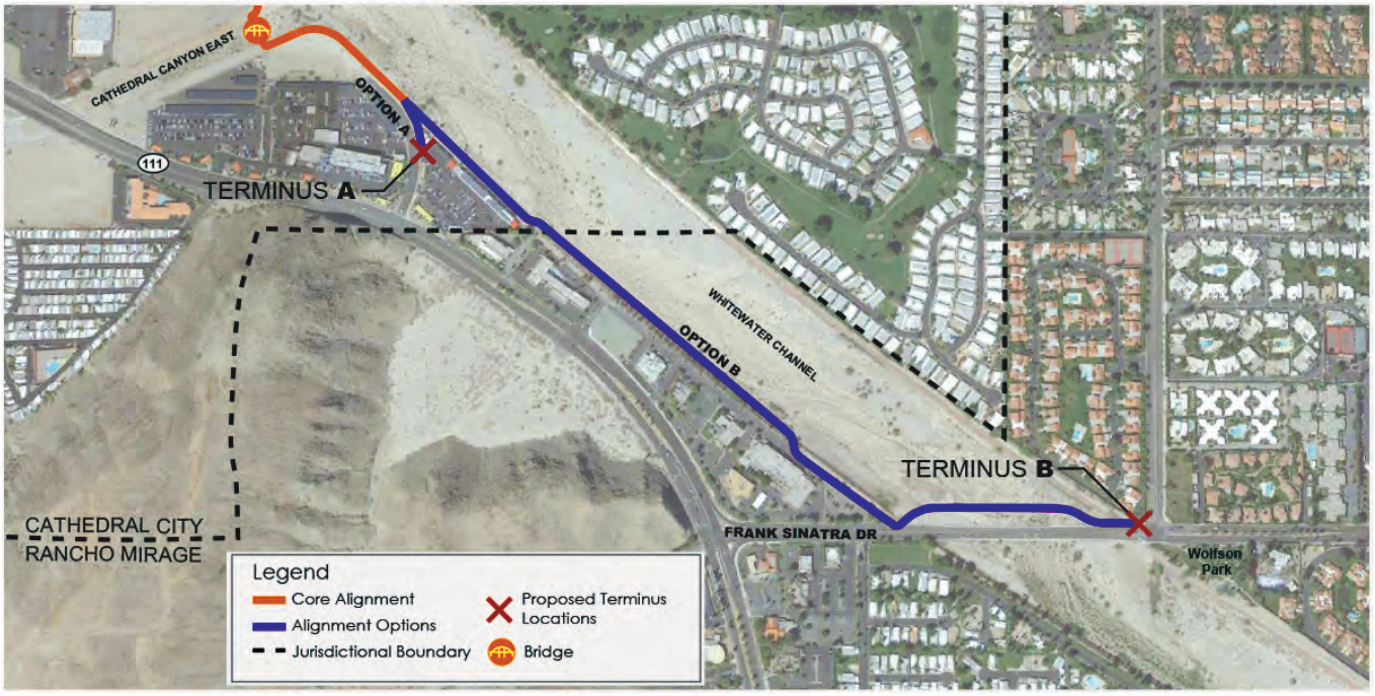
CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit

18

Rancho Mirage East Terminus

Rancho Mirage West Terminus



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Source: CVAG, 2016

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CV Link Project
Rancho Mirage Termini
Coachella Valley
Association of Governments

CV/LINK CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit

19

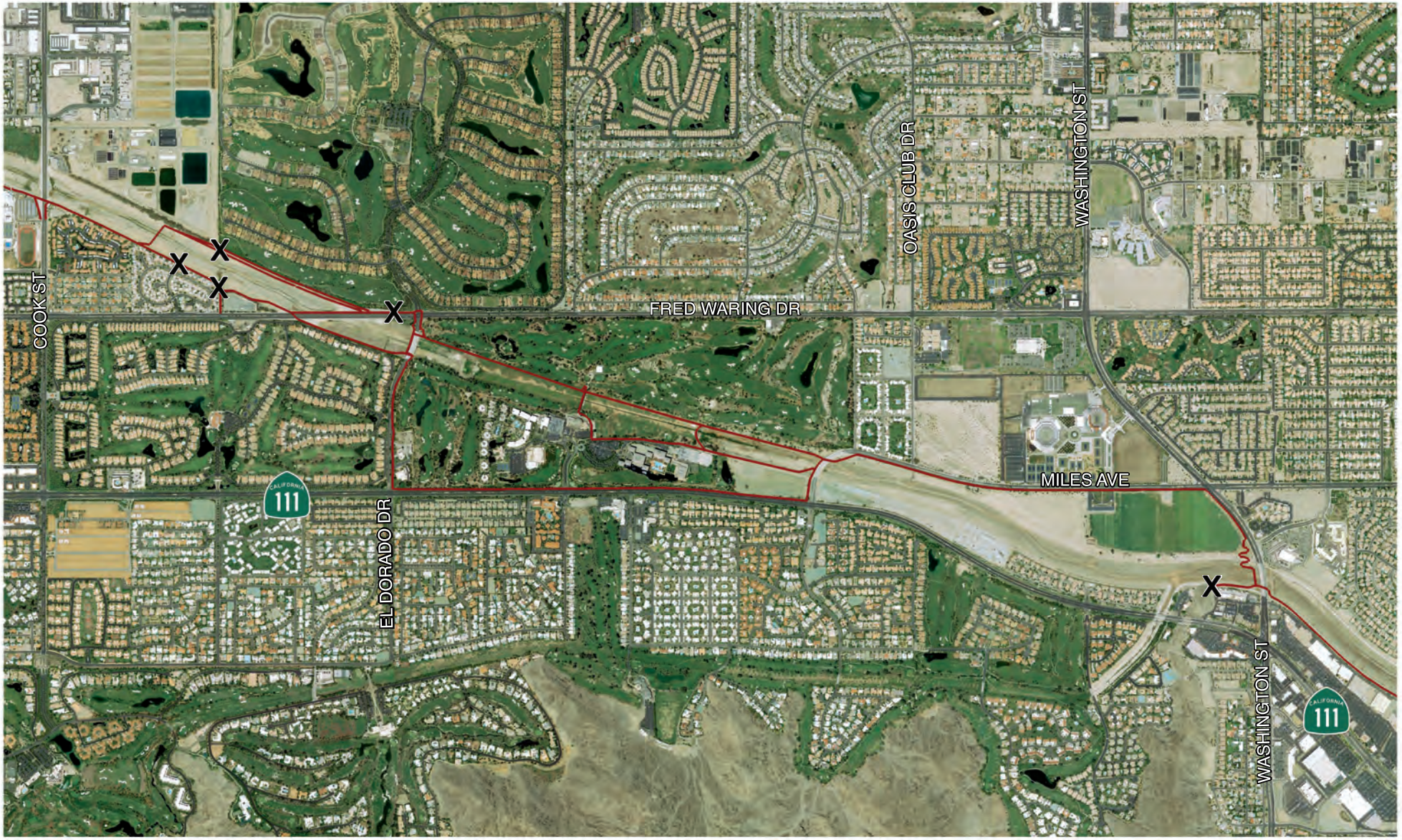
Indian Wells Segments Deleted

In addition to the Rancho Mirage segments that have been removed to result in the Proposed Project Alternative, Alternative 1 would also result in the deletion of the following alignments currently planned for this portion of the CV Link Route. These include:

- Right Bank of Wash Channel: extending from the intersection of the channel at Eldorado Drive southeast to Eldorado
- Left Bank of Wash Channel: extending from the intersection of Fred Waring Drive and Eldorado Drive south to the channel then and southeast along the north (left) bank of the channel, to an existing channel crossing and then east along the south (right) bank and through the resort hotel complex to the Miles Avenue bridge.
- Eldorado Drive and Highway 111: extends south from the intersection of Eldorado Drive and Fred Waring Drive along the east side of Eldorado to Highway111; then east on the north side of Highway 111 to the Miles Avenue bridge.
- Miles Avenue: an on-street facility extending from the Miles Avenue bridge over the Whitewater River to Washington Street and then south on the wash.
- Miles Avenue Right Bank: extends from the Miles Avenue bridge on proceeds east on the right bank of the wash to Washington Street.

Table 1-4
CV Link Indian Wells Segments
(Not a Part of Alternative 1)

6. Indian Wells[2] (left and right bank from Eldorado and Washington), Miles Ave and Hwy 111 **Not included in Alternative 1**	**From:** **Fred Waring Drive**	**To:** **Washington Street**	**42.7-47.9**	**4.1**	**Top of Levee** ***Right bank only and on Miles Ave paved section between Miles Ave bridge and Washington St.***
Whitewater River Channel (Left bank from Eldorado @ Fred Waring)	Fred Waring Drive	Eldorado Drive	42.7	0.6	Top of Levee
Fred Waring Drive (on sidewalk)	Fred Waring	Eldorado Drive	42.8-43.4	0.5	Sidewalk
Indian Wells Resorts Connections	Eldorado Drive	Miles Avenue via Highway 111	43.4-45.9	1.5	Mixed
Miles Avenue (Indian Wells Tennis Gardens Connection)	Miles Avenue	Washington Street (shared sidewalk/roadway down to Washington St. Undercrossing)	45.6a-47.9	1.5	Sidewalk or Within Right-of-way
Whitewater River Channel (Right Bank)	Miles Avenue	Washington Street	45.3-47.5a	1.5*	Mixed



Source: Google Earth, 2017

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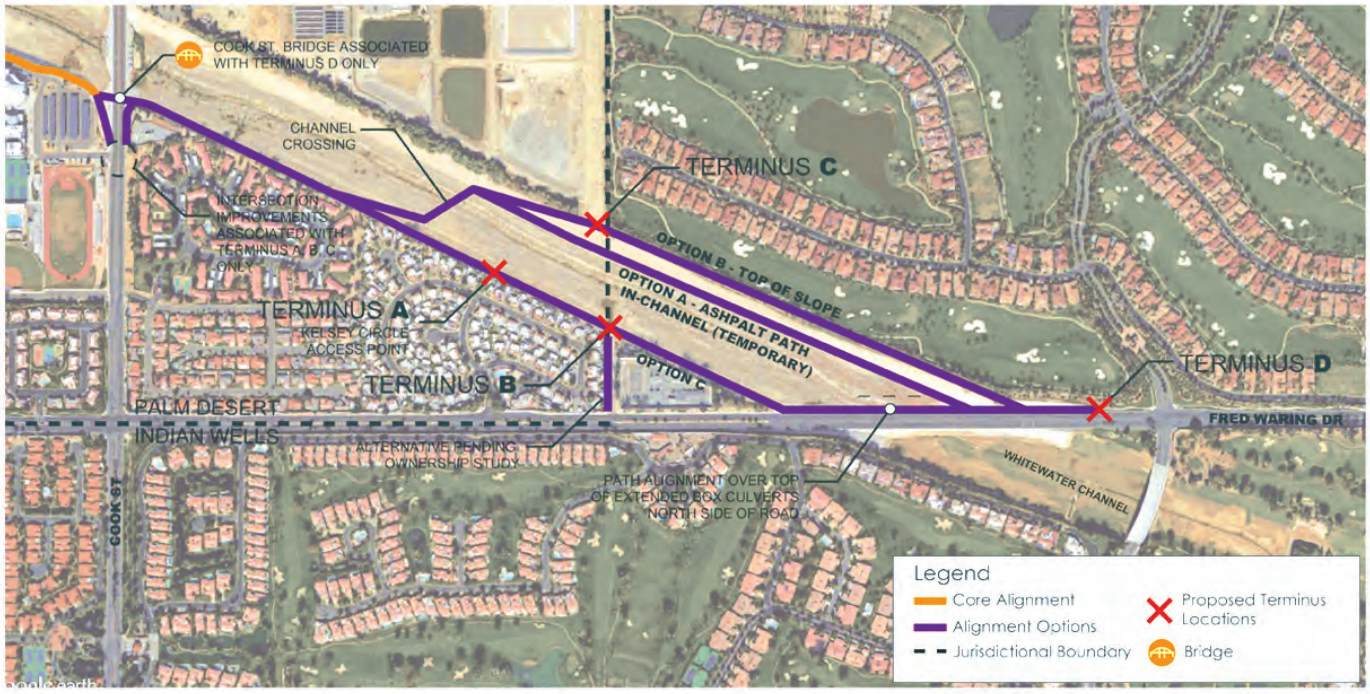
CV Link Project
Indian Wells Termini Overview
Coachella Valley Association of Governments

CV/LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Exhibit
20

Indian Wells Eastern Terminus

Indian Wells Western Terminus



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Source: CVAG, 2016

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CV Link Project
Indian Wells Termini
Coachella Valley
Association of Governments

CV LINK CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit

21

1-4.3 Alternative 2: Project With All Eight Cities (Full Project)

Alternative 2 evaluates the environmental impacts associated with a complete and full buildout of CV Link through all of the incorporated cities and unincorporated county and Native American lands from Palm Springs to Coachella. It evaluates all of the prospective route alignments, including those that pass through the cities of Indian Wells and Rancho Mirage. This alternative, therefore, evaluates a 49± mile long route and a total of 64.3± miles of alignments. It is essentially the same as the Proposed Project Alternative but with Rancho Mirage and Indian Wells alignments included. Please see Exhibits 3 through 16 above and Appendix D: Project Planning Area Maps for a comprehensive mapping of all CV Link alignments extending from Palm Springs to Coachella, including those planned for the cities of Rancho Mirage and Indian Wells.

1-4.4 Alternative 3: No Build/No Project

Under the No Build/No Project Alternative, the existing multi-modal network within the CV Link project area, which largely consists of a fragmented system of sidewalks, trails, and bike paths, will continue to provide current levels and types of service and facilities. The existing conditions will continue to lack an integrated multi-modal transportation facility from the City of Palm Springs to the City of Coachella within Coachella Valley and continue to deteriorate the levels of service. On-going maintenance costs will continue to rise due to inconsistent construction materials (i.e., concrete vs. asphalt) of existing facilities within communities; requiring various types of equipment to maintenance facilities. In addition, the various types of equipment also need scheduled maintenance, which adds to higher costs. Air quality would worsen under the No Build/No Project Alternative because a fragmented system of sidewalks, trails and bike paths would encourage users of these facilities to drive instead, further emitting vehicle emissions into the air.

The No Build/No Project Alternative will also have indirect impacts to the economy. Having an existing condition of fragmented sidewalks, trails and bike paths discourages economic development investments in the area, which further deteriorates the economy because users would not be attracted to the area as much.

Several smaller fixes may create cumulative impacts if developed in a piecemeal fashion in each individual jurisdiction planning documents, however the facilities may continue to be disjointed and limit intra-city access, therefore, creating a lack of connectivity within a community itself. A lack of lack of connectivity to other jurisdictions can be also be expected to create a poor user experience if the piecemeal fixes are inconsistent in planning, design and infrastructure.

The No Build/No Project Alternative would not enhance connectivity between major employment, residential, recreational, and institutional centers. In addition, it would not promote the use of alternative modes of transportation, including walking, bicycles, mobility assistance devices, and low-speed electric vehicles (LSEVs). The No Build/No Project Alternative would leave the existing path disjointed and would not provide continuous multi-modal travel between communities because existing off-street paths will continue to be unimproved.

It should be noted that the No Build/No Project Alternative would not meet the project's transportation goals and objectives, including the creation of an interconnected multi-modal transportation facility, limiting conflict between motor vehicle traffic and alternative modes of transportation, and supporting "safe routes to schools."

1-5 PERMITS AND APPROVALS NEEDED

Table 1-5 lists the following permit and approvals that will be required to implement CV Link.

Table 1-5
Required Permits and Approvals

Agency	Permit/Action Required	Status
U.S. Army Corps of Engineers	Section 404 permit for impacts to waters of the United States	Submitted, Pending Review
U.S. Environmental Protection Agency	401 Certification for impacts to federal/tribal lands, pursuant to the federal Clean Water Act	Submitted, Pending Review
California Regional Water Quality Control Board, Region 7	401 Certification for impacts to non-federal lands, pursuant to the federal Clean Water Act	Approved August 11, 2017
California Department of Fish and Wildlife	Section 1600 Streambed Alteration agreement	Application deemed complete on October 3, 2017, pending formal agreement
U.S. Fish and Wildlife Service	Section 7 permit – Casey's June Beetle	Submitted, Pending Review
Coachella Valley Water District	Easements or encroachment permit	Pending final design plans
Riverside County Flood Control & Water Conservation District	Easements or encroachment permit	Pending final design plans
NPDES MS 4 Permits	Order No. 2012-011-DWQ (as amended by Order WQs 2014-0006-EXEC. 2014-0077-DWQ and 2015-0036-EXEC.) NPDES No. CAS000003, NPDES Statewide Storm Water Permit Waste Discharge Requirements for State of California, Department of Transportation. *(for properties within Caltrans right of way)* Order No. R7-2013-0011, NPDES No. CAS617002. Discharges from the Municipal Separate Storm Sewer System (MS4) within the Whitewater watershed *(for properties within county and incorporated cities within the Whitewater Watershed including the Agua Caliente Band of Cahuilla Indians)* Federal Agency specific Water Quality Management Plans *(for properties within Federal Lands, aka BLM).* May not be applicable; no BLM or other federal lands involved. EPA NPDES permit & construction permit *(for tribal lands except for Agua Caliente Band of Cahuilla Indians)*	Pending final design plans

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

As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- Coastal Zone
- Relocations and Real Property Acquisitions

2-1 HUMAN ENVIRONMENT

2-1.1 LAND USE

LAND USE

Federal
The federal government (US Fish and Wildlife Service) has issued an "incidental take" permit pursuant to Section 10(a) of the federal Endangered Species Act (ESA) for species covered under the Coachella Valley Multiple Species Habitat Conservation Plan. There is one segment of the CV Link project that interfaces with conservation lands managed under this plan. These impacts are further discussed in Section 2-3: Biological Environment section of this document.

State
The State of California is also a participating agency under the Coachella Valley Multiple Species Habitat Conservation Plan, and has a role in regulating land use based upon a Natural Communities Conservation Plan (NCCP) as a part of the overall MSHCP. The state has other regulatory roles associated with the protection of water quality and jurisdictional waters of the state. These resources and potential CV Link impacts are discussed in Section 2-2.1 and 2-2.2, Hydrology and Water Quality sections of this document, respectively.

Regional
On April 7, 2016, the Southern California Association of Government's (SCAG) Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS or Plan). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals.

The Proposed Project Alternative is included in SCAG's Final 2017 Transportation Improvement Program (FTIP). The FTIP is prepared to implement projects and programs listed in the Regional Transportation Plan (RTP) and is developed in compliance with state and federal requirements. County Transportation Commissions have the responsibility under State law of proposing county projects, using the current RTP's policies, programs, and projects as a guide, from among submittals by cities and local agencies. The locally prioritized lists of projects (including CV Link) are forwarded to SCAG for review. From this list, SCAG develops the FTIP based on consistency with the current RTP, inter-county connectivity, financial constraint and conformity satisfaction.

Local
The various community General Plans, including that of Riverside County, are the primary local planning documents regulating land uses on non-federal lands in the Coachella Valley. The following sets forth goals, policies and programs from each jurisdiction's General Plans that are part of the project and relevant to the CV Link project.

Riverside County

Land Use Element

LU 1.5 The County of Riverside shall participation in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, watershed and habitat management, with cities, local and regional agencies, stakeholders, Indian nations, and surrounding jurisdiction.

LU 3.1 d. Create street and trail networks that directly connect local destinations, and that are friendly to pedestrians, equestrians, bicyclists, and others using non-motorized forms of transportation.

LU 3.1 g. Provide the opportunity to link communities through access of a multi-modal transportation systems.

LU 32.9 Integrate pedestrian, equestrian and bicycle-friendly street and trail networks connecting community centers with surrounding land uses.

LU 11.4 Provide options to the automobile in communities, such as transit, bicycle and pedestrian trails, to help improve air quality.

LU 13.4 Incorporate safe and direct multi-modal linkages in the design and development of projects, as appropriate.

LU 14.2 Incorporate riding, hiking, and bicycle trails and others compatible public recreational facilities within scenic corridors.

LU 20.14 Encourage the use of alternative non-motorized transportation and the use of non-polluting vehicles.

LU 25.2 Provide for a balanced distribution of recreational amenities.

LU 28.5 Integrate a continuous network of parks, plazas, public squares, bicycle trails, transit systems and pedestrian paths into new communities and developments to provide both connections within each community and linkage with surrounding features and communities.

Circulation Element Policies

C 15.6 Provide, where feasible, the construction of overpasses or undercrossings where trails intersect arterials, urban arterials, expressways, or freeways.

Open Space Element Policies

OS 17.3 Enforce the provisions of applicable MSHCP's, when developing transportation or other infrastructure projects that have been designated as covered activities in the applicable MSHCP.

C 11.6 Promote development transit centers and park-n-rides for use by all transit operators, including development of multi-modal facilities.

Riverside County Eastern Coachella Valley Area Plan Policies

ECVAP 14.1 Implement the Trails and Bikeways System, as discussed in the Non-motorized Transportation section of the General Plan Circulation Element.

ECVAP 14.2 At signalized intersections special equestrian push buttons (located at heights usable by persons riding on horseback) will be considered and installed where appropriate. Priority shall be given to those signalized intersections identified as trail crossings.

ECVAP 14.3 A resources permit consideration should be given to the placement of signs along those public rights-of-way identified as regional or community trail alignments alerting motorists to the possible presence of equestrian, bicycle and pedestrian (i.e., non-motorized) traffic.

Palm Springs

Land Use Element Policies

LU1.12 Ensure that land uses maintain and expand parks, recreational trails, bikeways, and pedestrian corridors and linkages throughout the City and between Palm Springs and adjacent municipalities.

LU7.8 Provide and maintain a variety of outdoor recreational opportunities and venues and encourage the development of ecotourism.

LU8.5: Provide pedestrian links from the commercial, office, and retail uses within mixed/multi-use areas to minimize vehicular traffic.

LU9.11 Promote recreational use through the development of a system of trails. Pursue easements or other mechanisms to ensure long-term viability and access to existing trails and trailheads.

Cathedral City

Land Use Element

Goal 2 A land use plan and pattern that preserves and enhances the integrity of neighborhoods, districts and corridors, while optimizing the community's natural assets, regional transportation systems, and opportunities for housing, employment and economic base-building.

Circulation Element Policies

Goal 2 Policy 1 The City circulation system shall be planned and developed to assure the provision of safe and efficient vehicular, pedestrian and bicycle access to all parts of the community, effectively linking residents and visitors to the full range of residential, employment, shopping, an recreational land uses.

Goal 2 Policy 2 Transit stops and pedestrian and bicycle paths should be sited in the a manner which encourages the use of alternatives modes of transportation and provides safe, convenient access to commercial and employment centers, as well as institutional and recreational uses.

Rancho Mirage

Circulation Element Polices

Goal 1 A safe, efficient, attractive, and economical circulation network meeting current and future demands in a manner consistent with the resort residential character of the community.

Policy 6 The City shall actively participate in a wide range of regional transportation planning and programs to improve the capacity, efficiency, and safety of the shared circulation system.

Policy6.A Regularly coordinate with other local agencies regarding their plans, programs, and services that affect the quality and safety of the Rancho roadway system.

Policy 7 The City shall develop a system of continuous and convenient bicycle routes and multi-use trails to places of employment, shopping centers, schools and other high activity areas; as well as a golf cart transportation program.

Program7.A Incorporate design standards and guidelines for bicycle routes and associated facilities such as bike racks and route signs.

Program7.B Maintain and expand a golf cart transportation program that will provide a safe and convenient means of golf cart access to golf course and neighboring uses within the City of Rancho Mirage.

Palm Desert

Land Use Element Policy

Goal 1 A sustainable and environmentally responsible transportation and circulation system that provides a wide range of facilities and transportation options that move people, vehicles and goods in an efficient, safe and economical manner.

Circulation Element Policy

Policy 8 The City shall continue its efforts to develop and facilitate the use of continuous and convenient bicycle routes and multi-use trails to places of employment, recreation, shopping, schools, and other.

Parks and Recreation Element Policy

Policy 11 The City shall provide open space trails that provide City residents and visitors access to undisturbed desert and mountain environments, while preserving these resources, including sensitive plant and animal species, in their natural environments.

Program 11.A The City shall explore and pursue opportunities to develop an expanded trails system and to obtain trail corridors where possible and feasible.

Program 11.B The City shall review development proposals for opportunities to integrate parks, plazas, squares, and other open spaces areas that allow and facilitate public use and social interaction.

Program 11.C The City shall participate in and encourage regional trail planning efforts and cooperate with agencies and cites.

Indian Wells

Circulation Element Goals

Goal IIC2 Provide Indian Wells' residents with a choice of travel modes

Circulation Element Policies

IIC2.4 Encourage new development to provide internal bike paths and pedestrian ways where feasible and where natural features make paths desirable. Require that such paths link with the citywide path system.

IIC2.5 Work with neighboring jurisdictions to provide an interconnected system of pedestrian ways, bikeways, and golf paths.

IIC3.4 Encourage the use of alternatives modes of transportation including public transit, ride sharing, golf carts, and walking.

IIC3.S Improve pedestrian, golf cart and bicycle connections from residential neighborhoods to retail centers, hotels, and schools.

La Quinta

Land Use Element Policy

Policy LU3.3a Provides incentives in the Zoning Ordinance for creative and high quality development; projects that reduce the dependence on automobiles; projects that incorporate trails and paths for pedestrians and bicycles; projects that incorporate transit and alternative transportation facilities into their designs.

Circulation Element Polices

Goal CIR2 A circulation system that promotes and enhances transit alternative vehicles, bicycles, and pedestrian networks.

Policy CIR2.2 Encourage reduction of greenhouse gas (GHG) emissions by reducing vehicles miles traveled and vehicle hours of delay by increasing or encouraging the use of alternatives modes of transportation technologies, and implement and manage a hierarchy of Complete Street multimodal transportation infrastructure and programs to deliver improved mobility and reduce GHG emissions.

Policy CIR2.3 Develop and encourage the use of continuous and convenient pedestrian and bicycle routes and multi-use paths to places of employment, recreation, shopping, schools, and other high activity areas with potential for increased pedestrian, bicycle, golf cart/NEV modes of travel.

Indio

Land Use Element Policies

Goal LU-8 To plan land areas for the provision of public and quasi-public services, such as schools, libraries, police, and fire facilities, utilities, government centers and other related facilities that are of a size and location to efficiently serve the current and future population of Indio.

Goal LU-9 To provide a range of active and passive recreational areas as well as provide areas for the preservation of the natural environment.

Goal LU-10 Provide areas in the community that encourage the combination of commercial, medium/high density residential, and active and passive open space uses within an area to create a vibrant village atmosphere dominated by pedestrian orientated land uses.

Coachella

Land Use Policy

3.2 Walkable streets. Regulate new development to ensure new blocks encourage walkability by maximizing connectivity and route choice, create reasonable block lengths to encourage more walking and physical activity and improve the walkability of existing neighborhood streets.

3.3 Pedestrian barriers. Discourage physical barriers to walking and bicycling between and within neighborhoods and neighborhood centers. If physical barriers are unavoidable, provide safe and comfortable crossings for pedestrians and cyclists. Physical barriers may include arterial streets with speed limits above 35 mph, transit or utility rights- of-way, very long blocks without through-streets, and sound walls, among others.

5.1 Complete neighborhoods. Through the development entitlement process, ensure that all new Neighborhoods (areas with a "Neighborhood" General Plan Designation) are complete and well-structured such that the physical layout and land use mix promote walking to services, biking and transit use; develop community identity and pride, are family friendly and address the needs of multiple ages and physical abilities.

Circulation Element Policy

Goals 3 Pedestrian Network. A safe pedestrian network that provides direct connections between residences, employment, shopping and civic uses.

Policy 3.6 Pedestrian only areas. Promote the closure of streets on a recurring basis to create temporary pedestrian zones for Community Events, such as farmers markets, community events, ciclovías (bicycle and pedestrian events), and other events consistent with the walking and biking environment policies of the Mobility Element. Leverage the momentum of other regional bike events, such as Tour de Palm Springs, to create events locally.

Policy 3.7 Neighborhood connectivity. Create bicycle and pedestrian connections through existing residential neighborhoods, providing access to adjacent neighborhoods and external bicycle/pedestrian facilities.

Goals 4. Bicycle Trail Network. A bicycle and multi-use trail network that facilitates bicycling for commuting, schools, and shopping and recreational trips.

Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP)

The project area of the CV Link is located within the planning area for the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a regional conservation plan coordinated by the Coachella Valley Association of Governments through Coachella Valley Conservation Commission (CVCC) in cooperation with its member jurisdictions and several state and federal agencies. The latter include the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), the National Park Service (NPS), Bureau of Land Management (BLM), and U.S. Forest Service (USFS). The MSHCP planning area is comprised of approximately 1.1 million acres in the Coachella Valley, including the project planning area.

The Coachella Valley MSHCP includes land use and development regulations and guidelines applicable to lands within and in proximity to a Conservation Area. These include Land Use Adjacency Guidelines that are designed to minimize impacts to protected species and their habitat. In this area, the CV Link alignments include one within the floodplain but at the very toe of the concrete-lined side levee slope protection. With adherence of CV Link development to the MSHCP guidelines, there will be no adverse impacts to MSHCP-managed lands.

Native American Lands

Several of the proposed routes and alignments of the pathway are located on lands that are under the jurisdiction of one of three Native American Tribes: the Agua Caliente Band, the Twenty-Nine Palms

Band and the Cabazon Band. Within their respective reservation boundaries, properties are designated as “Trust” or “Tribal”, “Allottee”, or “Fee”. Fee lands are those parcels owned in fee simple by non-Indians; Allotted lands are parcels owned by Tribal members either in trust or in fee; and Tribal parcels are owned by the Tribe as a government, corporation, or organization, and held either in trust by the United States or in fee (“Tribal Lands”). The Tribes have entered into a land use contract with the cities and county for certain Tribal lands located within its jurisdictional boundaries. In many instances, Tribal authorities are also assisted by the US Bureau of Indian Affairs in the review and approval of leases, easements and similar permitting, as well as the US EPA in the enforcement of the Clean Water Act and other environmental processing and clearances on Native American Lands.

AFFECTED ENVIRONMENT

Coastal Zone

The Proposed Project Alternative is located in the Coachella Valley, which is approximately 68 miles east of the Pacific Ocean. CV Link would not be located in a coastal zone and would not require coastal permits. No further discussion is required.

Wild and Scenic Rivers

The Proposed Project Alternative will be constructed on the levees of the Coachella Valley’s main watercourses. The proposed CV Link will not be located in the vicinity of a Wild and Scenic River or a river under consideration for a Wild and Scenic River. No further discussion is required.

Existing and Future Land Use

CV Link largely follows the levees of the region’s principle watercourses, including Chino Wash, the Whitewater Floodplain, Tahquitz Creek, the Whitewater River Stormwater Channel and the Coachella Valley Stormwater Channel. In some locations, CV Link will share rights-of-way with public roads thus providing direct access to key commercial districts, employment centers and recreational and institutional venues. These public roads include a limited portion of State Highway 111 in Palm Springs, Rancho Mirage and Indian Wells, East Riverside Drive, Sunrise Way, San Rafael Drive and El Cielo Road in Palm Springs, Parkview Drive, Monterey Avenue, Magnesia Falls Drive and Fred Waring Drive. Transportation impacts are discussed in detail in Section 2-1.8 and in Exhibits 4 through 17, and Appendix D – Project Planning Area Maps.

Single and multi-family residential, retail commercial, professional offices, a mix of industrial uses, and golf course and other open space lands are the assortment of land uses that surround the CV Link alignment. In the west and central valley, the proposed route will largely border drainage facilities, open space, residential developments and public streets. While residential developments continue to be a prominent land use in the eastern valley, light industrial, wastewater facilities and agricultural lands also occur along the route.

The section below discusses the existing land uses that pertain to the project planning area. Also please see Exhibits 1 through 16 and Appendices D and E, which show the CV Link planning area in detail. Socio-economic data and information is also provided in Section 2-1.4: Community Impacts. The following summarizes the existing and planned land uses along and in proximity of the CV Link route.

<u>Palm Springs</u>
The CV Link alignments in Palm Springs, including one set of alignment variations along the Whitewater Floodplain, are consistent across all build alternatives. The northwest terminus at the Palm Springs Visitor Center is generally bound by vacant lands/open space lands (including floodplains) and residential development. Other land uses along this segment include DeMuth Park, single-family subdivisions, Tahquitz Creek municipal golf course, a now-defunct golf course (Belair Greens), and drainage facilities.

This north Palm Springs segment terminates at the Palm Springs Visitor Center and is surrounded by expanses of varying desert lands, including the conserved open space of Chino Cone and the Whitewater Floodplain.

Farther east and following the WWR Channel, surrounding land uses include the wash and a mix of residential and light industrial lands. South of Vista Chino and along the top of channel the route passes the Escena golf club community, the Dream Homes community, and the Cimarron golf course. South of Ramon Road to the confluence with Tahquitz Creek, CV Link passes along the top of the levee of the WWR Channel, along vacant Agua Caliente Band of Cahuilla Indians (ACBCI) lands, single-family development and the northern portions of the Cathedral Canyon golf course in the wash.

The west terminus of the south Palm Springs route ends at South Palm Canyon Drive and is generally surrounded by retail commercial, service industrial, residential development and the Tahquitz Creek Channel. East of Sunrise Way, CV Link generally follows or passes near the Tahquitz Creek Channel, Mesquite Country Club and Tahquitz Creek Golf Club, groundwater recharge basins, a water park, condominiums, and the Tahquitz Creek Stormwater Channel. The project proposes to develop a multi-modal pathway (concrete) on-top of existing levees and rights of ways. (See exhibits 4-7, and 15).

Cathedral City

The CV Link alignments in Cathedral City are consistent across all build alternatives. At the confluence of Tahquitz Creek and the Whitewater River, CV Link offers three alignment variations east and southeast. Two alignment variations border or pass through the Cathedral Canyon golf course north and south of the wash. Adjoining land uses include the golf course, wash, multi-family residential and resort. The southern alignment passes through/between single- and multi-residential neighborhoods and an area of light industrial development. Both the golf course/wash routes continue through the Cathedral City's urban core, characterized by commercial and office/professional land uses. These alignments also rejoin just east of Date Palm Drive and continue east along the south/right bank of the Whitewater River proceeding the city limits. The project proposes to develop a multi-modal pathway (concrete) on-top of existing levees and rights of ways. (See exhibits 5-7).

Rancho Mirage

The CV Link Proposed Project Alternative does not include the City of Rancho Mirage alignments; however, Alternative 2 does include Rancho Mirage. In the vicinity of the two prospective West Termini, land uses in Rancho Mirage are limited to commercial and stormwater channel, and attached single-family development at the northwest corner of Da Val Drive and Frank Sinatra Drive, which back onto the stormwater channel. The Wolfson Park is located at the southeast corner of these two streets. In the central portion of the CV Link alignments in Rancho Mirage, other land uses include golf courses, Highway 111, WWR Channel, City Library, parklands, multi-family developments and an assortment of community and neighborhood-scale commercial development. The one East Terminus is proposed at the intersection of Highway 111 and Parkview Drive, where surrounding lands are fully developed with regional and community commercial services in both Rancho Mirage and Palm Desert. (See exhibits 8, 18-19).

Palm Desert

The Parkview Drive alignment is generally surrounded by residential, general commercial and professional office land uses. CV Link extends east to and passes through the College of the Desert campus, and also extends north along Monterey Avenue to Magnesia Falls Drive and thence east along gated golf course residential on the north and college and public open space lands (Civic Center Park) to the south. Magnesia Falls land uses include mobile home park, Lincoln Elementary School and multi- and single-family neighborhoods. Magnesia Falls Drive connects to the Whitewater River at Deep Canyon Drive, where the Link will continue along the southern (right) channel bank to Palm Desert High School. The route continues along the southern bank of the Whitewater River to the city limits, passing

residential development and the wash. (See exhibits 9 and 10).

Indian Wells

For the Proposed Project Alternative and Alternative 2 in Indian Wells, CV Link alignments continue along the south bank of the WWR Channel, crosses the wash north of Fred Waring Drive to Eldorado Drive, passing residential lands and a Southern California Edison (SCE) substation. The route splits south of Eldorado Drive to continue east along the north bank of the wash and golf course, and also south along Eldorado Drive past gated residential and the City Civic Center and a fire station to Highway 111. Proceeding east along the north side of Highway 111, land uses adjoining this alignment include gated single-family residential on the south side of the highway, and walled municipal golf course and resort hotel development on the north side and closest to the alignment. Future resort hotel and commercial is also approved on currently vacant land east of the resort hotel complex and extending beyond the Miles Avenue bridge. These two alignments continue east of the bridge, one along the south side of Miles Ave in proximity to homes, the Indian Wells Tennis Garden, turf farm and vacant lands. The second route continues along the south (right) bank of the WWR Channel, passing nearby residential and commercial uses to Washington Street. (See exhibits 9, 10, 20 and 21).

As previously discussed, Alternative 1 proposes termini at the western and eastern boundaries of Indian Wells. In the vicinity of the west termini, land uses include single family residential, the WWR Channel, and a SCE substation. Land uses surrounding the eastern terminus are predominantly commercial/retail and open space.

La Quinta

CV Link facilities in La Quinta are the same for all build alternatives. The majority of the La Quinta CV Link alignment is located along the south (right) bank of the Coachella Valley Stormwater Channel and would extend from Washington Street east to the La Quinta city limits east of Jefferson Street. The alignment is bordered by a mix of predominantly regional and community-scale commercial developments on the west, with limited single-family residential backing onto CV Link on the eastern portion of the alignment east of Jefferson Street. (See exhibits 10 and 11).

Indio

All of the Indio CV Link alignment is located along the south (right) bank of the Coachella Valley Stormwater Channel and is bordered by a mix of single-family residential, with limited service commercial and light industrial along the central portion of the Indio alignment. Land uses along and near the eastern portion of the route include single-family, parklands, agricultural-industrial, high school, service industrial and water treatment facilities, and vacant agricultural lands. (See exhibits 11-13).

Coachella, County of Riverside

The majority of the CV Link alignment through unincorporated Riverside County is located along the Coachella Valley Stormwater Channel straddling the Indio and Coachella city limits. In this area CV Link is bordered by a mix of service industrial and fallow agricultural lands. South of Dillon Road to Avenue 56, the route passes agricultural lands, an auto wrecking yard, scattered single-family agriculture-industrial, water treatment facilities and vacant and active agricultural lands. The subject core alignment terminates at Airport Boulevard. (See exhibit 14).

Parks and Recreational Facilities

Parks and other recreation areas and resources may qualify as special resources pursuant to Section 4(f) of the 1966 US Department of Transportation Act. A total of 22 parks and trails occur in proximity to CV Link that may qualify as 4(f) resources. Mapping and descriptions of these resources are provided in Appendix A of this EA.

City of Palm Springs

Desert Highland Park: will be provided direct access to the main Link segment planned on the adjacent Whitewater Floodplain levee. This 18-acre park includes the James O. Jessie (JOJ) Unity Center, which offers a variety of recreational, health and education programs to the community.

DeMuth Park: CV Link improvements at the 61-acre DeMuth Park will occur along existing roads and paved paths, as well as along and atop the soon to be rebuilt Tahquitz Creek flood control levee. DeMuth Park has several ball fields, soccer fields, tennis courts, and other amenities.

Sunrise Park: The 38-acre Sunrise Park is located approximately 0.4 miles north of the Tahquitz Creek CV Link alignment. This diverse park includes Palm Springs Swim Center, Mizell Senior Center, skateboard park, the Palm Springs Minor League baseball stadium, the main branch of the City Library and expanses of landscaped open space.

Tahquitz Creek/Bud Furer Trails: Both of these trails occur in proximity to and portions will become a part of the overall CV Link facility, which extends from South Pam Canyon Drive at Tahquitz Creek and proceeds east along existing and planned pathways to the confluence with the Whitewater River.

Jenkins Trail: is an existing trail extending from the confluence of the Tahquitz Creek and Whitewater River on the west and Cathedral Canyon Drive on the east.

City of Cathedral City

Existing and future Whitewater River Bike Path: This currently limited facility will be expanded and have direct connections to CV Link. This is considered a Section 4(f) resource; please also see Appendix A.

Second Street Park: A small neighborhood park located a short distance west of the proposed route with a ball field, playground and tennis and pickle ball courts. This is considered a Section 4(f) resource; please also see Appendix A.

Cimarron Golf Course: The approved Whitewater River bike path project will parallel CV Link and will be located atop the flood control levee, with the southern portion paralleling the existing Cimarron Golf Course, a public play facility. This is not a Section 4(f) resource.

Cathedral Canyon Golf Course: Two CV Link alignments would pass through or along portions of this golf course, which is also lined by condominiums on the south and a resort hotel on the north sides of the channel, portions of which have been developed for golf. Link routing through and near these facilities appears to avoid potentially significant conflicts with play on the golf course. Consultation with the golf course owner will be necessary to ensure that impacts are minimized. This is not a Section 4(f) resource.

City of Rancho Mirage

Michael S. Wolfson Park: A 1-acre park that features a fountain, decorative lighting and benches. While the park could see some CV Link user visitation, there are no active recreation facilities in this park and it would serve only as a rest stop along the journey. This is considered a Section 4(f) resource; please also see Appendix A.

Butler-Abrams Trail: An asphalt trail that starts at the Wolfson Park and parallels the Whitewater Wash. CV Link would incorporate and enhance this existing facility via new paving to provide adequate use for the increase in users. This is considered a Section 4(f) resource; please also see Appendix A.

Rancho Mirage Community (Whitewater) Park: CV Link will traverse through the northern boundary of the 8.25 acre park. Facilities in the park include tennis, basketball, racquetball/handball courts, a playground and picnic facilities. An increase use will occur because of the CV Link, even so he park accommodates community events such as the Rancho Mirage Art Affaire which attracts many people

without adversely affecting the park. This is considered a Section 4(f) resource; please also see Appendix A.

Blixseth Park: is a local park located east of the Magnesia Storm Channel off Mirage Road and provides several walking paths and benches to observe desert and mountain vistas. This park is offers visitors an opportunity to observe the natural beauty of the desert. CV Link would be complementary to the park since it would provide park users an alternative form of transportation. This is considered a Section 4(f) resource; please also see Appendix A.

City of Palm Desert and College of the Desert

Palm Desert Civic Center Park: The route will pass the northwestern boundary of the 70-acre regional park. CV Link would be complementary to the park by providing a safe multi-modal access to the existing facilities. This is considered a Section 4(f) resource; please also see Appendix A.

Palm Desert Community Park: A small neighborhood park that has a joint-use relationship with the Desert Sands Unified School District. The park utilized by the Abraham Lincoln Elementary and the Palm Desert Middle School for recreational purposes. A slight increase in use may occur yet these users will create a substantial impact to the existing facilities. This is considered a Section 4(f) resource; please also see Appendix A.

Campus of the College of the Desert: The campus includes athletic facilities such as ball fields, football field and tennis courts. These facilities are not open to the public and access is limited to the public. This is not a Section 4(f) resource.

City of Indian Wells

Indian Wells Golf Resort: A municipally owned facility open to the public. The Route will pass through and provide direct access to this public golf course. Two CV Link alignments would pass through and near this facility while avoiding potentially significant conflicts with golf play. This is considered a Section 4(f) resource; please also see Appendix A.

City of La Quinta

Pioneer Park: A small neighborhood park located approximately 0.25 miles from CV Link on the east side of Washington Street. This park is limited in size and amenities, and location of the park would make it difficult for CV Link users to conveniently visit the park. This is considered a Section 4(f) resource; please also see Appendix A.

City of Indio

Jackson Park: provides neighborhood-serving recreational amenities, including ball fields, tennis and basketball courts, as well as playground equipment. As a planned access point, the park has the potential for visitation and use by CV Link travelers. This is considered a Section 4(f) resource; please also see Appendix A.

Yucca Park: A small neighborhood facility located some distance south of the Link alignment and is unlikely to attract CV Link users. This is considered a Section 4(f) resource; please also see Appendix A.

City of Coachella

Sierra Vista Park: A small neighborhood park with a basketball court, a small playground equipment and landscaped open space. Visitation by CV Link users to this park is expected to be limited. This is considered a Section 4(f) resource; please also see Appendix A.

ENVIRONMENTAL CONSEQUENCES

Pathway widths will vary along the CV Link route depending upon the availability of right of way and other physical constraints and opportunities. The pathway width will range from 14 feet to 30 feet. The pathway will pass in proximity to lands that are developed and/or designated for residential uses. It should also be noted that transportation is also integral to a functioning land use pattern. Therefore, the relationship between CV Link and surrounding land uses and land use plans and regulations is ideally complimentary. The following discusses land uses and plans that may be affected by the construction and operation of all segments of CV Link, including the Proposed Project Alternative and all build alternatives.

It should be noted that Alternative 3, the No Build/No Project Alternative would have no impact on existing land uses because CV Link facilities would not be built.

Consistency with State, Regional and Local Plans

City of Palm Springs

The CV Link alignments in Palm Springs are consistent across all build alternatives. In the vicinity of Highland Park, CV Link improvements will extend south of the flood control levee to the north end of existing park improvements and its construction will have little or no effect on park facilities or activities. As a community park, Desert Highland Park is meant to provide services for great numbers of residents. CV Link, at this northern alignment, can be constructed without adversely affecting any adjoining land uses, but is likely to modestly increase use of the park but largely as a place to break and take in the dramatic landscape. Since potential additional use by CV Link users is expected to be primarily from residents of and visitors to the area, the increase is not anticipated to be substantial.

Residences within a portion of the Four Seasons residential community backup onto the Whitewater Floodplain levee, where three CV Link alignments are proposed. The first would occur between the residences' block wall and the levee, the second would be atop the levee (which would afford views into backyards), and the third would be located at the bottom of levee slope protection in the floodplain. These homes are separated from the prospective CV Link alignments by a six-foot decorative block wall and Link construction can be accomplished without having an adverse impact on the adjoining residences. Only the top of levee alignment would require the implementation of landscape screening to ensure compatibility with these residences, which would effectively mitigate potential impacts. It should be noted that the alignment planned at the base of slope protection and within the floodplain is within the boundaries of the Whitewater Floodplain Conservation Area established by the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) and potential conflicts with the MSHCP are discussed in Section 2-3.

An assessment was also conducted of the potential adverse effects of CV Link on public parks and recreation facilities. Primarily serving Palm Springs residents and visitors, and due to its distance (0.4 miles) north of the nearest CV Link alignment, Sunrise Park is expected to see limited and result in minimal additional use as a consequence of CV Link.

The Tahquitz Creek/Bud Furer Trails, as well as the Jenkins Trail, are already connecting Palm Springs neighborhoods and park amenities. CV Link construction will not adversely affect these trails, but will result in some trail enhancements, including widening and improvement of existing travel surfaces at a few locations. CV Link users are expected to increase the use of these facilities. However, the CV Link should be viewed as an expansion of this type of facility and will have a net positive benefit in increasing capacity via path widening for a broader mix of users. Therefore, the CV Link project will not result in the substantial deterioration of these trails or require the construction of new or expansion of existing trail facilities.

The City of Palm Springs supports the integration of multi-modal paths within the existing street rights of way wherever possible. Portions of CV Link will also be located within the Watercourse (W) Zone. Within this zone, the City allows trail facilities with an approval agreement, which is meant to ensure that the Proposed Project Alternative does not conflict with the flood control functions of these lands. In a few cases (see Appendix D), a CV Link alignment may pass in proximity to residences, where a buffer of distance and/or landscaping screen is provided. No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result from project development. Neither will the construction or operation of CV Link adversely affect existing or planned parks, trails or other public open space and recreation amenities. As noted, all project alternatives are the same in Palm Springs. Alternatives assessment summary for Palm Springs is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent with existing and planned land uses.
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent with existing and planned land uses.
Alternative 2 (With All Jurisdictions): Consistent with existing and planned land uses.
Alternative 3 (No Build/No Project): Consistent with existing and planned land uses.

City of Cathedral City

The CV Link alignments in Cathedral City are consistent across all build alternatives. In the City of the Cathedral City, CV Link alignments are primarily located in the Open Space-Water (OS-W) Zone. A recreational facility is permitted with the approval of a Conditional Use Permit. Segments paralleling the stormwater channel will pass condominiums and resort timeshares within the Cathedral Canyon Country Club, where a buffer of distance and/or landscaping screen will be provided. Farther southeast, the alignment runs along the channel and behind light industrial uses.

An assessment was also conducted of the potential adverse effects of CV Link on public parks and recreation facilities. Cathedral City alignments also follow smaller drainage facilities, which occur primarily in areas with commercial and light industrial land uses. The City's existing Jenkins Trail will not be affected and use of the trail will not be increased by the CV Link project. The use of the trail by existing residents and visitors will not substantially induce deterioration or require the construction of new or expansion of existing trail facilities.

No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result in Cathedral City from project development. Neither will the construction or operation of CV Link adversely affect existing or planned parks, trails or other public open space and recreation amenities. As noted, all project alternatives are the same in Cathedral City. Alternatives assessment summary for Cathedral City is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent with existing and planned land uses.
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent with existing and planned land uses.
Alternative 2 (With All Jurisdictions): Consistent with existing and planned land uses.
Alternative 3 (No Build/No Project): Consistent with existing and planned land uses.

City of Rancho Mirage

As noted above, the CV Link Proposed Project Alternative and Alternative 1 do not include City of Rancho Mirage alignments, and CV Link termini have been included to accommodate this transition (see Exhibit 15, above). In addition to removing Rancho Mirage, Alternative 1 also removes Indian Wells alignments, while Alternative 2 includes Rancho Mirage, Indian Wells and all of the other jurisdictions. Under the Proposed Project Alternative and Alternative 1, land uses in the vicinity of the two (A and B) Rancho Mirage West Termini are limited to commercial, park and stormwater channel, with the exception of the attached single-family development at the northwest corner of Da Vall Drive and Frank Sinatra Drive, which backs onto the stormwater channel.

Under Alternative 1, West-end terminus B brings CV Link users to a point across the street from Wolfson Park and the north end of the Butler-Abrams Trail, which are located at the southeast corner of these two streets (also see Exhibit 15: Rancho Mirage Termini). As discussed in the transportation analysis, a limited number of Link users would continue east, under the Proposed Project Alternative and Alternative 1 scenarios. Terminus A leaves CV Link users at a location with no particular destinations and limited options for proceeding eastward, and would therefore have the least impact on Rancho Mirage land uses.

Under Alternative 2, CV Link users could proceed east and west through Rancho Mirage on CV Link facilities, the westerly portions of which already exist as multi-modal paths along and within the Whitewater Channel and Class II bike lanes. Under this scenario, sensitive land uses include a mix of residential development on the south (right) bank and extending south from the Whitewater Channel to Country Club Drive limited large-lot residential backing up to the existing Butler-Abrams Trail and separated by fencing, walls and structures. Farther south, adjoining residential uses include a gated and walled duplex development and a mobilehome park also separated from the path by a block wall and landscaping. Portions of these residential lands are vacant or only partially developed large lots. As noted, all adjoining residential uses would be buffered from CV Link facilities by walls and fences, distance and landscape screening. CV Link will have no other impacts on sensitive land uses, and Alternative 2 also makes Rancho Mirage consistent with its own General Plan policies, including the following Circulation Element Policy, which is complementary to Land Use:

> *"The City shall develop a system of continuous and convenient bicycle routes and multi-use trails to places of employment, shopping centers, schools and other high activity areas; as well as a golf cart transportation program."*

CV Link impacts to surrounding land uses, including those to adjacent and nearby residences in Rancho Mirage, would be very limited.

The one Rancho Mirage East Terminus is proposed at the intersection of Highway 111 and Parkview Drive, where surrounding lands are fully developed with regional and community commercial services in both Rancho Mirage and Palm Desert. No substantial land use incompatibilities or conflicts with any applicable land use plan or policy will result in Rancho Mirage from project development.
Alternatives assessment summary for Rancho Mirage is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

<u>City Palm Desert</u>
Campus of the College of the Desert: A CV Link alignment will pass through the College of the Desert main campus on or along the existing campus ring road, providing important multi-modal student and faculty access to the campus, and also connecting the College to the Palm Desert Civic Center Park. These areas are zoned Public/Institutional (P) and the proposed facility is consistent with these institutional uses. The campus includes athletic facilities such as ball fields, football field and tennis courts. The public has limited access to these facilities, such as, during times when they are not in use by the College for sporting events. CV Link improvements would be located within existing on-campus streets and enhance multi-modal access to the College. CV Link will not result in the substantial deterioration or require the construction of new or expansion of existing park facilities or other recreational amenities.

The CV Link alignments in Palm Desert are consistent across all build alternatives. In Palm Desert, the route will utilize existing roadways and associated parkways along Parkview Drive, Monterey Avenue,

and Magnesia Falls Drive. East of Portola Avenue, the Link path will be within the Magnesia Falls Drive right of way and will pass by and serve the Lincoln Elementary School and Palm Desert Community Park. CV Link improvements on Monterey Avenue would occur within the existing 30±-foot parkway and would enhance the existing sidewalk. Magnesia Falls Drive improvements currently include a Class II pike path and meandering sidewalk within a 25±-foot parkway.

As the alignment moves east of Deep Canyon Drive (extended) it will be located in the Open Space-Waterway (OS/FW) District coterminous with the Whitewater Stormwater Channel. Recreational facilities are a permitted use within this district and as such CV Link will not conflict with any land use plans, polices, or regulations of the City of Palm Desert. West of Cook Street, CV Link passes the north end of Palm Desert High School, which is separated from the alignment by buffering land uses and a chain link fence. No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result in Palm Desert, the College of the Desert campus or the Lincoln Elementary of Palm Desert High School from project development. Alternatives assessment summary for Palm Desert (inclusive of the subject schools) is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

City of Indian Wells

Land uses adjoining and in proximity to CV Link alignments include recreational uses, tourist commercial, regional sports facilities and open space. All of these uses are compatible with and largely complementary to CV Link, generating potential Link users including residents and the City's many resort hotel visitors. No land use incompatibilities in Indian Wells have been identified in association with either the Proposed Project Alternative or Alternative 2.

Alternative 1 would allow for all CV Link alignments excepting those in Rancho Mirage and Indian Wells. In this instance and as described above, west and east-end termini have been designed to provide logical end points for CV Link alignments. The east terminus located on the south side of Highway 111 and at the city limits would tie directly into existing pedestrian and bike facilities in Indian Wells. No land use issues or incompatibilities are associated with this terminus. The four west-end termini are all located adjacent to or within the stormwater channel and would not adversely affect adjoining land uses in Indian Wells.

As described throughout, CV Link would place Link path flatwork, shade structures, restrooms and water fountains and signage within and along the WWR Channel. These improvements have been reviewed by the flood control agencies. Lands along and adjacent to the channel alignments include Watercourse (W), Open Space-Golf/Recreation (OS), Resort Commercial (RC), Community Commercial (CC) and Medium Density Residential (R-MD). Other alignments are primarily on-street and include those along Eldorado Drive, Highway 111, Miles Avenue and Washington Street. There are existing Class II bike lanes and a parkway ranging between 20 and 30 feet in width along Eldorado that will be enhanced as a part of the project. Along the north side of Highway 111, the City has designated this roadway as a Class III bikeway; however, there is a 40-foot plus parkway with a six-foot sidewalk that will provide room for both on-street and parkway CV Link improvements. Recreational uses are permitted and have been developed within the channel right of way with the City and Coachella Valley Water District (CVWD) approvals.

The CV Link alignments have been proposed to avoid conflicts with play on the City's municipal golf course and, as elsewhere, take advantage of the south bank channel service road east of the Miles

Avenue bridge and will occur adjacent to existing buffers of block walls, landscaping and distance. Alternative 1 removes Indian Wells as well as Rancho Mirage alignments, and Alternative 2 includes Rancho Mirage, Indian Wells and all of the other jurisdictions. No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result in Indian Wells from project development. Alternatives assessment summary for Indian Wells is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

City of La Quinta

The CV Link alignments in La Quinta are consistent across all build alternatives. In the City of La Quinta the CV Link alignment will be located primarily along and adjacent to the Coachella Valley Stormwater Channel, with a portion of the alignment located in proximity to the borders of Community Commercial land uses. A recreational facility is a permitted use in a Floodplain Zone. Remaining vacant lands adjacent to the alignment are also designated for commercial development, which (as now) will back onto the stormwater channel. For a distance of approximately 850 feet east of Jefferson Street the Link alignment is atop the channel service road and will pass behind ten existing and future single family homes that back onto the channel, and which will be buffered from CV Link facilities by fences, walls and landscape screens. With regard to all of the alternatives herein analyzed, there are no land use or policy conflicts associated with the development of the CV Link project in La Quinta. No substantial land use compatibilities or conflicts with any applicable land use plan, policy will result in La Quinta from project development. Alternatives assessment summary for La Quinta is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

City of Indio

The CV Link alignments in Indio are consistent across all build alternatives and continue to follow the right bank of the stormwater channel, passing light industrial lands, public facilities and residential rear yards. Residences backing onto the proposed CV Link alignment and are at an elevation lower than the top of levee and are separated from the channel and levee by walls and fences. The separation between the top of levee and residential rear yards ranges from 45 feet to approximately 10 feet where the levee nears a channel condition; that is, where the top of the channel's containment is native surrounding ground and not an elevated structure (levee). While the Proposed Project Alternative provides a valuable transportation and recreational asset to adjoining residents, potential concerns about privacy have been identified and are mitigated by CV Link design elements, including structural and landscape screening, as set forth in the CV Link Master Plan and in mitigation measure LU-2, below.

Adjoining land uses in the northern portion of the City include industrial and business park development, which are not sensitive to and will not be adversely affected by the project. Farther east and continuing along the channel, additional single-family development backs onto the stormwater channel and the proposed future CV Link alignment. Here too, the Proposed Project Alternative provides valuable transportation and recreational opportunities to these residents; however, there are issues of noise and privacy, which are addressed in the noise and aesthetics analysis in Avoidance, Minimization and Mitigation Measures set forth below. The proposed alignment will also connect with the Jackson Park; CV Link will serve as an extension of the park's recreational functions. No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result in Indio from project development. Alternatives assessment summary for Indio is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

City of Coachella

The CV Link alignments in Coachella are consistent across all build alternatives. The alignment of the CV Link Proposed Project Alternative is located almost entirely on the right bank service road of the Coachella Valley Stormwater Channel. There are areas of single-family development and so designated vacant lands that are generally north of Avenue 52 and that back onto the channel levee. As with other portions of the channel, it is in a levee condition and the top of levee is higher than residential rear yards in these areas. While the Proposed Project Alternative is compatible with and complimentary to these residential uses, there are issues of noise and privacy, which are addressed in the noise and aesthetics analysis in this EA. No substantial land use incompatibilities or conflicts with any applicable land use plan, policy will result in Coachella from project development. Alternatives assessment summary for Coachella is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

County of Riverside, and the Cabazon and Twenty-Nine Palms Tribes

CV Link alignments in the County are consistent across all build alternatives. The CV Link alignment passes through unincorporated Riverside County lands in the vicinity of the Indio/Coachella city limits; these lands are Native American lands of the Twenty-Nine Palms and the Cabazon Tribes. The County General Plan designates these lands as “Tribal Lands” and provides land use management services to the Tribe. Neither Tribe has specific land use assignments on undeveloped portions of their reservations.

Farther south, the alignment passes through a very small piece of county land just south of Avenue 52, which is within the right of way of the Coachella Valley Stormwater Channel and is designated Watercourse (W-1). So long as compatible with flood control facilities, paths and bikeways are a permitted use on W-1 lands. On these lands, CV Link improvements will be largely atop the channel maintenance road with an undercrossing planned at Dillon Road. On-levee and in-channel CV Link improvements have been reviewed by CVWD to ensure that they do not adversely affect channel capacity or CVWD’s ability to manage and maintain the channel. The proposed route will be located within the Watercourse (W-1) Zone, where recreational facility is a permitted use and is therefore, considered to be a compatible use. For this reason CV Link will not conflict with any applicable land use plan, policies, or regulations of the County of Riverside. Alternatives assessment summary for Riverside County is as follows:

Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

Agua Caliente Tribe

The CV Link alignments on Native American lands are consistent across all build alternatives with the limited exception of that portion of the alignment in Rancho Mirage within the Agua Caliente Tribe’s Reservation just north of Frank Sinatra Drive, and within and along the stormwater channel. At these locations Agua Caliente Tribe lands would be affected under the Proposed Action with the implementation

of west-end Terminus B. Several alignments within CV Link are located on lands that are under the jurisdiction of the Agua Caliente Tribe, including the following segments. They are shown on the CV Link Project Planning Area Maps (see Appendix D) and are color-coded.

- Appendix D-Page 8: segment along the Whitewater stormwater channel west of Gene Autry Drive
- Appendix D-Page 9: segment along channel north of Vista Chino
- Appendix D-Page 13: segment along channel south of Ramon Road to Dinah Shore Drive bridge
- Appendix D-Pages 14 & 22: segment south of Dinah Shore Drive extended to the confluence of Tahquitz Creek and the Whitewater River
- Appendix D-Pages 23-28: segments extending from the confluence of Tahquitz Creek and Whitewater River on the west Frank Sinatra Drive on the east
- Appendix D-Page 18: segment within the Bel Aire Greens property in Palm Springs west of El Cielo Road in Palm Springs

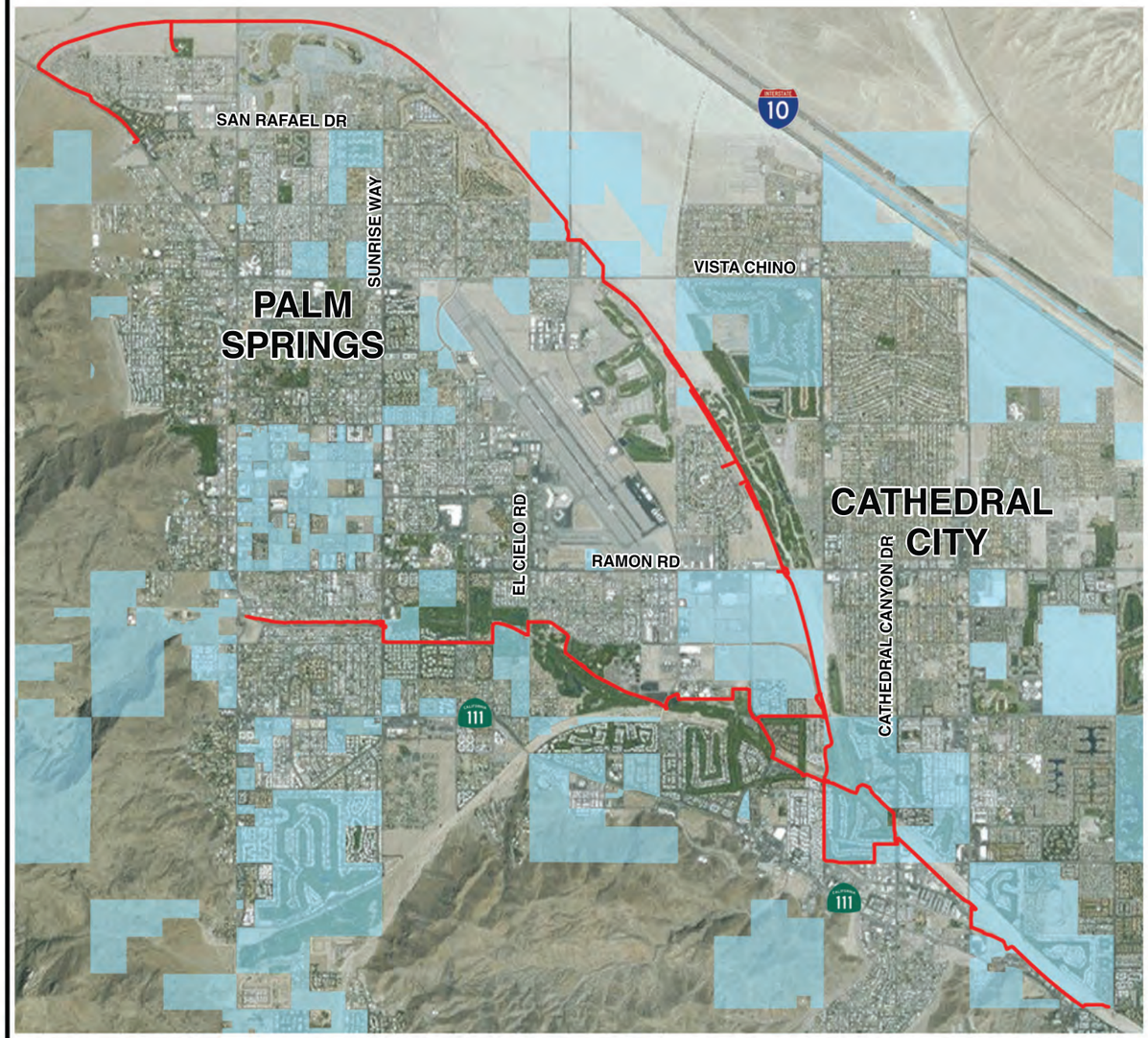
Most of the CV Link improvements associated with areas where it will cross Tribal or allottee lands will be limited to flatwork, including installation of concrete and other path materials. At some locations, access points are also planned. Existing and permitted uses on these lands include flood control, golf course, multi-family residential, existing trails, and retail commercial. In principle, access points have been proposed at existing and well-signalized intersections, in proximity to existing and planned parks and open space amenities, and where connections to existing pedestrian and bikeway improvements are available.

As with the Cabazon and Twenty-Nine Palms Band, lands within the reservation boundaries are designated as “Trust” or “Tribal”, “Allottee”, or “Fee”. Fee lands are those parcels owned in fee simple by non-Indians; Allotted lands are parcels owned by Tribal members either in trust or in fee; and Tribal parcels are owned by the Tribe as a government, corporation, or organization, and held either in trust by the United States or in fee (“Tribal Lands”). The Tribes have entered into a land use contract with the cities and county for certain Tribal lands located within its jurisdictional boundaries. In many instances, Tribal authorities are also assisted by the US Bureau of Indian Affairs in the review and approval of leases, easements and similar permitting, as well as the US EPA in the enforcement of the Clean Water Act and other environmental processes and clearances on Native American Lands.

Agua Caliente Tribe lands affected by CV Link alignments share the underlying land use designations as established by the local municipality and these govern land use in those communities except in limited instances. The analysis of potential land use impacts in Palm Springs, Cathedral City and Rancho Mirage also address the Agua Caliente Tribe’s lands, the uses of which are governed by the local government General Plan land use designations. As noted above, there are no substantial land use incompatibilities with these land uses. Alternatives assessment summary for Agua Caliente Tribe lands is as follows:

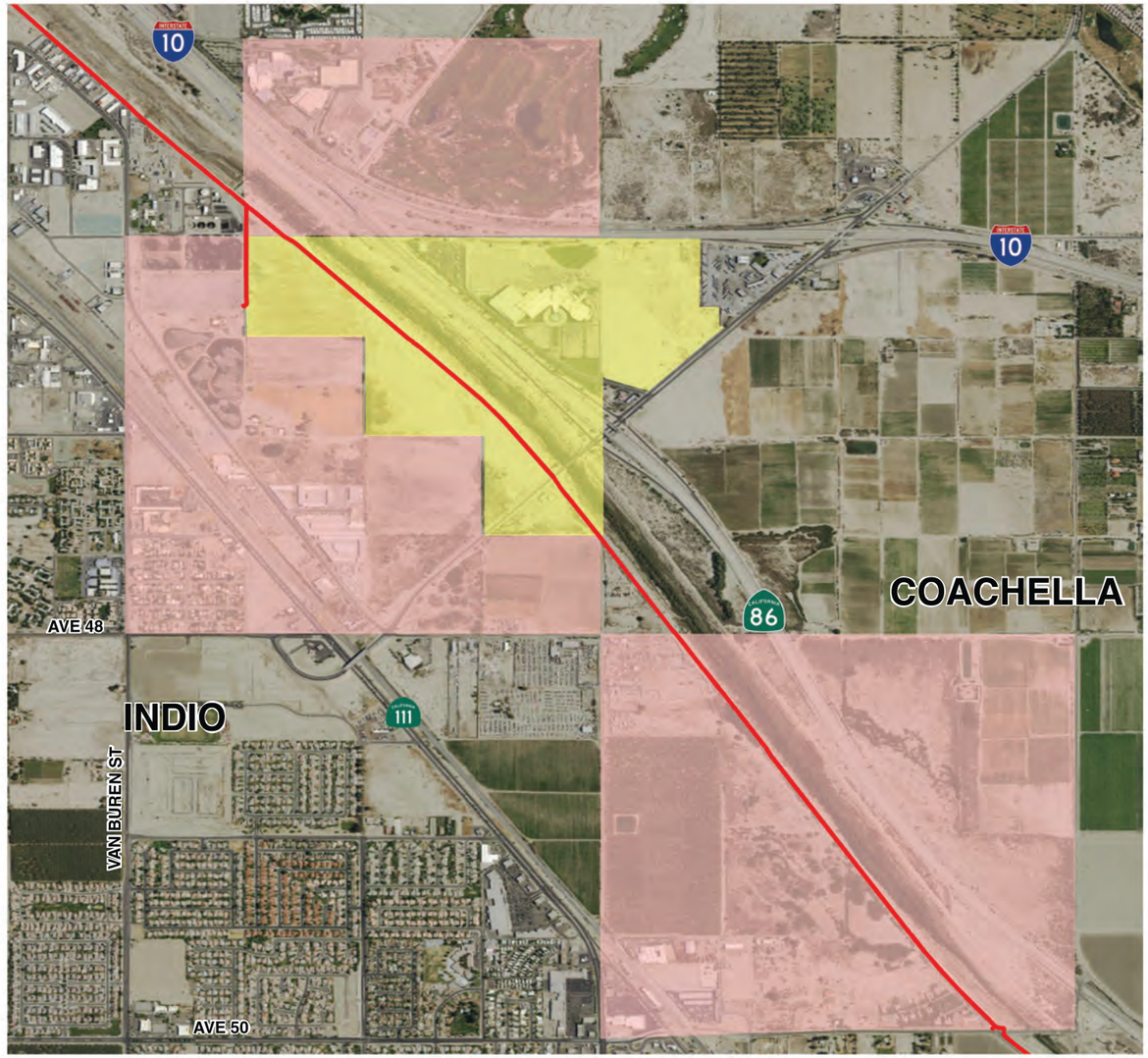
Proposed Project Alternative (W/O Rancho Mirage): Consistent
Alternative 1 (W/O Rancho Mirage and Indian Wells): Consistent
Alternative 2 (With All Jurisdictions): Consistent
Alternative 3 (No Build/No Project): Consistent

TRIBAL LANDS - WEST VALLEY



Agua Caliente Band of Cahuilla Indians

TRIBAL LANDS - EAST VALLEY



Cabazon Band of Mission Indians

Twenty-Nine Palms Band of Mission Indians

09.29.16

Source: CVAG, 2016; Alta Planning + Design, 2016

TERRA NOVA® PLANNING & RESEARCH, INC.

CV Link Project
Tribal Boundaries in the Project Area
Coachella Valley Association of Governments

CV LINK CONNECTING THE COACHELLA VALLEY

CVAG

Exhibit 22

Table 2-1
On-Going and Future Land Uses Along the CV Link Route

Name	Jurisdiction	Proposed Uses	Status
On-going channel improvement projects	Valley-wide	Continued improvement to channel facilities to meet the recommended standards.	On-going
Partially built-out commercial/residential/ industrial subdivisions	Valley-wide	Construction of approved commercial/residential/industrial subdivisions	On-going
Cathedral Canyon Bridge	Cathedral City	All-weather bridge	Approved
Widening of the Date Palm Bridge	Cathedral City	Widening of existing all-weather bridge	Approved
Cathedral Canyon Whitewater River Bike Path	Cathedral City	2.5-milebike path	Approved
Widening of the South Palm Canyon Bridge	Palm Springs	Widening of existing all-weather bridge	Environmental Permitting Stage
Frank Sinatra Bridge	Rancho Mirage	All-weather bridge	Planning
Cook Street Bridge	Palm Desert	All-weather bridge	Future
Channel Modification in the east and west banks of Miles Avenue	Indian Wells	Channel modifications	Planning

General Plan land use maps for all jurisdictions are provided in Appendix E.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As noted in the discussion above, CV Link alignments and project design components include access points, rest areas, and ancillary Link facilities (restrooms, shade structures, signage, recharge stations), which will occur at access points and rest stops, as shown on the Project Planning Area Maps in Appendix D. Design guidelines set forth in the CV Link Master Plan provide for screening, landscape buffers and the like, which will provide screening and privacy along the route, and avoid and minimize the potential for land use impacts and incompatibilities. There will be no adverse land use impacts associated with any of the project alternatives with the implementation of these project design components.

Path alignments and screening elements will further serve to avoid and minimize the minimal potential impacts that CV Link may have on adjoining and nearby land use. These locations include minor Link alignments adjacent in proximity to four area golf courses, and to residences that back onto the path, where screening and landscape buffers described in detail in the CV Link Master Plan will be installed. Therefore, the following measures serve to further assure that impacts will be kept to the lowest level practicable. On-going consultation with potentially affected parties and review of facilities will also be conducted to further ensure that no substantial impacts will occur.

Avoidance and Minimization Measures

LU-A. CVAG and project designers and engineers shall meet and confer with land use and public facility managers of each jurisdiction prior to initiation of construction to ensure that CV Link facilities are adequately screened and/or buffered from adjoining golf land uses. These include Tahquitz Creek Golf Course in Palm Springs, Cimarron Golf Course and Cathedral Canyon Country Club in Cathedral City, and Indian Wells Golf Resort in Indian Wells. Some minor adjustment in these areas may be needed to avoid conflicts between the Link path and golf facilities in these area.

LU-B CVAG and project designers and engineers will meet and confer with the owners and managers of the Tahquitz Creek Golf Course through which CV Link alignments pass prior to construction to ensure that adequate buffers between CV Link facilities and fairways, greens, tee boxes and in play areas are installed along the proposed alignments to avoid conflicts between the Link path and golf facilities. The safety of CV Link users shall also be taken into consideration and protected through minor alignment adjustments, protective netting or other means.

LU-C. At those locations where CV Link alignments are at an elevation higher than adjoining residential lands, the project shall incorporate landscape screens to ensure that the privacy of residents is protected. CVAG and project designers and engineers will meet and confer with the owners and managers of the Cathedral Canyon golf course, and any underlying leaseholders prior to construction to ensure that CV Link facilities adequately buffers between CV Link facilities and fairways, greens, tee boxes and in play areas are installed along the proposed alignments to avoid conflicts between the Link path and golf facilities..

LU-D. CVAG and project designers and engineers will meet and confer with the owners and managers of the Indian Wells Golf Resort golf course through which CV Link alignments pass prior to construction to ensure that adequate buffers between CV Link facilities and fairways, greens, tee boxes and in play areas are installed along the proposed alignments to avoid conflicts between the Link path and golf facilities. The safety of CV Link users shall also be taken into consideration and protected through minor alignment adjustments, protective netting or other means.

CUMULATIVE IMPACTS

The potential cumulative effects of the CV Link project on existing and planned land uses, including privacy, and on recreational resources have been assessed during project design and in this EA. Specific resources identified include all types of urban land uses, including major drainage facilities, which most adjoining development back up to. Therefore, the resource study area has included adjacent land uses and those in proximity of CV Link alignments. In addition to field surveys, a wide variety of mapping, including General Plan land use maps (see Appendix E), were reviewed. Designers also conferred with local land use officials to assess CV Link compatibility with existing and planned land uses.

As discussed in the affected environment and environmental consequences sections above, land uses along the CV Link alignments range from long-established commercial and industrial development, and newer residential and golf course development, as well as numerous transportation projects ranging from bridges to sidewalks. As noted, with the exception of agricultural lands east of Indio, most of the developable lands located adjacent to the CV Link alignments has been developed.

The majority of the proposed CV Link route is proposed atop existing flood control maintenance and service roads. Elsewhere, alignments are located along existing street rights-of-way. As designed, CV Link will not adversely impact, directly or indirectly, existing or future land uses. Rather, CV Link is designed to enhance the existing and future land use pattern by providing an integrated, low-impact multi-

modal transportation facility that will benefit all adjoining and nearby land uses. Future land uses are expected to be compatible with surrounding uses and CV Link. The CV Link project and other changes in land use would have a long-term or permanent incremental effect on the character of the vicinity given their nature.

The geographic scope for the analysis of cumulative impacts on land use consists of each CV Link jurisdiction and the immediate vicinity along the Route where limited land use conflicts could occur, including golf courses and residential areas along CV Link alignments. Along most of the CV Link Route and vicinity there are limited opportunities for new impacts to these adjoining lands. Beyond the aforementioned approved channel modifications in Indian Wells, development of currently agricultural lands east of Indio, and the construction of new and expansion of existing bridges, limited additional development on or along the stormwater channels associated with this project are expected to occur.

Potential project conflicts or inconsistencies with applicable adopted plans, policies and regulations would be specific to an individual project component, would be local and limited in effect, and would not result in a substantial cumulative impact. Given the linear geographic physical extent of the CV Link project, construction will be carried out in stages and its effects will be short-lived. During the operation of CV Link, the surrounding land uses will benefit and in many cases will be enhanced by the project. Overall, there will be a less than cumulatively substantial effect on existing and planned land uses generated by this project.

2-1.2 GROWTH

REGULATORY SETTING

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 Code of Federal Regulations [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

AFFECTED ENVIRONMENT

Urban development in the Coachella Valley is largely concentrated in the western and central portions of the valley. Development generally straddles the State Highway 111 corridor and reaches north beyond Interstate-10 (I-10) and south to the foothills of the San Jacinto and Santa Rosa Mountains. The region is characterized by low- to medium-density residential development supported by a strong service commercial industry. The eastern valley is one of California's most important agricultural production regions and contains high-quality farmland.

The Coachella Valley is known for its economic strength and rapid growth. In the past, the valley's economy was largely reliant on agriculture, particularly in the eastern valley, and this industry remains a regional mainstay. The resort and tourism industry began to emerge throughout the valley in the 1920s. For many decades, the region has been considered a world-class resort destination, and tourism is a fundamental component of the regional economy, providing local jobs and investment dollars in hotels, golf courses, dining and shopping establishments, and timeshare and seasonal home developments.

Since the economic recession began in 2008, development trends in the Coachella Valley have stabilized but have not been as strong as in other parts of California. The economy's strong reliance on resort development and retirement housing has slowed its recovery, and fluctuations in currencies have resulted

in a comparatively soft real estate market. The economy is affected by both national and international trends and conditions, which will continue to affect the international visitor. Nonetheless, in recent years, valley-wide employment has been steadily growing. The largest gains have been in tourism, healthcare services, and development and construction. Retail sales have also been an important jobs generator.

While CV Link will not have a substantial effect on local or regional growth, it will provide the valley with an essential transportation asset that can address not only traffic congestion and accessibility, but also the competitiveness of destination resorts and retirement communities along the CV Link route. Therefore, rather than inducing growth, CV Link will strengthen the local economies and make them more competitive.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative includes all jurisdictions with the exception of Rancho Mirage. For transportation projects, accessibility is defined as the ease of movement between places. The Proposed Project Alternative directly improve accessibility for non-automobile modes of transportation (including foot traffic, bicycles, neighborhood electric vehicles, scooters, and others) between a variety of land uses that are immediately adjacent and in close proximity to CV Link. Improved accessibility will occur on a regional scale, along the entire 44± mile length of the project. Whereas non-motorized travel paths are currently uncoordinated, fragmented systems of sidewalks, bike paths, and trails, CV Link will provide a seamless pathway with approximately 50 access points at roadway intersections, adjacent parks and schools, and many residential and commercial developments.

Physical Growth-Related Impacts
Although it will improve accessibility on a regional scale, substantial physical growth impacts resulting from CV Link are not reasonably foreseeable, for the reasons described below.

- CV Link is proposed within existing right-of-way corridors (including watercourse levees, trails, sidewalks, and roadways) already constructed in the region's urban core. Much of this right-of-way is physically confined and bounded by urban development and structural improvements, such as channel levees or curbs, such that no additional or "spill-over" projects could occur on adjacent land.

- Much of the land adjacent to CV Link is already built out. Where vacant land exists, CV Link will not convert or change or induce change to existing land uses or designations to more intensive land uses. The project will have no direct impact on development proposals or building densities but may have limited indirect effects, including enhancing the recreational opportunities in the region. CV Link will be built on land already designated or intended by local jurisdictions for watercourse, open space, or transportation uses. Future land use changes would require analysis and approval by local jurisdictions.

- As a unique alternative transportation and recreational amenity, CV Link could increase the desirability of some vacant parcels adjacent or in proximity to the path, which could, in turn, affect development location and timing. However, the project itself is not expected to substantially influence or be the sole influence on regional or broad-reaching locational and development decisions.

- The project does not propose and will not result in the construction of new residences or businesses that would attract new population to the area.

- In most locations, utility infrastructure already serves existing development in proximity to the pathway. Over the course of CV Link design, project designers and engineers have collected data and information on existing utilities and have consulted with service providers. CV Link has also been designed to generate a low demand for energy and other utility services, including Southern California Edison, Imperial Irrigation District, Verizon/Frontier Communications, and Southern California Gas Company. The project has also been developed in on-going consultation with Public Works and other staff in each of the municipalities. Wireless and web-based utilities are planned for CV Link facilities, which will limit or preclude the need for wired communications and data management. Needed connections to potable water and the community sewer system, and tie-ins to the local electric power grid will occur at locations where those connections can be made directly, including along the largely developed properties adjoining the valley stormwater channels. In summary, the project will require minimal expansion of utilities, including water and sewer for restrooms and drinking fountains, and electricity for lighting. No major expansions of utility infrastructure that would encourage or facilitate subsequent growth will occur.

- CV Link is not expected to increase traffic congestion on local roads or create the need for additional parking. The project includes approximately 50 access points at major intersections, community facilities, and residential and commercial sites to maximize access for non-motorized users. Overcrossings and under-crossings are proposed at key locations to minimize interaction, traffic delays, and safety hazards between CV Link users and vehicle traffic. The project connects a wide range of land uses in some of the most urbanized portions of the valley to enhance alternative travel routes and reduce traffic congestion on local roads, including State Highway 111.

Economic Growth-Related Impacts

An economic impact analysis for CV Link was conducted to provide an objective assessment of the potential economic impacts that could result from the project, which at the time of the analysis was referred to as Parkway 1e11.[2] The project is expected to result in positive indirect impacts to local and regional economies, as described below.

- Project construction, operation, and maintenance will create new planning, construction, maintenance, and other jobs. It may also influence the creation or expansion of related spin-off industries, such as bike tour companies. An estimated 482 direct construction jobs will be generated.[3] Most jobs are expected to be absorbed by the regional labor pool, and the project is not expected to attract a substantial number of new permanent workers to the area.

- The project is expected to contribute to increased sales tax, transient occupancy tax, and other municipal revenues from increased hotel occupancy, visitor spending at restaurants, shopping, and other commercial venues in close proximity to the pathway. Revenues would be generated over the long-term and depend on the extent to which the project is used by residents and tourists. The economic impact analysis found that, for every $1 in public money spent toward the cost of the project, $18.29 would be returned in benefits to the regional economy.[4] The extent to which this occurs depends on CV Link usage by residents and visitors.

The project, therefore, is not expected to induce substantial physical growth in the Coachella Valley, but is expected to enhance regional recreational amenities that could help generate increased revenues over the long-term.

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2 "Economic Impact of the Parkway 1e11," prepared by John Husing, Ph.D. for the Coachella Valley Economic Partnership, 2013.

3 Ibid.

4 Ibid.

Although the project will not extend through Rancho Mirage, some city residents may be employed by the project given their proximity to it. Some city businesses near the CV Link termini at the Rancho Mirage city limits could benefit from increased sales and patronage by CV Link users. No other growth-inducing impacts are expected to affect Rancho Mirage.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Under Alternative 1, CV Link would not be built in the cities of Rancho Mirage and Indian Wells. For the cities containing CV Link, the environmental consequences of Alternative 1 will be the same as those described above for the Proposed Alternative. As noted, CV Link will have no adverse growth-inducing effects both in terms of physical and economic development. It will bolster the local economy by improving the valley's competitiveness, which relies upon a diversity of transportation and recreational opportunities. Although the project will not extend through Rancho Mirage or Indian Wells under the Alternative 1 scenario, some of their residents may be employed by the project and residents and visitors from both cities may still opt to access and use CV Link due to its proximity. Some businesses near the CV Link termini in Rancho Mirage and Indian Wells could benefit from increased sales and patronage by CV Link users, and hotel visitors in each city may seek out venues with these types of transportation facilities, which would be supportive of these businesses. No other growth-inducing impacts are expected to affect the two cities.

C. Alternative 2: Project with All Eight Cities

Under Alternative 2, CV Link will be built within all eight cities of the central Coachella Valley, including Rancho Mirage and Indian Wells. The environmental consequences of Alternative 2 will be essentially the same as those described above for the Proposed Alternative, but will also have at least a modest effect on growth in Rancho Mirage and Indian Wells as well, increasing sales and patronage by CV Link users. All jurisdictions would realize positive direct and indirect growth impacts to local and regional economies.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build Alternative, no CV Link project will be built. Development trends and regional growth will continue to occur at current levels. No new CV Link project-related jobs or municipal revenues will be generated, and no improvements to regional accessibility will occur.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

None of the project alternatives will result in substantial foreseeable adverse effects on growth. No further growth analysis or avoidance, minimization, or mitigation measures pertaining to growth impacts are necessary.

CUMULATIVE IMPACTS

The project will not result in adverse cumulative growth impacts. Vacant land in close proximity to CV Link could be developed in the future, adding new housing and hotels and providing new residents with access to CV Link. It is anticipated that CV Link will continue to accommodate additional residents and visitors and facilitate non-motorized connections between existing and planned land uses.

2-1.3 FARMLANDS/TIMBERLANDS

REGULATORY SETTING

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 United States Code [USC] 4201-4209; and its regulations, 7 Code of the Federal Regulations (CFR) Ch. VI Part 658) require federal agencies, such as the Federal Highway Administration (FHWA), to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and farmland of statewide or local importance.

There are no timberlands within the project area. Therefore, the Proposed Project Alternative and build alternatives will not require work on federal land (e.g., Bureau of Land Management or U.S. Forest Service lands), resulting in compliance with those agencies' regulations and policies regarding protection of timberlands.

AFFECTED ENVIRONMENT

CV Link is largely proposed on existing rights-of-way, including atop channel embankments and levees, and existing trails, sidewalks, and roads. The CV Link path does not directly cross or otherwise directly affect any farmlands, although some CV Link alignments pass close to existing farmlands (see Appendix D: Project Planning Area Maps). The Proposed Project Alternative would not impact farmlands or result in the termination any Williamson Act Contracts. The Proposed Project Alternative is not located in Timber Production Zones and poses no impacts to forest resources.

Agricultural Resources

This analysis evaluates the potential for project facilities to result in adverse effects related to the conversion of farmland to non-agricultural use and whether these impacts are substantial. Agricultural impacts are evaluated by comparing anticipated direct temporary and permanent ground disturbance areas associated with the project facilities to farmland mapped on CDC's Farmland Mapping and Monitoring Program (FMMP) Important Farmland Series Maps as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and to maps of Williamson Act contracts and zoning maps for the study area.

Direct impacts are also evaluated based upon the size, shape and location of the subject agricultural lands, whether they are near or a part of a different planned land use, whether they are a fragment of farmland, and how location and shape affect the cost-effectiveness of long-term cultivation. Indirect effects related to potential incompatibilities between agricultural uses (such as access for agricultural vehicles, and dust/air/noise from agricultural operations) and the CRRF are also evaluated. Because of CVWD's status as a Special District, the analysis also considers the requirements imposed on it to comply with regulations mandated by the State for water quality and water treatment.

Timberlands

As previously noted, there are no timberlands in the project planning area or vicinity. Therefore, the evaluation of forest resources is identified as an Area of No Project Impact, discussed below.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

As discussed above, there are no agricultural resources (farmland or timberland) that would be directly or indirectly impacted by the CV Link project. The CV Link route occurs in proximity to agricultural lands near the Indio/Coachella city limits, where on the south (right) bank of the channel scattered farmlands

are still being cultivated (see Appendix D: Project Planning Area Maps). Farther southeast the level of cultivation rapidly increases especially on the east side of the stormwater channel, and the Link alignment will pass near but will not interfere with farming activities. CV Link and the agricultural industry may benefit one another with the emergence of agricultural tourism. The Proposed Project Alternative will not result in any adverse impacts to agricultural lands or timberlands.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

There are no agricultural or timber lands in Indian Wells or Rancho Mirage. Thus, Alternative 1 will not result in any direct or indirect impacts to agricultural lands and/timberlands.

C. Alternative 2: Project with All Eight Cities

There are no agricultural or timber lands in Indian Wells or Rancho Mirage. Therefore, the potential for impacts under this alternative are the same as for the Proposed Project Alternative. CV Link and the agricultural industry may benefit one another with the emergence of agricultural tourism. The Proposed Project Alternative will not result in any adverse impacts to agricultural lands or timberlands.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build Alternative, no project will be built, subsequently no impacts will occur to agricultural lands and/or timberlands.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No impacts to agricultural or timberlands would occur, and therefore, no avoidance, minimization, or mitigation measures are required.

CUMULATIVE IMPACTS

The project will not convert or affect any farmland or timberland. The project planning does not contain existing agricultural land and/or timberlands. No further discussion is required.

2-1.4 COMMUNITY CHARACTER AND COHESION

REGULATORY SETTING

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

AFFECTED ENVIRONMENT

The proposed CV Link route extends 44± miles through the central Coachella Valley region of Riverside County. Incorporated cities include (from west to east): Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio, and Coachella. Also included is unincorporated Riverside County land and reservations of three Native American Tribes. For about a century, the Coachella Valley has been known as a destination resort region with a warm, mild climate, dramatic mountain and desert scenery, and world-class resorts, spas, and championship golf courses. Tourism and service-related industries dominate the regional economy.

Urban development in the project area generally occurs in a linear pattern extending from Palm Springs on the northwest to Coachella on the southeast. Commercial development is largely concentrated along State Highway 111, which serves as the backbone of the intra-regional transportation network. The Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel, along which much of CV Link is proposed, roughly parallels Highway 111, and is the principal drainage facility in the region. Incorporated areas are dominated by low- to medium-density residential, retail, resort commercial, and institutional development. Unincorporated, outlying areas include low- and very low-density residential development, undeveloped desert land, and agricultural land in the southeastern portion of the valley.

Population

Table 2-2, below, describes population, median age, and average household size in the project area. As shown, the project area contains approximately 350,091 residents. Every community in the project area experienced positive population growth between 2010 and 2016, with an average growth rate of 8.2%.

The median age of residents ranges between 24.5 years in Coachella to 66.7 years in Indian Wells, and average household size ranges from 1.8 persons per household in Indian Wells to 4.52 in Coachella. Younger residents and larger households generally live in the eastern communities of Indio, Coachella, and Thermal. Older residents and smaller households generally live in the central communities of Rancho Mirage, Palm Desert, and Indian Wells.

Table 2-2
Regional Demographic Profile

Jurisdiction	2010 Population	2016 Population[1]	Percent Change 2010-2016	Median Age (years)	Average Household Size (persons/ household)
Incorporated:					
Palm Springs	44,552	46,654	4.7%	51.6	1.93
Cathedral City	51,200	54,261	6.0%	36.0	2.99
Rancho Mirage	17,218	18,070	4.9%	62.3	1.94
Palm Desert	48,445	49,335	1.8%	54.6	2.08
Indian Wells	4,958	5,412	9.1%	66.7	1.80
La Quinta	37,467	39,977	6.7%	45.6	2.52
Indio	76,036	88,058	15.8%	32.2	3.21
Coachella	40,704	45,407	11.5%	24.5	4.52
Unincorporated:					
Thermal	2,865	2,917[2]	1.8%[2]	25.9	4.19
TOTAL:	**323,445**	**350,091**	**8.2%**	**---**	**---**
Riverside County	2,189,641	2,347,828	7.2%	33.7	3.14
California	37,253,956	39,225,883	5.3%	35.2	2.90

[1] Source: Table E-1, City/County Population Estimates with Annual Percent Change, January 1, 2016, California Department of Finance.

[2] CA Dept. of Finance did not report a 2016 population estimate for unincorporated areas, including Thermal. An estimate is provided here using the lowest 2010-2016 growth rate of the other communities in the project area (1.8%) to provide a conservative estimate.

Source: 2010 U.S. Census.

Special Populations

For many decades, the Coachella Valley has attracted a notable population of retirees, some of whom live in the region seasonally (typically during the winter months when regional temperatures remain mild). Table 2-3, below, describes the number of residents ages 65+, as well as the number of disabled residents who have vision, hearing, cognitive, ambulatory, self-care, and/or independent living challenges. Both populations may be affected by similar transportation issues, including limited mobility, driving restrictions or loss of driving privileges, and the need for wheelchair accessible transit facilities. The data show that the greatest numbers of seniors and disabled residents live in Indian Wells, Rancho Mirage, Palm Desert, and Palm Springs.

Table 2-3
Senior and Disabled Populations
In the Project Area

Jurisdiction	Senior Residents Ages 65+		Disabled Residents[1]	
	Number	Percent of Total Population	Number	Percent of Total Population
Incorporated:				
Palm Springs	12,447	27.2	7,981	17.5
Cathedral City	7,135	13.6	6,166	11.7
Rancho Mirage	8,013	45.4	2,624	14.9
Palm Desert	15,824	31.7	7,113	14.3
Indian Wells	3,101	61.0	858	16.9
La Quinta	9,173	23.7	4,668	12.0
Indio	11,303	13.7	9,525	11.6
Coachella	1,963	4.6	3,870	9.1
Unincorporated:				
Thermal	218	6.1	366	10.3
TOTAL:	**69,177**	**---**	**43,171**	**---**
Riverside County	282,688	12.4	242,737	10.8
California	4,617,907	12.1	3,851,442	10.3

[1] Total civilian non-institutionalized population with hearing, vision, cognitive, ambulatory, self-care, and/or independent living difficulties.
Source: 2010-2014 American Community Survey, 5-Year Estimates.

Ethnicity

Ethnic characteristics of the project area are described in Table 2-5, below. The ethnicity of the project area population is predominantly “white,” although the majority of residents identify themselves as “Hispanic or Latino” in Cathedral City (58.5%) and the eastern communities of Indio (67.8%), Coachella (58.8%), and Thermal (95.3%). Despite the presence of Native American reservations in the project area, the American Indian (and/or Alaska Native) population in the project area is quite low, ranging from 0.4% in Indian Wells to 1.1% in Coachella and Cathedral City.

Housing

Table 2-4 describes housing characteristics in the project area. The project area contains approximately 184,292 housing units, which is 22.7% of all housing units in Riverside County. Vacancy rates range from 3.9% in Thermal to 50.4% in Indian Wells. Higher vacancy rates in the central communities of Indian Wells, Rancho Mirage, and Palm Desert are generally indicative of second home and vacation home markets that are prevalent in the western and central portions of the valley. Vacancy rates are very low

in Coachella (6.2%) and Thermal (3.9%) in the eastern project area and indicate a strong permanent population.

Table 2-4
Housing Characteristics in the Project Area

Jurisdiction	Total Housing Units	Occupancy (%)		Tenure (occupied units) (%)		Median Value
		Occupied Units	Vacant Units	Owner Occupied	Renter Occupied	
Incorporated:						
Palm Springs	36,281	63.1	36.9	57.8	42.2	$265,400
Cathedral City	20,836	80.8	19.2	61.7	38.3	$180,300
Rancho Mirage	15,402	58.2	41.8	75.9	24.1	$508,900
Palm Desert	39,812	59.4	40.6	62.8	37.2	$299,500
Indian Wells	5,532	49.6	50.4	81.0	19.0	$630,200
La Quinta	23,970	62.7	37.3	70.6	29.4	$343,200
Indio	31,137	81.2	18.8	65.1	34.9	$196,400
Coachella	10,334	93.8	6.2	63.9	36.1	$143,600
Unincorporated:						
Thermal	988	96.1	3.9	41.6	58.4	$22,400[1]
TOTAL:	**184,292**	**---**	**---**	**---**	**---**	**---**
Riverside County	810,426	85.2	14.8	65.7	34.3	$236,400
California	13,781,929	91.5	8.5	54.8	45.2	$371,400

[1] The reported margin of error is +/- $54,055. Therefore, $22,400 is not considered representative of the actual median housing value.
Source: 2010-2014 American Community Survey 5-Year Estimates.

Neighborhood/Community Character and Cohesiveness Impacts
One of the defining goals of CV Link is to provide physical connectivity (mobility) between people and places within the Coachella Valley. The CV Link will positively serve the overall cohesiveness of the western and eastern portions of the valley. It will connect a wide range of land uses, including residential, employment, commercial, institutional. The project will also support future economic development opportunities on vacant, undeveloped land immediately adjacent to the route.

CV Link will also serve all types of people, including permanent and seasonal residents, and tourists. It is designed to accommodate all segments of the population, including children, elderly, persons with disabilities, and numerous types of travelers, such as pedestrians, cyclists, motorists, and transit riders. By linking various types of development and community amenities, and offering opportunities to display public art and highlight local historical or scenic features, the project will appeal to a wide range of users.

The proposed route extends through some of the most densely populated areas of the Coachella Valley and will offer a travel alternative to the often-congested State Highway 111 and other arterial roads in the vicinity, as well as a travel corridor that is largely free of traffic signals and vehicle-pedestrian conflicts. It connects 4 existing, but disconnected, path segments: Tahquitz Creek Trail, Whitewater River Trail, and Butler-Abrams Trail. It is designed to be both continuous and permeable, and incorporates numerous access points at pathway-adjacent destinations along its length.

CV Link largely follows existing levees, roadways, and trails. It will require acquisition of additional right-of-way where the alignment is too narrow or constrained by existing fences or other barriers, and will also require the construction of new overcrossings and under-crossings where it intersects major roadways. It will include the construction of new improvements using a unifying set of design elements and components, such as shade structures, outdoor furniture, restrooms, pavement markings, landscaping, and signage, which could be visible from adjacent properties and roadways. CV Link will be an easily

identifiable facility that will provide cohesiveness and enhanced character to all of the communities through which it passes.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

One of the defining consequences of CV Link will be to provide physical connectivity, in the form of enhanced mobility, between people and places within the Coachella Valley. The Proposed Project Alternative will positively serve the overall cohesiveness of the western, central, and eastern portions of the valley by connecting a wide range of land uses, including residential, employment, commercial, institutional (schools, libraries, government), and recreational destinations. Within a half-mile of CV Link are approximately 27 schools, 30 golf courses, 27 parks, 13 medical facilities, and numerous commercial and civic centers.[5]

The project will also support future economic development opportunities on vacant, undeveloped land immediately adjacent to the route. By linking various types of development and community amenities, and offering opportunities to display public art and highlight local historical or scenic features, the project will appeal to a wide range of users. The project can also serve as a major multi-modal connector to multiple types of community events, such as fairs, farmers' markets, and charity events throughout the Coachella Valley.

CV Link will also serve all types of people, including permanent and seasonal residents, and tourists. It is designed to accommodate all segments of the population, including children, seniors, persons with disabilities, and numerous types of travelers, such as pedestrians, cyclists, motorists, and transit riders. It will be built in compliance with the Americans with Disabilities Act (ADA) so that it is fully accessible to those with mobility restrictions and provides a safe corridor that minimizes vehicle-pedestrian conflicts. It is designed to be both continuous and permeable, and incorporates approximately 50 access points along its length.

The Proposed Project Alternative and Alternative 1 would not cross through the City of Rancho Mirage, and CV Link will terminate at the easterly and westerly city boundaries. CV Link users wanting to travel through the City of Rancho Mirage will be required to use other travel corridors, including roads, trails, and sidewalks, which may pose an inconvenience and may frustrate many CV Link users due to the lack of multi-modal facilities in Rancho Mirage. Most Rancho Mirage residences, businesses, and institutional venues (schools, parks, etc.) will not have direct access to the Link and will not benefit from the enhanced connectivity to other parts of the city or to neighboring communities; however, Rancho Mirage residents will be able to access the pathway at access points outside the city.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

As with the Proposed Project Alternative described above, Alternative 1 will enhance mobility through some of the most densely developed portions of the Coachella Valley. Alternative 1 will not pass through the cities of Rancho Mirage or Indian Wells, and CV Link users wishing to pass through the cities will be required to use other existing travel corridors. Residences, businesses, and institutional facilities in Rancho Mirage and Indian Wells will not be directly connected to other areas of the city or to neighboring communities via CV Link. Residents of both cities will be able to access the project at the termini located at the cities' limits or access points along the route.

[5] CV Link Conceptual Master Plan, prepared by Alta Planning + Design. January 2016.

C. Alternative 2: Project with All Eight Cities

Under Alternative 2, CV Link would be built within all jurisdictions between Palm Springs and Coachella, and would extend as far southeast as Thermal. It would connect a wide range of land uses for all segments of the population, including seniors and disabled residents. Alternative 2 provides the greatest level of connectivity of the three "build" alternatives, as it includes Rancho Mirage and Indian Wells, and facilitates uninterrupted travel along the entire 49±-mile route.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build Alternative, no project will be built. The regional population will continue to rely on currently available transportation facilities, including roads and, in many locations, fragmented and/or incomplete trails, sidewalks, and bike paths. No additional land use connectivity will occur. No additional community gathering and/or event space will be provided.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No adverse project-related effects pertaining to community character or cohesion will occur. Therefore, no avoidance, minimization, or mitigation measures are required.

CUMULATIVE IMPACTS

The project is consistent with development and transportation projects in the Coachella Valley (see LAND USE and TRANSPORATION sections) in that it diversifies the local and regional transportation network and modal mix. Therefore, cumulative effects of the project are positive and will enhance community accessibility and connectivity. CV Link will be a unique alternative transportation pathway that connects a variety of land uses on a regional scale. It enhances regional transportation and introduces an additional recreational component to the regional resort and tourism-based economy, and creates a coordinated, continuous pathway for existing and future residents, visitors, and tourists. No adverse cumulative impacts will occur.

2-1.5 ENVIRONMENTAL JUSTICE

REGULATORY SETTING

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2016, this was $24'300 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. The Department's commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

AFFECTED ENVIRONMENT

Minorities

Ethnicity in the project area is set forth in the following table. Riverside County and California data are provided for comparison. The data show that the ethnicity of the project area population is predominantly "white," although the majority of residents identify themselves as "Hispanic or Latino" in Cathedral City (58.5%) and the eastern communities of Indio (67.8%), Coachella (58.8%), and Thermal (95.3%).

Other ethnicities are represented at substantially lower levels. The Proposed Project Alternative crosses three Native American reservations, but much of the reservation land in the western valley is developed with commercial, residential, or other urban uses, while reservation land in the east valley contains a mix of entertainment (casino), agriculture/agribusiness, and vacant land. None of the reservation lands contain concentrated Native American populations or exclusive Native American housing developments. According to the following table, the 2010 American Indian (and/or Alaska Native) populations in each jurisdiction were extremely low, ranging from 0.4% in Indian Wells to 1.1% in Coachella and Cathedral City, indicating that Tribal members live throughout the valley.

Table 2-5
Ethnicity in the Project Area, 2010

Jurisdiction	Percent of Population							
	One Race						Two or More Races	Hispanic or Latino, of any race
	White	African American	American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Some Other Race		
Incorporated:								
Palm Springs	75.7	4.4	1.0	4.4	0.2	11.1	3.1	25.3
Cathedral City	63.5	2.6	1.1	5.0	0.1	23.5	4.2	58.8
Rancho Mirage	88.7	1.5	0.5	3.8	0.1	3.5	2.0	11.4
Palm Desert	82.5	1.8	0.5	3.4	0.1	9.1	2.5	22.8
Indian Wells	95.2	0.6	0.4	1.7	0.0	1.0	1.0	4.2
La Quinta	78.7	1.9	0.6	3.1	0.1	12.3	3.3	30.3
Indio	61.5	2.4	1.0	2.2	0.1	29.5	3.4	67.8
Coachella	63.5	2.6	1.1	5.0	0.1	23.5	4.2	58.8
Unincorporated:								
Thermal	36.1	1.0	1.0	1.1	0.0	58.8	1.9	95.3
Riverside County	61.0	6.4	1.1	6.0	0.3	20.5	4.8	45.5
California	57.6	6.2	1.0	13.0	0.4	17.0	4.9	37.6

Source: 2010 U.S. Census.

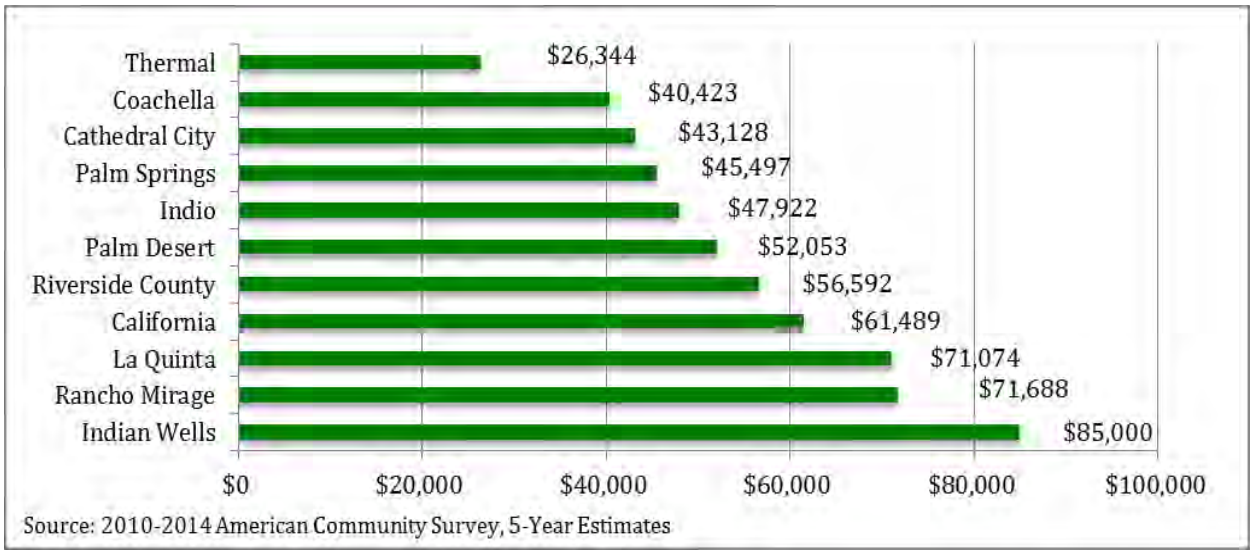
Populations living in proximity to CV Link generally represent the mix of ethnicities shown in the table above. Residential units and neighborhoods in close proximity to CV Link are not known to contain isolated or disproportionately large populations of any minority group.

Low Income Population

The following chart shows median household income estimates for cities in the CV Link project area during the 2010-2014 time period. Riverside County and California estimates are provided for comparison.

The data show that a wide range of incomes exists in the project area. Median household incomes were lowest in Thermal ($26,344) and Coachella ($40,423), and highest in Rancho Mirage ($71,688) and Indian Wells ($85,000). Median household incomes in Thermal were approximately half of those found throughout Riverside County.

Chart 2-1
Median Household Incomes in the Project Area
(2010-2014 Estimates)



Poverty thresholds are updated each year by the U.S. Census Bureau for statistical purposes, such as estimating the population living in poverty. The following table describes the percentage of residents living below the poverty level in each community in the CV Link project area.

Table 2-6
Population Living Below the Poverty Level
In the Project Area

Jurisdiction	Population Below Poverty Level (%) (estimate)
Incorporated:	
Palm Springs	17.8
Cathedral City	21.9
Rancho Mirage	12.3
Palm Desert	10.5
Indian Wells	5.6
La Quinta	9.6
Indio	22.3
Coachella	31.5
Unincorporated:	
Thermal	46.2
Riverside County	16.9
California	16.4

Source: 2010-2014 American Community Survey, 5-Year Estimates.

The table shows that, between 2010 and 2014, poverty levels in the project area were lowest in the cities of Indian Wells (5.6%) and La Quinta (9.6%), and highest in Thermal (46.2%) and Coachella (31.5%). The percentage living below the poverty level in Thermal was more than 2.5 times higher than that of Riverside County.

An analysis of Census data was undertaken to determine the proximity of low-income residents to CV Link. Census block groups were analyzed to determine where median household incomes are less than 80% of the statewide median household income. The analysis shows that 61% of the proposed CV Link alignment crosses through Census blocks with median household incomes less than 80% of the statewide income.[6] These segments are geographically spread across the CV Link, from Palm Springs to Thermal. Populations that are not considered low-income also live in these and other Census block groups along the CV Link route.

The immediate CV Link project area is not known to contain isolated or disproportionately high populations of low-income residents.

Summary

No minority or low-income populations have been identified that would be adversely affected by the Proposed Project Alternative as determined above.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Based on the above discussion and analysis, the Proposed Project Alternative will not cause disproportionately high and adverse effects on any minority or low-income populations per EO12898 regarding environmental justice.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

[6] Figure 4: CV Link and Households Earning Less Than 80% of State Median Income, CV Link Conceptual Master Plan, January 2016.

Based on the above discussion and analysis, Alternative 1 will not cause disproportionately high and adverse effects on any minority or low-income populations per EO12898 regarding environmental justice.

C. Alternative 2: Project with All Eight Cities

Based on the above discussion and analysis, Alternative 2 will not cause disproportionately high and adverse effects on any minority or low-income populations per EO12898 regarding environmental justice.

D. Alternative 3: No Build/No Project Alternative

Under the No Build/No Project Alternative, no CV Link project would be built. Like the broader population, minority and low-income populations would continue to use existing vehicle facilities (roads, highways) multi-modal facilities (sidewalks, trails, and bike paths) to access various land uses.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Based on the above discussion and analysis, the designed alternatives will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further environmental justice analysis is required

CUMULATIVE IMPACTS

The project is not expected to adversely affect minorities or low-income populations. No project-related cumulatively considerable impacts will occur.

2-1.6 UTILITIES/EMERGENCY SERVICES

AFFECTED ENVIRONMENT

This analysis evaluates the affected environment (baseline conditions) of utilities and emergency services that could be impacted by construction and operation of CV Link. For this analysis, regional-scale planning and environmental documents, as well as documentation on existing and approved development projects in CV Link planning area, have been reviewed to obtain data and information used in this analysis and to evaluate the project's potential effects on utility systems and emergency services (i.e. water, sewer, solid waste, electric power, telecommunication systems, police and fire protection services, and medical services).

Water Service

The Project is located within the Coachella Valley Water District (CVWD), Desert Water Agency (DWA), Indio Water Authority (IWA), and City of Coachella's Coachella Water Authority (CWA) service areas. The project will have access to existing potable water lines located adjacent to the proposed alignments and within public rights-of-way. Any extension of water lines will be minimal and limited to service for landscaping, drinking fountains, and restrooms.

Wastewater Service

CV Link will pass through several jurisdictions where City of Palm Springs, CVWD, DWA, IWA, and CWA provide sewer service and wastewater treatment services. The project, where needed, will be connected to the sewer system of the respective cities or providers that it passes through. The project-related impact will include modest wastewater generated during operational use. CV Link will provide four restroom facilities (eight toilets) located along the route.

Solid Waste

The Project is located within in the solid waste and recycling collection service areas of Palm Springs Disposal Services (PSDS), Burrtec Waste and Recycling Services, and Western Waste Industries (WWI). The project-related impact includes a variety of potential solid waste that could be generated during project construction and operations. During construction, potential solid waste includes sediments, trash and debris, oil and grease, fuels, lubricants, concrete waste, paints, sanitary waste and miscellaneous chemicals. Operational potential solid waste includes a small amount of trash and debris such as solid waste from humans and dog waste. Non-human and waste products will be transferred to nearest solid waste disposal facilities (Palm Springs Disposal Services (PSDS), Waste Management of the Desert, and Burrtec Waste and Recycling Services (Burrtec)). Once sorted and recyclables removed, the remaining solid waste would be transported to regional landfills, including Lambs Canyon, Mecca II, and Badland, which are operated by the County of Riverside.

Electricity

The Project is located in the Southern California Edison (SCE) and Imperial Irrigation District (IID) service areas. The project-related impact includes the power consumption during construction phase and some support elements of CV Link at buildout such as up to 68 shade structures, 42 WiFi equipment stations, 30 big belly trash systems, in-ground traffic counters, rest area lighting, restrooms, and lighting control systems. The project will have access to existing electricity service connections located along the route. Power systems on the CV Link side of the meter will be maintained by CVAG.

Communications/WiFi

The Project is located within the Frontier Communications and Time Warner (now Spectrum) service areas. CV Link users are expected to rely on cell phone services communication services, which are available along all of the CV Link alignments. The installation of up to 42 WiFi equipment stations along the Route is also planned. Non-utility communications systems on the CV Link will be maintained by CVAG.

Law Enforcement Services

The Riverside County Sheriff's Department (RCSD) and cities' police departments within the project's jurisdictions will provide Law enforcement services to those portions of the proposed CV Link project within their respective jurisdictions. The project could require police services due to possible theft of construction equipment and/or vandalism that might occur during the construction period. However, once the project is completed, police services would only be required in case of a crime within the project area. Motion detector lights will be installed at restrooms and elsewhere along the route to increase the sense of security for CV Link users. The project will not directly or indirectly increase population in the area, and users are expected to be existing residents and tourists. Therefore, additional police services is not required for CV Link, as the existing police services will be sufficient.

CV Link may also by outfitted with closed-circuit television (CCTV) equipment, or web-based cameras which would transmit video data to a monitoring location to increase the sense of safety and enforcement. Surveillance may be used to observe parts of CV Link that are hidden from public view or during non-peak hours, when there is less police enforcement.

Fire Protection Services and other Emergency Services

The Riverside County Fire Department (RCFD) and cities' fire departments within the project's jurisdictions would provide fire protection services to the proposed CV Link project. During construction, fire protection services and other emergency services would be needed in the event of worker injury or other accidental occurrence. However, it will be temporary and once the project is completed, CV Link does not pose any special fire or emergency elements and would not result a substantial increase in the demand for fire protection services and other emergency services.

The project construction may, at times, require temporary, short-duration partial lane closures on adjacent roadways, requiring traffic control measures, or safety measures that would typically be coordinated with local police. Link contractors will be required to prepare traffic control plans for approval. Several private and public roadways would be crossed by the CV Link project and could need to be temporarily closed during grading activities. These roadways include, but are not limited to, the following:

- North Palm Canyon Drive, North Indian Canyon Drive, North and South Sunrise Way, East Vista Chino, North Gene Autry Trail, Mesquite Avenue, El Cielo Road, Kirkwood Drive, Cathedral Canyon Drive, Date Palm Drive, Frank Sinatra Drive, Country Club Drive, Highway 111, Bob Hope Drive, Parkview Drive, Fred Waring Drive, Cook Street, Miles Avenue, Washington Street, Adam Street, Dune Palms Road, Jefferson Street, Monroe Street, Jackson Street, Avenue 44, Golf Center Parkway, Dillon Road, Avenue 50, and Avenue 52.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative proximity would result in a 44±mile multi-modal transportation route and up to 57.6± miles of CV Link alignments extending from Palm Springs to Coachella, with Rancho Mirage being excluded from the Proposed Project Alternative. This analysis evaluates the environmental consequences of the Proposed Project Alternative on utilities and emergency services.

Water Service

The Proposed Project Alternative would not adversely impact water services. During construction, water will be used for dust control, washing off construction equipment, and establishing landscaping. At buildout, potable water will be used for rest stops, drinking fountains and landscaping. No water lines will be severed as a result of this project. Water lines will be extended to serve drinking fountains (24) and restrooms (2). Coordination with the water utility for installation of water service will ensure that impacts to water service will not be substantial since there are a limited number of these facilities along the route. During construction, the total estimated water demand for the Proposed Project Alternative is approximately 86.4 acre-feet. CV Link operations will require approximately 4.48 acre-feet per year water to serve restrooms and provide drinking water. It is further estimated that the operational water demand for landscape irrigation will be approximately 12.86 acre-feet per year. According to the Coachella Valley Integrated Water Management Plan (2010), the projected valley-wide water demand for 2020 is 719,100 acre-feet per year. Based on this, CV Link's modest demand of 17.34 acre-feet per year constitutes a 0.0024% increase in demand. This increase is negligible and will have a modest impact on valley-wide water supplies. Therefore, no adverse project-related impacts are anticipated and no mitigation is required.

Wastewater Service

Limited amounts of wastewater will be produced during construction and operation of the Proposed Project Alternative. The restrooms along the CV Link route would generate minimal amounts of wastewater. It is assumed that approximately 25% of Link users passing a restroom will use these facilities. Assuming the use of ultra-low flush toilets that use 1.28 to 1.6 gallons per flush, the four planned restrooms and drinking water demand, and assuming an adjoining link demand of 2,500 users per day (see project Traffic Report), yields a wastewater generation of 800 gallons per restroom per day or 1,168,000 gallons (3.58 acre-feet) per year.

Each of the four project restrooms will be required to connect to the existing sanitary sewer system within each jurisdiction according to their regulations. No existing wastewater lines will be severed as a result of this project. Adherence to applicable regulations will ensure that there are no impacts to wastewater

services or facilities. With the use of two restrooms along the path, wastewater generation is anticipated to be minimal and result in no adverse impacts to wastewater facilities.

Solid Waste

The Proposed Project Alternative would not adversely impact solid waste services. Solid waste generated during construction includes sediments, trash and debris, oil and grease, fuels, lubricants, concrete waste, paints, sanitary waste and miscellaneous chemicals. CV Link operations would generate trash and debris including solid waste from humans, dog waste, nutrients and other chemicals from landscaped areas.

The CV Link project calls for up to 30 solar-powered trash/recycling compactors to be distributed along the route, which will reduce trash volume and facilitate pickups and disposal. The amount of solid waste estimated to be generated by CV Link is approximately 5,750 tons per year and assumes a 50% diversion rate, which is calculated based on 2.30 tons per year rate for recreational waste disposal rates, derived from CalRecycle's 2014 Waste Characterization Study[7], and total estimated daily users of 2,500 people. Based on this, the project will contribute 0.015% (2,875 tons) annually to Lamb Canyon remaining capacity.

Overall, the project is anticipated to have minimal impacts to solid waste services. Coordination with the solid waste provider on the locations of the solar-powered trash/recycling compactors will ensure that the generated solid waste will be disposed of to the most efficient means possible. In addition, occasional clean-ups will also be coordinated with the sold waster provider to further reduce the accumulation of solid waste along the path.

Electricity

The Proposed Project Alternative would not have significant power consumption demand to adversely impact electricity services, which would be generated by lighting, WiFi base stations, and charging points. The total estimated power demand for the Proposed Project Alternative is approximately 734,296 kwh per year. However, solar panels will be installed on shade structure to generate most of the project's power. Based on this, approximately 89.6% of CV Link's electric demand will be generated through solar panels. Therefore, SCE and IID will be relied upon to provide 10.23% (75,118 kWh) of the Proposed Project's Alternative annual electricity demand. No electrical lines are proposed to be severed or relocated. Coordination with the electric utility will help reduce impacts to the electricity system in the area.

Communications

CV Link does makes provision for emergency call boxes along the route in areas with inadequate cell phone reception. Call boxes are only called for where it is determined that there are areas without a cellular signal. In that case, CV Link will be connected to the existing telecommunication system/service of the respective providers via landlines. Fieldwork along the CV Link route indicates that all alignments will have cell phone service. There would be no project impacts to local or regional communications systems.

Law Enforcement Services

Riverside County Sheriff's Department (RCSD) provides several law enforcement services (such as general community policing as well as the operation and maintenance of several correctional facilities) to areas under its jurisdiction. The RCSD has 2,720 employees, which includes 1,330 sworn personnel, to provide community policing services.[8] The RCSD is a "demand response" agency that maintains patrol

7 CalRecycle's 2014 Waste Characterization Study.

8 Riverside County Integrated Project (RCIP), 2002. General Plan Final Program Environmental Impact Report. State Clearinghouse No. 2002051143.

services throughout the County of Riverside.[9] The RCSD will have direct responsibility for police services for that portion of CV Link within the unincorporated community of Thermal. The RCSD also provides law enforcement services under contract to several cities within the CV Link project area, including Palm Desert, Rancho Mirage, Indian Wells, La Quinta and Coachella. Palm Springs, Cathedral City and Indio operate their own local Police Departments with mutual aid agreements with the Riverside County Sheriff's Department.

Agua Caliente Band of Cahuilla Indians lands are provided police protection service by the Palm Springs, Cathedral City and Rancho Mirage police departments, based on the location of their lands. The Cabazon Band of Mission Indians and Twenty-Nine Palms Band of Mission Indians lands are located in the cities of Indio and Coachella, respectively, and are provided law enforcement service by those cities.

Personal security along CV Link will be enhanced by regular mile-post signage and other wayfinding, bollard and security lighting on shade structures and at restrooms, and path lighting along the Route. Call boxes are planned at locations where cellular phone service is not available along the CV Link Route. Shade structures and restrooms will also be pre-wired for closed circuit TV (CCTV). A CV Link Volunteer Ambassador program is also proposed, which could provide a secondary form of security and enforcement of CV Link user rules.

The project may require occasional police services due to possible theft of construction equipment and/or vandalism that might occur during the construction period. However, once the project is completed, Police services would only be required in case of a crime or violence within the project area. CV Link users will be the "eyes on the Link" and will be able to report unusual, inappropriate or illegal activity that occurs along CV Link alignments. The existing police services in the respective cities along the route would be sufficient to serve the project because the CV Link is not expected to increase the service area population. Calls for additional law enforcement services are expected to be limited; as such, multimodal facilities are not typically associated with high call rates. However, continued coordination with police department will ensure that public safety personnel has access to the facility at all times. CV Link would have not have adverse impacts on police protection services.

Fire Protection Services and other Emergency Services

During construction, fire protection services and other emergency services may be needed in the event of worker injury or other accidental conditions. However, construction-related demand will be temporary and once the project is completed, CV Link operations would not result in substantial increase in the demand for fire protection services and other emergency services, as the project will not increase the service area population or result in habitable structures. Project access points will adequately ensure that fire and other emergency response teams can access the Link. Coordination with fire department personnel during and after construction will ensure that any calls for service along the path are not interrupted. Therefore, the Proposed Project Alternative would not adversely affect fire protection services and other emergency services.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

As with the Proposed Project Alternative described above, Alternative 1 will need access to utility systems and emergency services (i.e. water, sewer, solid waste, electric power, telecommunication systems, police and fire protection services, and medical services) during construction and operational phases. Alternative 1 will not pass through the cities of Rancho Mirage and Indian Wells, and CV Link users wishing to pass through the cities will be required to use other existing travel corridors, which already have utilities and are accessible for emergency services. Therefore, the cities of Rancho Mirage and Indian Wells will not be required to provide any utility and/or emergency services to CV Link.

[9] Ibid.

Under Alternative 1, the project would develop a 40± mile route that would be comprised of up to 48.2± miles of CV Link alignments between Palm Springs and Coachella. For analysis purposes, utility impacts for Alternative 1 were derived as a function of alignment length. The Alternative 1 project will result in a 16.3% reduction in demand for utility and emergency response services compared to the Proposed Project Alternative. Compared to the Alternative 2, Alternative 1 would result in a 25% reduction in overall demand for utility and emergency response services. Impacts to utilities and emergency services have been analyzed on this basis, as appropriate.

Water Service

During construction, the total estimated water demand for Alternative 1 is approximately 79.49 acre-feet. Post-construction, water demand for the restrooms and drinking water is approximately 4.48 acre-feet per year. It is further estimated that the operational water demand for landscape irrigation will be approximately 11.83 acre-feet per year. According to the Coachella Valley Integrated Water Management Plan (2010), the projected valley-wide water demand for 2020 is 719,100 acre-feet per year. Based on this, CV Link's modest demand of 16.31 acre-feet per year of operational demand constitutes a 0.0022% increase in projected 2020 demand. Thus, Alternative 1 is anticipated to have slightly less impact to water services than the Proposed Project Alternative and will not adversely affect regional water supplies and service.

Wastewater Service

Limited amounts of wastewater will be produced during construction and operation of the Alternative 1. The restrooms along the CV Link route would generate minimal amounts of wastewater. It is assumed that approximately 25% of Link users passing a restroom will use these facilities. Assuming the use of ultra-low flush toilets that use 1.28 to 1.6 gallons per flush, the four planned restrooms and drinking water demand, and assuming an adjoining link demand of 2,500 users per day, yields a wastewater generation of 800 gallons per restroom per day or 1,168,000 gallons per year. Alternative 1 is anticipated to generate a volume of wastewater comparable to that of the Proposed Project Alternative.

Solid Waste

The amount of solid waste estimated to be generated by CV Link Alternative 1 would be similar to Proposed Project Alternative, i.e. 2,875 tons per year (50 percent of 5,750), because the total number of CV Link users would remain the same (2,500 people).

Electricity

The total estimated power consumption for CV Link Alternative 1 would be 25% less than the full project buildout (Alternative 2) or 614,645 kWh per year, of which approximately 62,878 kwh would need to be secured from the electric power grid. Approximately 90% of Alternative 1 power would be generated by the CV Link's solar power system. Therefore, a limited demand for electricity from the utility grid and Alternative 1 will not have an adverse effect on electric power supplies or infrastructure.

Communications

The overall telecommunication impacts of the Alternative 1 would be approximately equal to those of the Proposed Project Alternative. This is due to the fact that CV Link will rely on cell phone service. Fieldwork along the CV Link route indicates that all alignments will have cell phone service. Therefore, a limited demand for electricity from the utility grid and Alternative 1 will not have an adverse effect on local or area communication systems.

Police/fire Protection and other Emergency Services

The overall public service impacts of the Alternative 1 would be similar to the Proposed Project Alternative because there will be no population increase in the service area. There would be no Link alignments in

Rancho Mirage or Indian Wells under this alternative, but Link access points and Rancho Mirage and Indian Wells termini will ensure adequate police and emergency access to CV Link.

C. Alternative 2: Project with All Eight Cities

Under Alternative 2, CV Link will be built within all eight incorporated communities between Palm Springs and Coachella, including Rancho Mirage, as well as limited unincorporated county lands and Native American Lands. The route would extend uninterrupted from Palm Springs to Coachella. Similar to the Proposed Project Alternative, Alternative 2 will require utility systems and emergency services during construction and operation. The addition of Rancho Mirage will increase the proposed route length by approximately five miles to 49± miles, which will not substantially increase demands for these services. Impacts on utility and emergency services under Alternative 2 will be limited. Under Alternative 2, the project route totals 49± miles and is comprised of up to 64.34± miles of alignments.

Water Service

Alternative 2 would require water use during construction, primarily for periodic dust control on access roads and during earthmoving activities. However, this water use would be temporary in nature and would not generate wastewater that would require treatment or disposal. During construction, the total estimated water demand for the Alternative 2 is approximately 96.10 acre-feet. Water supplied to the rest steps for toilet and drinking water would be approximately 4.48 acre-feet per year, consistent with the Proposed Project Alternative. It is further estimated that the operational water demand for landscape irrigation will be approximately 14.30 acre-feet per year. According to the Coachella Valley Integrated Water Management Plan (2010), the projected valley-wide water demand for 2020 is 719,100 acre-feet per year. Based on this, Alternative 2's operational demand of 18.78 acre-feet per year constitutes a 0.0026% increase in demand. Alternative 2 is anticipated to have greater impact to water services than the Proposed Project Alternative. However, this increase is negligible and will have an adverse effect on water supplies or delivery infrastructure.

Wastewater Service

Limited amounts of wastewater will be produced during construction and operation of Alternative 2. The restrooms along the CV Link route would generate minimal amounts of wastewater. It is assumed that approximately 25% of Link users passing a restroom will use these facilities. Assuming the use of ultra-low flush toilets that use 1.28 to 1.6 gallons per flush, the four planned restrooms and drinking water demand, and assuming an adjoining link demand of 2,500 users per day (see project Traffic Report), yields a wastewater generation of 800 gallons per restroom per day or 1,168,000 gallons per year. Alternative 2 is anticipated to generate a similar amount of wastewater as the Proposed Project Alternative; therefore, Alternative 2 will not substantially impact the local wastewater collection or treatment system.

Solid Waste

The amount of solid waste estimated to be generated by Alternative 2 is approximately 5,750 tons per year, which is calculated, based on 2.30 tons per year rate for recreational land use, given in CalRecycle's 2014 Waste Characterization Study, and total estimated daily users of 2,500 people for CV Link. CV Link will be required to maintain 50 percent waste diversion for each jurisdiction in accordance with CIWMP, based on this; the total solid waste generation for the project will be approximately 2,875 tons per year. Based on this, the project will only contribute 0.015% (2,875 tons annually) to Lamb Canyon's remaining capacity. There will be no adverse project-related impacts to landfill capacity and diversion programs.

Electricity

The estimated utility demand for Alternative 2 will be approximately 819,527 kwh per year, of which CV Link solar panels will provide about 735,840 kwh per year, requiring the project to secure approximately

83,686 kwh per year from the electric power grid. This demand is about 12% greater than the Proposed Project Alternative

Communications
The overall telecommunication impacts of the Alternative 2 would be approximately equal to those of the Proposed Project Alternative because it will rely on cell phone service. Fieldwork along the CV Link route indicates that all alignments will have cell phone service.

Police/fire Protection and other Emergency Services
The overall public service impacts of the Alternative 2 would be similar to the Proposed Project Alternative because there will be no population increase in the service area. However, there would be an increase of approximately 10% in the length of alignments along which police/fire/emergency services might be needed, compared to the Proposed Project Alternative.

D. Alternative 3: No Build/No Project Alternative

The No-Build Alternative would not affect any utility/emergency services systems because no water, electricity, telecommunication, police and fire protection activities related to CV Link would take place.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Very limited avoidance, minimization, and/or mitigation measures are necessary because there will be no adverse project related impacts. Additionally, the project would be constructed incrementally over the course of 3-4 years, which will further minimize any police, fire and emergency services related impacts to lesser levels. For this project, no relocation of a power and/or water line is recommended. Nonetheless, the following avoidance and minimization measures will ensure that emergency and other access is not substantially affected during project construction.

UE-A The construction activities shall meet or exceed all applicable federal, state and local statutory requirements for public safety.

UE-B All necessary permits or approvals, including traffic control plans, shall be secured prior to the initiation of site disturbance such as grading, paving and other construction activities where public streets may be affected. Prior to the initiation of site development, CVAG shall confer with the appropriate City Public Works Department to ensure that construction activities and traffic control are carried out in a manner that causes minimal disruption to traffic on adjoining city streets.

UE-C In order to minimize or avoid emergency and other accessibility issues for nearby residences, business and schools, CVAG and the CV Link Construction Manager shall develop and implement construction management strategies and traffic control and operations plans that maximize the efficiency of construction and minimize the disruption of traffic flow through CV Link construction areas. Traffic control plans shall be approved by the affected jurisdiction, and shall include requirements that at least one lane remain open in each direction; that signage be installed for roadwork and/or detours; and that emergency vehicle access is not affected.

UE-D While there will be no adverse impacts to existing utilities, CVAG and its contractors shall consult “Dig Alert” and shall closely coordinate with all utility purveyors to ensure that the location of potentially conflicting utilities are identified and impacts avoided. Utility clearances and/or approvals shall be secured prior to the initiation of site disturbance activities where utilities may be affected.

CUMULATIVE IMPACTS

The geographic scope for the analysis of cumulative impacts on utilities and service systems consists of the proposed CV Link alignments and rest areas in the cities of Palm Springs, Cathedral City, Palm Desert, Indian Wells, La Quinta, Indio, and Coachella. Along its proposed Route, multiple providers of water, wastewater and solid waste disposal will have jurisdiction over the project.

CVWD, DWA, IWA, and CWA maintain and operate water and wastewater services where CV Link alignments would be located. Each has identified adequate capacity to serve CV Link along with current and future projects. Construction and operation of CV Link alignments would not require the construction or expansion of stormwater or wastewater facilities. Therefore, the CV Link's contribution to cumulative impacts related to these services, regardless of the proposed alternative, would not be cumulatively considerable.

SCE and IID have adequate policies, programs, and projects in place to provide electricity to its users, including CV Link, for 20 years. As discussed above, approximately 89.77% of CV Link's electric need will be generated through project solar panels. Therefore, CV Link's incremental demand for electricity from SCE and IID would not be cumulatively considerable. For solid waste, implementation of the adequate programs and municipal codes to reuse and recycle generated construction and operation waste would lessen the amount of the solid waste. Therefore, implementation of the CV Link project, regardless of the alternative proposed, would not result in cumulatively considerable impacts related to utilities and service systems.

2-1.7 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

REGULATORY SETTING

The Department, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities.

Levels of Service and Jurisdiction Standards

The "Level of Service" (LOS) is a qualitative measurement that describes operational conditions within a traffic stream and considers speed, travel time, driving comfort, safety and traffic interruptions. Levels of Service are described as a range of alphabetical connotations, "A" through "F," which are used to characterize roadway and intersection operating conditions. LOS A represents the best, free flow conditions, and LOS F indicates the worst conditions and system failure.

Intersection Capacity

At intersections, the level of service is typically dependent on the quality of traffic flow. The 2010 Highway Capacity Manual (HCM)[10] methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The procedures used to determine levels of service vary with the type of intersection controls, including signs and signals. The levels of service are defined in the following table.

Table 2-7
Levels-of-Service for Intersections

	Average Total Delay Per Vehicle (seconds)	
Level of Service	**Signalized**	**Unsignalized**
A	0 to 10.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

The identification and definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions.

City of Palm Springs: Per Goal CR2.1 of the City of Palm Springs General Plan, Level of Service D or better should be maintained for the City's circulation network, as measured using "in season" peak hour conditions.

City of Cathedral City: For planning and design purposes, Cathedral City has established Level of Service D as the minimum peak hour system performance standard for Cathedral City circulation network.

City of Rancho Mirage: Per Goal 1, Policy 1 of the City of Rancho Mirage General Plan, the following LOS will be utilized for study area intersections located within the City: Require development to achieve a peak hour LOS D or better at intersections and roadway segments. It should be noted that Ramon Road and Monterey Avenue are a part of the CMP system. Where a LOS of E or worse exists along roadway segments and intersections along these CMP roadways, the City will attempt to take every reasonable measure to improve operating conditions.

City of Palm Desert: The Circulation Element of the City of Palm Desert General Plan states that peak hour intersection operation at LOS "C" or better is generally acceptable. Because LOS "C" represents a standard that is progressively more difficult and costly to achieve as traffic volumes grow in the City LOS "D" and/or a maximum volume to capacity ratio of 0.90 is provisionally considered the generally acceptable service level for peak operating periods when all feasible intersection improvements have been implemented.

City of Indian Wells: Per City of Indian Wells General Plan, minimum Level of Service (LOS) "D" should be maintained at roadway intersections. It should be noted that only HWY-111 is included on the CMP roadway system in the City of Indian Wells. For principal arterials, the CMP standard is LOS "E" or better.

[10] "Highway Capacity Manual; Fifth Edition"; Transportation Research Board, National Research Council; Washington, D.C.; 2010.

City of La Quinta: Per City of La Quinta's Engineering Bulletin #06-13 (July 2015), the City has established LOS "D" as the minimum level of service for its intersections and street segments.

City of Indio: City of Indio standard for acceptable Level of Service is LOS "D".

City of Coachella: City of Coachella criteria, LOS "D" is allowed in "Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterials, Urban Arterials, Expressways, conventional state highways or freeway ramp intersections. For the purposes of this analysis, LOS "D" is the minimum acceptable LOS for roadway segments.

Riverside County: Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS: LOS C on all County-maintained roads and conventional State Highways. As an exception, LOS D may be allowed in Community Development areas at intersections of any combination of Secondary Highways, Major Highways, Arterial Highways, Urban Arterial Highways, Expressways or conventional State Highways. LOS E may be allowed in designated Community Centers to the extent that it would support transit-oriented development and pedestrian communities. For CMP streets or highways, the County accepts LOS E.

Pedestrian Design Criteria

State and federal transportation policy has been shifting in recent years to require that transportation plans make provisions for pedestrian, bicyclists, LSEV and those with disabilities within the roadway network, which has heretofore primarily served motor vehicles. In analyzing options at intersections, pedestrians and motor vehicles have equal status; therefore, some loss of motor vehicle capacity is acceptable in order to accommodate minimum pedestrian crossing times. Pedestrian crossing-time requirements can have a substantial impact on intersection operations, especially in coordinated or synchronized signal systems, where a background cycle length is used to achieve consistent operation between consecutive intersections.

The level of delay is again the primary measure of impacts on intersection capacity. In general, shorter cycle lengths are preferable to longer ones because they result in less delay and shorter queues. However, the need to accommodate multiple pedestrian movements across wide roadways, coupled with complex signal phasing and minimum green time requirements to accommodate signal progression in multiple directions, may sometimes require the use of longer cycle lengths. The primary reference for the management and regulation of intersections is the California Manual of Uniform Traffic Control Devices (MUTCD), which states that the pedestrian clearance time should allow a pedestrian crossing in the crosswalk to leave the curb and travel to at least the far side of the traveled way or to a median of sufficient width for pedestrians to wait before opposing vehicles receive a green signal. The Institute of Transportation Engineers (ITE) recommends that median widths serving as pedestrian waiting area ideally be ten feet or wider to provide enough space for pedestrians to stand. Median refuge islands should be at least six feet wide and in no case less than four feet wide when used by pedestrians and bicyclists.[11] All aspects of CV Link are designed to comply with the requirements of the Americans With Disabilities Act (ADA).

Analysis Criteria and Methodology

The transportation analysis methodology for CV Link focuses on several layers of information:

(1) Identification and targeting of potentially significant conflict points and safety issues along the corridor,

[11] Institute of Transportation Engineers (ITE), Unsignalized Intersection Treatment Guide, Treatment ID No. 060. Also references the Federal Manual of Uniform Traffic Control Devices, Federal Highway Administration (FHWA), 2009, which recommends a minimum 4-foot wide median island refuge with an 8-foot refuge preferred.

(2) Collection of baseline (existing) peak season weekday auto, bike, LSEV, and pedestrian counts during peak periods at key at-grade access and/or at-grade crossing locations,
(3) Estimation of future bike/LSEV/walk activity along each corridor segment using information derived from the updated CVAG version of the Riverside County Transportation Analysis Model (RivTAM),
(4) Conflict point assessment and level of service (LOS) analysis at each of the potentially significant conflict points,
(5) Estimation of future bike/LSEV/walk miles traveled along each corridor segment, and
(6) Estimation of changes in vehicle miles traveled (VMT) on the surrounding road network associated with implementation of CV Link.

A variety of data sources were used to develop an understanding of traffic and roadway and intersection operating conditions. In addition to evaluating a wide variety of previous studies, additional traffic data were collected during March 2016, including peak hour directional movements tabulated at at-grade access and/or at-grade crossing locations along the corridor for vehicles, bicyclists, LSEVs and pedestrians. Future (RivTAM 2040 Plus TPPS – CVAG Model) volumes by mode of travel with the Proposed Project Alternative are then estimated at these locations. With the critical conflict locations known – the places where bicycles, LSEVs, pedestrians and vehicles will compete for shared space – a thorough evaluation of each location has been performed based on Federal Highway and California State Highway best practice including LOS calculations; review of field geometry; and review of traffic controls proposed in conjunction with CV Link.

AFFECTED ENVIRONMENT

The Corridor Transportation Analysis prepared for the CV Link project (July 2016), assessed the existing roadway network, and measured the level of use and service along the existing roadways in the project vicinity. The initial analysis of CV Link alignments and where they interface with the roadway network were identified. The transportation analysis evaluated the 33 key at-grade crossing locations[12] along the Route where traffic volumes and/or CV Link users' activity levels. At each location the efficacy of CV Link and planned General Plan roadway and intersection improvements were fully analyzed for buildout conditions and growth in traffic volumes for the year 2040. With proposed CV Link improvements and those already programmed by the local jurisdictions, levels of service and safety of operations will not be adversely affected.

Existing Vehicle Levels of Service

The various CV Link alignments that comprise the core route are located primarily along and atop the service/maintenance roads of major drainages in the region, including the Whitewater Floodplain, Tahquitz Creek and the Whitewater River/Coachella Valley Stormwater Channel. Portions of the alignments also would be located along local roadways, including portions of State Highway 111. The analysis identified where the potential exists for CV Link facilities and users to conflict with existing and planned roadway geometries and controls. As part of the traffic data collected on project-related roadways and intersections during March 2016, weekday peak hour directional movements were tabulated at the key at-grade access and/or at-grade crossing locations for vehicles, bicyclists, LSEVs and pedestrians. The following peak periods are evaluated based on the review of peak season hourly conditions observed in a sampling of available 24-hour traffic counts:

- Weekday Morning/Midday (peak hour between 11:30 AM and 1:30 PM)
- Weekday Evening (peak hour between 4:00 PM and 6:00 PM)

Table 2-8, below, identifies each of these locations and provides information on intersection geometries, traffic control devices, and current AM and PM peak hour levels of service for vehicular traffic, including

[12] The 33 intersections represent all direct interfaces between CV Link and existing roadways/transportation corridors.

LSEVs. The analysis of existing operating conditions for vehicular traffic at these locations indicates that all are operating at acceptable levels of service (LOS D or better). In fact, only one location (Gene Autry Trail at Via Escuela) operates at LOS D (PM peak hour), with all other operating at LOS A through C.

Existing Pedestrian and Bicycle Levels of Service

In addition to evaluating the operating conditions for vehicular traffic at potentially affected CV Link/Roadway intersections a Level of Service (LOS) analysis was also performed for bicycle, pedestrian, and LSEV users. For existing conditions, the LOS analysis indicates acceptable operations, although several of the intersections indicate a poor quality of service for bicyclists (LOS “D”) during peak hours. Pedestrian LOS at signalized intersections evaluates conflicting motorized vehicle volumes and speeds, crosswalk length, and average pedestrian delay. Pedestrians are better served at intersections with lower motorized vehicle volumes and speeds, shorter crosswalk lengths, and lower delay.

Table 2-9 below describes operating conditions for pedestrians and bikers at each of the 33 intersections, including type of traffic control, delays experienced by each mode of travel, and AM and PM peak hour LOS for each. Currently, for these users at these locations intersections operate at LOS C or better with the exceptions of seven intersections where one or more legs operate at LOS D. The lower operating conditions and longer waits are generally associated with roadways with higher traffic volumes.

Table 2-8
Vehicle Level of Service Analysis For Existing Conditions (2016)

#	Intersection	Traffic Control[4]	Intersection Approach Lanes[1]												AUTO/LSEV[2,3]			
			Northbound			Southbound			Eastbound			Westbound			Delay (Secs)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Palm Cyn. Dr. (SR-111) / San Rafael Dr.	TS	1	2	1	1	2	1	1	1	1	0.5	1.5	0	10.8	10.1	B	B
2	Indian Cyn. Dr. / Sunrise Pkwy.	CSS	0	2	0	0	2	0	0	0	0	0	1!	0	12.3	11.1	B	B
3	Sunrise Pkwy. / San Rafael Dr.	TS	1	2	0	1	2	0	0.5	0.5	1	0	1!	0	11.9	11.8	B	B
4	Gene Autry Tr. / Via Escuela	TS	1	2	1	1	2	1	0.5	0.5	1	0.5	0.5	1	14.4	50.6	B	D
5	Clubhouse View / Vista Chino	TS	1	0	d	0	0	0	1	2	1	1	2	0	11.1	16.2	B	B
6	Sunrise Wy. / N. Riverside Dr.	CSS	1	2	0	0	2	0	0	1!	0	0	0	0	13.1	13.1	B	B
7	Sunrise Wy. / Mesquite Av.	TS	1	2	0	1	2	d	1	1	0	1	1	1	12.8	10.9	B	B
8	Farrel Dr. / Mesquite Av.	TS	1	2	0	1	2	0	1	2	0	1	2	0	13.5	12.0	B	B
9	El Cielo Rd. / Mesquite Av.	AWS	0	1	d	1	1	0	0	0	0	1	0	1	10.0	10.5	A	B
10	Crossley Rd. / 34th Av.	CSS	1	2	d	1	2	d	0	1!	0	0	1!	0	12.9	11.5	B	B
11	Golf Club Dr. / Tahquitz Creek	Y	0	2	0	0	2	0	0	0	0	0	0	0	-	-	-	-
12	Cathedral Cyn. Dr. / Officer David Vasquez Rd.	TS	0	2	0	1	2	0	0	0	0	2	0	1>	4.7	4.5	A	A
13	Date Palm Dr. / Perez Rd.	TS	1	2	0	0	2	1>	2	0	1	0	0	0	13.9	14.1	B	B
14	Da Vall Dr. / Frank Sinatra Dr.	TS	0	0	0	1	1!	0	1	2	0	1	2	1	16.4	25.4	B	C
15	SR-111 / Country Club Dr.	TS	1	3	0	2	3	0	1	1	0	1	0.5	1.5	9.1	8.4	A	A
16	SR-111 / Thunderbird Rd.	TS	1	3	0	1	3	1	0.5	0.5	d	0	1!	0	3.1	3.0	A	A
17	SR-111 / Paxton Dr.	TS	1	3	0	1	3	0	0	0	0	1	0	1	2.5	1.9	A	A
18	San Jacinto Dr. / Rancho Las Palmas	AWS	0.5	0.5	1	0	1!	0	1	2	0	1	2	0	9.9	9.9	A	A
19	Bob Hope Dr. / Rancho Las Palmas	TS	1	2	1	1	2	1	1	1	1	0.5	0.5	d	9.5	10.0	A	A
20	Bob Hope Dr. / Avenida Las Palmas	TS	1	2	1	1	2	1	0.5	0.5	1	0.5	0.5	1	17.1	13.7	B	B
21	Bob Hope Dr. / Commercial Dwy.	CSS	0	2	1	0	2	0	0	0	0	0	0	1	10.6	10.4	B	B
22	SR-111 / Bob Hope Dr.	TS	1	3	1	2	3	0	0	1!	0	2	1!	0	15.5	15.0	B	B
23	SR-111 / Magnesia Falls Dr.	TS	1	3	0	1	3	0	0.5	0.5	1	1.5	0.5	1	9.9	7.6	A	A
24	Monterey Av. / Park View Dr.	TS	1	3	1	2	3	1	1	1	1	1	1	1	9.2	11.8	A	B
25	San Pablo Av. / Magnesia Falls Dr.	AWS	1	0	1	0	0	0	0	1	0	1	1	0	10.1	10.9	B	B
26	San Pablo Av. / Alumni Dr.	AWS	1	1	d	0.5	0.5	1	0.5	0.5	d	1	1	0	9.8	11.3	A	B
27	Portola Av. / Magnesia Falls Dr.	TS	1	2	1	1	2	0	1	1	1	1	1	1	20.0	29.3	B	C
28	El Dorado Dr. / Fred Waring Dr.	TS	1	1	1	1	1	1	1	3	1	1	3	1	19.9	22.8	B	C
29	Dune Palms Rd. / Corporate Ctr. Dr.	CSS	1	1	0	0	2	0	1	0	1	0	0	0	17.5	19.9	C	C
30	Monroe St., south of I-10 EB Ramps	-	0	1	0	0	1	0	0	0	0	0	0	0	-	-	-	-

Table 2-8
Vehicle Level of Service Analysis For Existing Conditions (2016)

#	Intersection	Traffic Control[4]	Intersection Approach Lanes[1]												AUTO/LSEV[2,3]			
			Northbound			Southbound			Eastbound			Westbound			Delay (Secs)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
31	Avenue 44, east of Palo Verde St. - Circle Dr.	-	0	0	0	0	0	0	0	1	0	0	1	0	-	-	-	-
32	Dillon Rd., west of SR-86S SB Ramps	-	0	1	0	0	1	0	0	0	0	0	0	0	-	-	-	-
33	Tyler St. - Magnolia / Avenue 50 - Tyler St.	AWS[5]	0.5	0.5	1	0	1!	0	0.5	0.5	1	0	1!	0	10.4	15.4	B	C

1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right turn lane; > = Right Turn Overlap; d = Defacto Right Turn Lane

2 Delay and level of service calculated using Syncrho 9 analysis software. BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

3 Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

4 TS = Traffic Signal; CSS = Cross Street Stop; AWS = All-Way Stop; Y = Crosswalk Yield

5 Based on field observations, the intersection of Tyler St. - Magnolia / Avenue 50 - Tyler St. is stop controlled for the NB, SB, and EB approach. The WB approach is uncontrolled. This type of traffic control setup is not supported in Synchro. Therefore, for the purpose of this report this intersection is evaluated as an all-way stop control.

Table 2-9
Pedestrian And Bicycle Analysis For Existing (2016) Conditions

#	Intersection	Traffic Control[4]	PEDESTRIAN[1,2]				BICYCLE[3]			
			Score/ Delay		Level of Service		Score		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Palm Cyn. Dr. (SR-111) / San Rafael Dr.	TS								
	- Eastbound Approach		N/A	N/A	N/A	N/A	1.95	1.95	A	A
	- Westbound Approach		2.19	2.19	B	B	2.56	2.57	B	B
	- Northbound Approach		N/A	N/A	N/A	N/A	3.06	3.19	C	C
	- Southbound Approach		2.67	2.73	B	B	3.01	3.12	C	C
2	Indian Cyn. Dr. / Sunrise Pkwy.	CSS								
	- Northbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Southbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Sunrise Pkwy. / San Rafael Dr.	TS								
	- Eastbound Approach		2.30	2.34	B	B	2.92	2.94	C	C
	- Westbound Approach		1.73	1.77	A	A	2.08	2.11	B	B
	- Northbound Approach		2.48	2.52	B	B	2.27	2.38	B	B
	- Southbound Approach		2.38	2.37	B	B	1.89	1.87	A	A
4	Gene Autry Tr. / Via Escuela	TS								
	- Eastbound Approach		2.02	2.10	B	B	2.88	3.12	C	C
	- Westbound Approach		1.95	1.95	A	A	2.96	2.99	C	C
	- Northbound Approach		2.74	2.79	B	C	2.94	3.22	C	C
	- Southbound Approach		2.89	2.99	C	C	2.95	2.93	C	C
5	Clubhouse View / Vista Chino	TS								
	- Eastbound Approach		N/A	N/A	N/A	N/A	3.48	3.92	C	D
	- Westbound Approach		N/A	N/A	N/A	N/A	2.21	2.30	B	B
	- Northbound Approach		1.98	1.97	A	A	1.50	1.48	A	A
6	Sunrise Wy. / N. Riverside Dr.	CSS								
	- Northbound Approach		6.20	6.20	B	B	N/A	N/A	N/A	N/A
7	Sunrise Wy. / Mesquite Av.	TS								
	- Eastbound Approach		2.11	2.07	B	B	2.61	2.52	B	B
	- Westbound Approach		2.36	2.35	B	B	2.89	2.86	C	C
	- Northbound Approach		2.65	2.62	B	B	2.99	2.95	C	C
	- Southbound Approach		2.72	2.67	B	B	1.46	1.39	A	A
8	Farrel Dr. / Mesquite Av.	TS								
	- Eastbound Approach		2.36	2.35	B	B	2.36	2.33	B	B
	- Westbound Approach		2.36	2.33	B	B	2.30	2.28	B	B
	- Northbound Approach		2.51	2.49	B	B	2.53	2.51	B	B
	- Southbound Approach		2.46	2.44	B	B	2.76	2.72	C	B
9	El Cielo Rd. / Mesquite Av.	AWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	Crossley Rd. / 34th Av.	CSS								
	- Northbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Southbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	Golf Club Dr. / Tahquitz Creek	CSS								
	- Northbound Approach		16.40	16.40	C	C	N/A	N/A	N/A	N/A
	- Southbound Approach		16.40	16.40	C	C	N/A	N/A	N/A	N/A
12	Cathedral Cyn. Dr. / Officer David Vasquez Rd.	TS								
	- Westbound Approach		2.15	2.15	B	B	2.68	2.67	B	B
	- Northbound Approach		N/A	N/A	N/A	N/A	1.54	1.59	A	A
	- Southbound Approach		2.51	2.54	B	B	1.58	1.64	A	A

Table 2-9
Pedestrian And Bicycle Analysis For Existing (2016) Conditions

#	Intersection	Traffic Control[4]	PEDESTRIAN[1,2]				BICYCLE[3]			
			Score/ Delay		Level of Service		Score		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
13	Date Palm Dr. / Perez Rd.	TS								
	- Eastbound Approach		2.59	2.58	B	B	3.13	3.06	C	C
	- Northbound Approach		2.66	2.67	B	B	3.27	3.38	C	C
	- Southbound Approach		N/A	N/A	N/A	N/A	3.46	3.39	C	C
14	Da Vall Dr. / Frank Sinatra Dr.	TS								
	- Eastbound Approach		2.59	2.61	B	B	3.02	3.10	C	C
	- Westbound Approach		2.71	2.75	B	B	3.08	3.22	C	C
	- Southbound Approach		2.54	2.59	B	B	2.98	2.93	C	C
15	SR-111 / Country Club Dr.	TS								
	- Eastbound Approach		1.97	1.96	A	A	3.74	3.76	D	D
	- Westbound Approach		N/A	N/A	N/A	N/A	3.53	3.41	D	C
	- Northbound Approach		N/A	N/A	N/A	N/A	3.73	3.85	D	D
	- Southbound Approach		3.46	3.43	C	C	3.29	3.16	C	C
16	SR-111 / Thunderbird Rd.	TS								
	- Eastbound Approach		1.98	1.99	A	A	1.73	1.76	A	A
	- Westbound Approach		1.74	1.73	A	A	2.69	2.68	B	B
	- Northbound Approach		3.30	3.33	C	C	2.13	2.19	B	B
	- Southbound Approach		N/A	N/A	N/A	N/A	3.62	3.64	D	D
17	SR-111 / Paxton Dr.	TS								
	- Westbound Approach		1.98	1.96	A	A	2.90	2.86	C	C
	- Northbound Approach		3.35	3.33	C	C	2.96	3.06	C	C
	- Southbound Approach		N/A	N/A	N/A	N/A	3.69	3.54	D	D
18	San Jacinto Dr. / Rancho Las Palmas	AWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Bob Hope Dr. / Rancho Las Palmas	TS								
	- Eastbound Approach		2.42	2.42	B	B	3.32	3.33	C	C
	- Westbound Approach		2.01	2.01	B	B	3.01	3.02	C	C
	- Northbound Approach		2.82	2.81	C	C	3.11	3.10	C	C
	- Southbound Approach		2.88	2.89	C	C	3.27	3.27	C	C
20	Bob Hope Dr. / Avenida Las Palmas	TS								
	- Eastbound Approach		2.06	2.05	B	B	3.13	3.13	C	C
	- Westbound Approach		2.02	2.00	B	A	3.01	2.98	C	C
	- Northbound Approach		2.81	2.78	C	C	3.08	3.04	C	C
	- Southbound Approach		2.81	2.79	C	C	3.11	3.05	C	C
21	Bob Hope Dr. / Commercial Dwy.	CSS								
	- Northbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Southbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	SR-111 / Bob Hope Dr.	TS								
	- Eastbound Approach		1.77	1.78	A	A	2.06	2.06	B	B
	- Westbound Approach		2.70	2.66	B	B	3.07	2.99	C	C
	- Northbound Approach		N/A	N/A	N/A	N/A	3.83	3.91	D	D
	- Southbound Approach		3.31	3.32	C	C	2.66	2.60	B	B
23	SR-111 / Magnesia Falls Dr.	TS								
	- Eastbound Approach		2.02	2.00	B	A	3.05	3.00	C	C
	- Westbound Approach		2.37	2.35	B	B	3.31	3.25	C	C
	- Northbound Approach		N/A	N/A	N/A	N/A	3.66	3.63	D	D
	- Southbound Approach		3.58	3.65	D	D	2.57	2.73	B	B

Table 2-9
Pedestrian And Bicycle Analysis For Existing (2016) Conditions

#	Intersection	Traffic Control[4]	PEDESTRIAN[1,2]				BICYCLE[3]			
			Score/ Delay		Level of Service		Score		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
24	Monterey Av. / Park View Dr.	TS								
	- Eastbound Approach		2.23	2.26	B	B	3.45	3.56	C	D
	- Westbound Approach		2.31	2.32	B	B	3.16	3.25	C	C
	- Northbound Approach		3.26	3.27	C	C	3.18	3.23	C	C
	- Southbound Approach		3.34	3.36	C	C	3.37	3.35	C	C
25	San Pablo Av. / Magnesia Falls Dr.	AWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	San Pablo Av. / Alumni Dr.	AWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	Portola Av. / Magnesia Falls Dr.	TS								
	- Eastbound Approach		2.28	2.31	B	B	3.24	3.37	C	C
	- Westbound Approach		2.23	2.22	B	B	2.86	2.85	C	C
	- Northbound Approach		2.85	2.88	C	C	3.20	3.22	C	C
	- Southbound Approach		N/A	N/A	N/A	N/A	3.10	3.18	C	C
28	El Dorado Dr. / Fred Waring Dr.	TS								
	- Eastbound Approach		3.20	3.30	C	C	3.28	3.56	C	D
	- Westbound Approach		3.16	3.28	C	C	2.65	2.66	B	B
	- Northbound Approach		2.39	2.41	B	B	3.37	3.45	C	C
	- Southbound Approach		2.33	2.33	B	B	2.96	2.95	C	C
29	Dune Palms Rd. / Corporate Ctr. Dr.	CSS								
	- Northbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Southbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Monroe St., south of I-10 EB Ramps	-								
	- Northbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Southbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	Avenue 44, east of Palo Verde St. - Circle Dr.	-								
	- Eastbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Westbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	Dillon Rd., west of SR-86S SB Ramps	-								
	- Eastbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- Westbound Approach		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	Tyler St. / Avenue 50	AWS[5]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1 Delay and level of service calculated using Syncrho 9 analysis software. BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

2 Per the 2010 Highway Capacity Manual, the pedestrian score and level of service for the pedestrians crossing each subject approach (i.e. "Eastbound" pedestrians are those crossing the Eastbound vehicular approach) are shown for signalized intersections. For cross-street stop controlled intersections, the pedestrian delay and level of service are shown for pedestrians crossing a traffic stream not controlled by a stop sign. It should be noted that pedestrian level of service measures at all-way stop controlled intersections are not evaluated since pedestrian LOS is defined for pedestrians crossing a traffic stream not controlled by a stop sign (Exhibit 8-2 of HCM2010)

3 Per the 2010 Highway Capacity Manual, the bicycle LOS score for the segment is used to estimate facility LOS. One score is needed for each direction of travel of interest for each segment on the facility for signalized intersections. For unsignalized intersections, bicycle level of service measures are not evaluated per Exhibit 8-2 of HCM2010.

4 TS = Traffic Signal; CSS = Cross Street Stop; AWS = All-Way Stop

5 Based on field observations, the intersection of Tyler St. - Magnolia / Avenue 50 - Tyler St. is stop controlled for the NB, SB, and EB approach. The WB approach is uncontrolled. This type of traffic control setup is not supported in Synchro. Therefore, for the purpose of this report this intersection is evaluated as an all-way stop control

Bicycle LOS at signalized intersections is determined based on perceived separation from motorized vehicle traffic, motorized vehicle volumes, cross-street width, and presence and utilization of on-street parking. Bicycle LOS is improved with a reduction in each of these indicators. Pedestrian LOS at cross-street STOP-controlled (stop signs) intersections is based on average pedestrian control delay crossing the major street. Pedestrian LOS is improved via lower vehicle volumes, presence of a median, and provision of pedestrian crossing treatments that improve motorist yielding rates.

Existing Transit Service

The SunLine Transit Agency provides public transit service throughout the Coachella Valley. SunLine has a service area of approximately 1,120 square miles. Its fifteen transit lines provide public bus service with a fleet of 70 fixed route buses and 33 paratransit vans throughout the Coachella Valley, seven days a week (excluding Thanksgiving and Christmas). SunLine Transit Agency buses are wheelchair accessible. SunLine buses have bicycle racks that are convenient for cyclists to use and can accommodate either two or three bicycles per bus. There are approximately 105 SunLine bus stops in proximity to CV Link alignments.

SunLine's overall ridership increased 3.2% in 2014, and the increases on some of the fixed routes were even more significant. The following fixed routes experienced the largest increase:

- Route 14—DHS/Palm Springs increased 4.3%.
- Route 15—Spa City Loop in Desert Hot Springs increased 7.7%.
- Route 24—Palm Springs increased 4.7%.
- Route 53—Palm Desert/Rancho Mirage/Indian Wells increased 20.6%.
- Route 81—Indio increased 109.4%.
- Route 90—Coachella/Indio increased 7.1%.
- Route 32—Thousand Palms/Palm Springs/Cathedral City increased 11%.
- SunLine ADA Paratransit service ridership increased by 9.2%.

Modeled data provided in the Environmental Consequences section below are based on a design year of 2040, which is approximately 18 to 20 years beyond the completion date of the project. The analysis assumes that no new vehicular traffic will be generated by CV Link, but rather the subject multi-modal project will reduce vehicular traffic over time. CV Link alignments would interface with 33 roadway intersections and would rely upon and add to roadway improvements and traffic controls designed to ensure safety and acceptable levels of service for all users. Therefore, initially there will be adverse but beneficial effects on vehicular traffic reductions upon CV Link opening at all 33 intersections, which will operate as they do now. Over time, CV Link improvements will further benefit vehicular roadway operations at these intersections, where CV Link users will make up a larger percentage of roadway users, thereby reducing vehicle volumes at these locations versus what they would be without CV Link. As a result, the area-wide "buildout" period for surrounding lands and future traffic volumes was assumed for the Year 2040 and were computed based on this buildout year and associated land use patterns and socio-economic conditions in that year.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The analysis of CV Link impacts on the local and regional transportation network takes two forms. First, the analysis evaluates the travel demand by mode choice (auto, walking, bicycling, etc.) and evaluates the current and long-term (2040) demand for the CV Link facility. The analysis also evaluates the effects of the CV Link project and facilities on the existing transportation network, especially at at-grade crossings and where CV Link facilities share the road right of way. To assess these potential impacts, 33 CV Link/roadway interface areas were identified and analyzed. So too were the east-end and west-end

termini at the Rancho Mirage city borders, part of the Proposed Project Alternative resulting from the exclusion of Rancho Mirage alignments from this alternative.

The above described modal split analysis gauges pedestrian, bicycle and LSEV demand on the CV Link facility based on a trip purpose basis for the 2016 socio-economic data and modeling for the year 2040. Demand estimates have also been extracted for home-based (originating from home) shopping trips, other-based other trips (shopping to lunch, etc.), and work-based other trips. The analysis provides a demand estimate for each CV Link segment based on a combination of all these purpose types.

Furthermore, demand for CV Link has been estimated by assuming that a portion of travel between cities for bicyclists, pedestrians, and LSEV users would find CV Link desirable. A smaller portion of travel within an individual city has also been allocated to CV Link demand. These demand estimates vary depending on the CV Link alignment, nearby land uses, and other considerations. Based on these factors the percentage of pedestrians utilizing the CV Link is generally lower than the percentage of bicycles using the Link. LSEV demand has been estimated based upon bicycle and pedestrian demand, and varies similarly to the variation in bicycle demand estimates.

Palm Springs North

Trips originating in the Palm Springs North area include those trips contained *within* the area (intratrips), trips traveling to another CV Link analysis area (such as to Palm Springs Central, Cathedral City, etc.), and trips that interact with County areas. Daily demand for the Palm Springs North segment in 2040 is anticipated to be approximately 1,275 trips, of which 672 are in the AM and PM peak periods and 603 are in the off-peak periods. The Palm Springs North segment trips primarily interact internally (i.e., begin and end within the area), with a high proportion of interactions to and from Palm Springs Central and Cathedral City.

Palm Springs Central

The CV Link 2040 corridor demand estimate for the Palm Springs Central area indicates AM and PM peak periods will be approximately 983 trips, with an additional 959 demand in the off-peak periods. Total daily corridor demand for the Palm Springs Central segment is 1,942 trips. In addition to intratrips, the Palm Springs Central segment trips experience a high proportion of interactions to and from Palm Springs North and Cathedral City.

Cathedral City

In addition to the corridor demand for intratrips (trips contained fully within Cathedral City) and trips traveling to another CV Link analysis area, there are pass-through trips, which start on one side (either west or east) of Cathedral City and end on the other. For example, a trip that starts within Palm Springs Central and ends within Rancho Mirage would be a “pass through trip” for Cathedral City. Total daily demand for the Cathedral City segment is anticipated to be approximately 2,125 trips, of which 1,139 are in the AM and PM peak periods and 986 are in the off-peak periods. The Cathedral City segment trips primarily interact internally, with a high proportion of interactions to and from Palm Springs Central, Rancho Mirage, Palm Springs North, and Palm Desert.

Rancho Mirage

While, with the exception of west-end Terminus B, the Proposed Project Alternative does not include CV Link alignments within the city. The construction of the Link and projected conditions in 2040 indicate that travel demand for CV Link would nonetheless come from this jurisdiction. Under the Proposed Project Alternative, CV Link terminates near the city boundary on the east and west sides of the Rancho Mirage. Though neighborhood electric vehicles (NEVs) are prohibited in Rancho Mirage, other types of LSEVs such as motorized wheelchairs and golf carts are allowed[13]. Demand for the Rancho Mirage segment for

[13] Ordinance No. 1099 of the City of Rancho Mirage. Adopted November 5, 2015. Rancho Mirage voters have the potential to overturn the NEV prohibition in the future.

the Proposed Project Alternative in the AM and PM peak periods is anticipated to be approximately 617 trips, with an additional 576 demand in the off-peak periods. Total daily corridor demand for the Rancho Mirage segment is 1,193 trips. In addition to intratrips, the Rancho Mirage segment trips experience a high proportion of interactions to and from Palm Desert and Cathedral City. Only a limited portion of these potential Rancho Mirage Link trips would be realized due to the limited access Rancho Mirage users would have to CV Link facilities under the Proposed Project Alternative.

The location and use of West Terminus B could modestly increase the use of these Rancho Mirage facilities by CV Link users. The CV Link traffic analysis indicates that individual bicycle movements at intersection locations in Rancho Mirage, without the CV Link alignments, are limited to less than 15 bicycles per hour. This is an average of one every four minutes. Signal cycle lengths are anticipated to be less than four minutes, and bicycle turns are not anticipated to occur in every direction during every cycle. Furthermore, pedestrian activity in Rancho Mirage without CV Link is not projected to occur during every signal cycle. The highest pedestrian projection at any location in the City of Rancho Mirage is 21 pedestrians per hour, or an average of 1 every three minutes. This average is actually conservative, as pedestrians are more likely to travel together than cyclists, possibly including a parent with child(ren). For the Proposed Project Alternative, LSEV activity is projected to be nominal (less than 2 per hour) at most locations in the City of Rancho Mirage. In the event that special accommodations are not provided, LSEV users operate as pedestrians, utilizing existing crosswalks, push-buttons, etc. The volume of CV Link passing through Rancho Mirage would be low and have no adverse impact on these Rancho Mirage facilities or roadways. Therefore, the implementation of the Terminus B design would not result in CV Link users adversely affecting Rancho Mirage streets or other transportation facilities.

West Terminus B is preferable from a safety standpoint because it would connect CV Link users directly to existing Class I (off street) bike, pedestrian, and golf cart infrastructure in Rancho Mirage. However, this connection cannot be made without the approval of Rancho Mirage voters. Terminus A has the advantage of space for parking and other access point amenities, but would require CV Link users to use on-street facilities to continue travel in Rancho Mirage. On-street facilities are less safe than off-street facilities because the increased likelihood of conflicts with fast moving automobile traffic.

Palm Desert

Daily demand in 2040 for the Palm Desert segment is anticipated to be approximately 2,168 trips, of which 1,123 will be in the AM and PM peak periods and 1,045 are in the off-peak periods. The Palm Desert segment trips primarily interact internally, with a high proportion of interactions to and from Rancho Mirage, Cathedral City, Indian Wells, La Quinta and Indio.

Indian Wells

By the year 2040, the demand for the Indian Wells segment in the AM and PM peak periods is anticipated to be approximately 727 trips, with an additional 636 demand in the off-peak periods. Total daily corridor demand for the Indian Wells segment 1,363 trips. In addition to intratrips, the Indian Wells segment trips experience a high proportion of interactions to and from Palm Desert.

La Quinta

Daily demand in 2040 for the La Quinta segment is anticipated to be approximately 2,077 trips, of which 1,110 will be in the AM and PM peak periods and 967 in the off-peak periods. The La Quinta segment trips primarily interact internally, with a high proportion of interactions to and from Indio, Palm Desert, and Indian Wells.

Indio

By 2040, demand for the Indio segment in the AM and PM peak periods is anticipated to be approximately 1,483 trips, with an additional 1,238 demand in the off-peak periods. Total daily corridor demand for the Indio segment would be 2,721 trips. In addition to intratrips, the Indio segment trips experience a high proportion of interactions to and from Coachella, La Quinta, and Palm Desert.

Coachella

Daily demand for the Coachella segment in 2040 is anticipated to be approximately 2,361 trips, of which 1,278 are in the AM and PM peak periods and 1,083 are in the off-peak periods. The Coachella segment trips primarily interact internally, with a high proportion of interactions to and from Indio.

Estimated Vehicle Trip Reductions

As discussed above, the RivTAM Model provides a means by which multi-modal trips, that might otherwise be taken using an auto, can be estimated. The following briefly describes how the various CV Link analysis areas are projected to capture pedestrian, bicycle and LSEV trips that would otherwise result in motor vehicle trips.

Table 2-10
CV Link Annual Trips and Vehicle Miles Avoided
(Proposed Project Alternative - Based on CV Link Use in 2040)

Pedestrian Trips	
Annual Pedestrian Trips	1,044,784
Reduced Motor Vehicle Trips	365,674
Reduced Motor Vehicle Miles	689,053
Bicycle Trips	
Annual Bicycle Trips	1,264,731
Reduced Motor Vehicle Trips	632,366
Reduced Motor Vehicle Miles	3,480,273
LSEV Trips	
Annual LSEV Trips	969,594
Reduced Motor Vehicle Trips	678,716
Reduced Motor Vehicle Miles	3,241,667
Total Trips	
Annual Trips	3,279,109
Reduced Motor Vehicle Trips	1,676,756
Reduced Motor Vehicle Miles	7,410,993

CV Link 2040 Daily Miles Travelled

In addition to calculating the number of multi-modal trips the CV Link would carry in 2040, an approximation has also been made of the average miles per trip mode and defined for each combination of trips along the CV Link corridor. This approximate trip length is dependent upon the segment length, the mode used, and the trip starting / ending point. The estimated 2040 daily non-motorized miles traveled to approximate VMT (and auto conversion values) have been developed.

The model's traffic demand data has also been evaluated to provide a summary of CV Link miles travelled on the core route by bicyclists, LSEVs, and pedestrians. The calculations take into consideration the variable distances on each segment of the corridor that are related to intra-district and inter-district travel activities, which vary by bicycle travelers, LSEV users, and pedestrians. An estimate of CV Link desirability was also developed based upon known trends in seasonal variations in population and employment in the Coachella Valley, as were climate and weather patterns and data, which served to weight the demand projections. Table 6.4-1 contains the results of this analysis. As shown on Table 4-7

below, the average trip lengths for the Proposed Project Alternative range from 1.88 miles for pedestrian trips to 5.50 miles for bicycle trips with an average of 4.78 miles for LSEV trips.

Table 2-11
CV Link 2040 Daily Miles Travelled

Corridor (Proposed Project Alternative)	Bike	LSEV	Walk	Total
Intra District Trips	2,093	1,736	2,876	6,705
Inter District Trips	2,315	1,177	1,127	4,619
Daily Trips	4,408	2,913	4,003	11,324
Daily Miles Traveled	24,257	13,913	7,543	45,713
Average Miles Traveled Per Trip	**5.50**	**4.78**	**1.88**	**4.04**

Other CV Link Impacts

In 2040, the CV Link facility will annually capture approximately 1.3 million bike trips, 970,000 LSEV trips, and 1 million pedestrian trips. It is assumed, based on the RivTAM model mode selection tool, that on average approximately 35% of the pedestrian trips attracted to CV Link will replace vehicle trips. The mode shift from vehicle trips has been estimated to be approximately 50% for bicycle trips, and 75% for LSEV trips. The addition of an integrated and safe option for bicycle travelers, LSEV users, and pedestrians in Coachella Valley is projected to induce travel by these modes and reduce vehicle miles traveled in conventional automobiles, compared to conditions without the CV Link accommodations for these alternative modes of travel.

The savings in motor vehicle VMT with CV Link is estimated to be approximately 7,410,993 miles annually for the Proposed Project Alternative, a substantial beneficial impact to the existing transportation system (as well as regional air quality).

The CV Link project was developed based, in part, on a review of transportation-related planning and technical documents of the various local jurisdictions in order to harmonize the Link design with local transportation planning, facilities and regulations. The CV Link jurisdictions have all adopted General Plan transportation policies and programs that support alternative modes of travel and the sharing of the street with these alternative modes (for example, the California *Complete Streets* Policy[14], etc.). The FHWA does not have a formal Complete Streets program but policy does support the goals of Complete Streets.[15]. The Proposed Project Alternative does not conflict with, but rather complements, the adopted policies, plans, and programs of the participating jurisdictions as they relate to public transit, bicycle, or pedestrian facilities. The project also serves to enhance, rather than decrease, the performance and safety of these multi-modal facilities. The City of Rancho Mirage has adopted an ordinance that currently restricts NEVs from certain arterial roadways, but as noted, Rancho Mirage is not a part of the Proposed Project Alternative.

CV Link is not proposing any new parking because automotive travel to the facility is to be discouraged. Regardless, some users will drive a car to reach CV Link. Surplus automobile parking is available to serve CV Link users at adjacent public parks and on nearby non-residential streets. Parking availability was one of the considerations used to propose the locations for CV Link access points.

14 Deputy Directive -64-R2, 2008 and 2014. California Department of Transportation.

15 Although the Federal Highway Administration (FHWA) does not have an official complete streets policy, the concept is closely associated with the principles promoted by the Interagency Partnership for Sustainable Communities, a joint endeavor involving the U.S. Department of Transportation (USDOT), U.S. Department of Housing and Urban Development (HUD), and U.S. Environmental Protection Agency (EPA). The partnership aims to provide more transportation choices, including investing in healthy, safe, and walkable and bikable neighborhoods.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Transportation/traffic related impacts associated with Alternative 1 will be similar to those of the Proposed Project Alternative, excepting that the CV Link alignments through Indian Wells would not be constructed. As with the Proposed Project Alternative, Rancho Mirage would also be excluded from Alternative 1. The effects associated with the Rancho Mirage termini are discussed above in the Proposed Project Alternative discussion. Throughout the remaining alignments of the project, roadway and intersection improvements would be provided as identified in the CV Link Corridor Transportation Analysis.

In the vicinity of the west Indian Wells city limits four Indian Wells West-End termini have been developed. All of the four termini end in or adjacent to the WWR Channel, north of Fred Waring Drive. Link users will have the option of backtracking along a different or the same Link segment, or can proceed south on Eldorado Drive on existing city streets. As demonstrated for the Proposed Project Alternative, which Includes Indian Wells, the intersection of Fred Waring Drive and Eldorado Drive will continue to operate at acceptable levels of service in 2040 with existing and programmed improvements. No additional mitigation would be required for the Alternative 1 scenario.

The primary difference, in terms of vehicle travel offsets, between Alternative 1 and the Proposed Project Alternative will be the annual vehicle trips avoided. It is estimated that Alternative 1 will reduce VMTs by 6,422,918 miles annually (i.e. 988,075± vehicle miles traveled less than the Proposed Project Alternative) by 2040.

The CV Link project, including Alternative 1 was developed based on a review of transportation-related planning and technical documents of the various local jurisdictions in order to harmonize the Link design with local transportation planning, facilities and regulations. Alternative 1 does not conflict with, but rather complements, the adopted policies, plans, and programs of the participating jurisdictions as they relate to public transit, bicycle, or pedestrian facilities. The project also serves to enhance, rather than decrease, the performance and safety of these multi-modal facilities.

C. Alternative 2: Project with All Eight Cities

Transportation/traffic related impacts associated with Alternative 2 will be similar to those of the Proposed Project Alternative with the addition of Rancho Mirage. Planned CV Link and other programmed roadway and intersection improvements will be provided, but the Rancho Mirage termini will not be required and CV Link users will have access through the City and full connection through the route. There will be adverse impacts to all potentially affected roadway intersections with all intersections operating at acceptable levels of service in 2040. The primary difference between Alternative 1 and the Proposed Project Alternative will be the annual automobile savings. It is estimated that Alternative 1 will reduce motor vehicle VMTs by 9,071,027 miles annually (i.e.1,660,034± vehicle miles traveled more than the Proposed Project Alternative).

The CV Link project, including Alternative 2 was developed based on a review of transportation-related planning and technical documents of the various local jurisdictions in order to harmonize the Link design with local transportation planning, facilities and regulations. The CV Link jurisdictions have all adopted General Plan transportation policies and programs that support alternative modes of travel and the sharing of the street with these alternative modes (see California's *Complete Street* program, etc.). Alternative 2 does not conflict with, but rather complements, the adopted policies, plans, and programs of the participating jurisdictions as they relate to public transit, bicycle, or pedestrian facilities. The project also serves to enhance, rather than decrease, the performance and safety of these multi-modal facilities. The City of Rancho Mirage has adopted an ordinance that significantly restricts LSEV's (primarily NEVs) from its arterial roadways, which is the only inconsistency between CV Link and local General Plan and other transportation policies.

D. Alternative 3: No Build/No Project Alternative

Under the No Build/No Project Alternative, the CV Link project would not be built and would not require modifications to the existing roadway/transportation systems. However, Alternative 3 will not result in motor vehicle VMT reductions and associated traffic reduction benefits. Neither does the No Project Alternative provide the opportunities afforded by CV Link to help local communities meet their qualitative goals of a more diverse transportation system that supports all modes of travel.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Based upon this analysis, project impacts on traffic and transportation facilities are expected to be beneficial overall. Nonetheless, in an abundance of caution, general and specific avoidance and minimization measures are provided below that will further reduce project impacts and facilitate development and maintenance of a safe and efficient transportation system that serves the valley. Minimization measures that address any residual impacts associated with the CV Link Proposed Project Alternative are set forth below.

Avoidance and Minimization Measures

TR-A. The construction activities shall meet or exceed all federal, state and local statutory requirements for public safety.

TR-B. All necessary permits or approvals shall be secured prior to the initiation of site disturbance such as grading, paving and other construction activities. Prior to the initiation of site development, CVAG shall confer with the appropriate City Public Works Department to ensure that construction activities are carried out in a manner that causes minimal disruption to traffic on adjoining city streets.

TR-C. The Construction Manager shall be required to identify and promptly repair any project-related damage to existing public roads upon completion of the construction activities within the project site. The contractor shall monitor the condition of these routes throughout the construction process and, in the event of an accidental load spill, to arrange for the immediate clean-up of any spilled material with street sweeping or other procedures, as needed.

TR-D. The final design of the Link access points and the internal circulation improvements shall comply with applicable city access and design standards, and be reviewed by the City Engineer. CVAG shall submit CV Link and associated street improvement and striping plans to each respective City Engineer for review and approval, prior to the issuance of grading and/or construction permits.

TR-E. Properly designed and maintained CV Link and any associated street, roadway, and access area lighting shall be provided along the CV Link route, as needed, to facilitate the safe movement of vehicular, pedestrian and bicycle traffic, and to ensure good visibility under both daylight and nighttime conditions.

TR-F. Prior to the issuance of grading permits or other work authorization for specific CV Link segments, the CV Link Construction Manager shall develop and implement construction management strategies and traffic control and operations plans that minimize the disruption of traffic flow through CV Link construction areas, in order to minimize or avoid accessibility issues for nearby residences, business and schools.

CUMULATIVE IMPACTS

As noted above, CV Link has been developed within the framework of local and regional transportation planning and policy. In addition to being consistent (with the possible exception of Rancho Mirage) with the Circulation/Mobility Elements of the local jurisdictions, CV Link is also consistent with and implements the SCAG Regional Transportation Plan and Coachella Valley's CVAG Active Transportation Plan. CV Link also implements such important federal transportation plans as "Complete Streets", which serve to enhance roadway access to and use by all modes of transportation, including pedestrian, bicyclists and LSEVs.

CV Link will have a less than considerable adverse cumulative impact on local and regional transportation facilities and operations. Rather, CV Link will provide a cumulatively beneficial impact on these facilities, their operations and levels of service. The project provides much needed multi-modal transportation facilities that address an identified need for a larger and more diverse multi-modal network in the Coachella Valley. Therefore, the project will not result in any cumulatively considerable adverse impacts but, rather, CV Link's contributions will have cumulatively considerable beneficial effects on local and regional traffic of all types and modes.

2-1.8 VISUAL/AESTHETICS

REGULATORY SETTING

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

AFFECTED ENVIRONMENT

A visual impact assessment (VIA) was prepared for the proposed CV Link in October 2016. The following section is based on the analysis conducted for the CV Link project, and which provides additional detail, photographic surveys and visual simulations of major CV Link features and structures report. The CV Link VIA was conducted in accordance with guidance provided by FHWA and meets the requirements of NEPA.

Project Setting

The regional landscape creates the general visual environment of the project. Even so, this assessment focuses on the specific environment by defining visual assessment units (VAUs) and the project viewshed.

The Coachella Valley is located in the northwestern extension of the Salton Trough, a tectonic (fault-created) depression that began forming approximately 5 million years ago and is a geological extension of the Gulf of California. It is characterized by extreme elevation variations and a unique arrangement of low-lying desert landscape surrounded by high terrain of the San Jacinto, San Bernardino, Little San Bernardino, and Santa Rosa Mountains. The highest point on the valley floor, approximately 1,000 feet above sea level, occurs at Windy Point near the San Gorgonio Pass in the northwestern valley. The lowest point, approximately 228 feet below sea level, occurs at the Salton Sea in the southeastern valley.

The mountains that surround the valley are comprised of highly differentiated rock formations, large expanses of light gray granite, and a diversity of vegetation. Numerous alluvial fans and cones, which form at the mouths of many canyons draining the mountains, constitute an important and visually interesting transition between the mountains, foothills, and valley floor. The valley floor is comprised of a mix of sand dunes and fields, and more limited areas of desert pavement swept clear of sand, which also offer high visual resource values in many locations.

The valley's principal drainage feature is the Whitewater River/Coachella Valley Stormwater Channel, which channels runoff from surrounding mountains through the valley and southeast to the Salton Sea.

Urban development in the Coachella Valley largely occurs in a northwest-southeast trending pattern, roughly parallel to State Highway 111. The western and central portions of the valley are generally characterized by medium-density residential, service commercial, and golf course and resort development. The eastern valley includes agricultural and equestrian land and lower density residential development. CV Link traverses some of the most developed portions of the valley and is designed to facilitate connections between a variety of land uses. Adjacent land uses generally include low- to medium-density residential neighborhoods, retail and service commercial development, resort hotels and golf courses, institutional facilities (libraries, schools, and sports venues), public parks, public facilities, agricultural lands and open space.

Visual Assessment Units

The project corridor was divided into a series of "outdoor corridors" or *visual assessment units* (VAUs). Each VAU has its own visual character and visual quality. For this project, VAUs were defined according to shared visual characteristics, including near and distant viewsheds, and land uses in the immediate project vicinity.

VAU-1: North Palm Springs

VAU-1 begins at the western terminus of CV Link in northern Palm Springs. Specifically, it begins at the Palm Springs Visitor Center on North Palm Canyon Drive and extends north and east along the Whitewater River flood plain levee to Vista Chino.

Viewsheds to the west, north, and east are characterized by undeveloped land and natural landforms. On the west, the steep, rocky slopes of the San Jacinto Mountains are as close as ½ mile to the west providing an imposing and dramatic view of this impressive mountain scape that dominates all westerly views.

To the north is open desert land of the Whitewater River flood plain in the foreground, hundreds of wind energy turbines in the middle ground, and the San Bernardino and Little San Bernardino Mountains in the distance. Views to the south along this unit include residences, community parkland, and vacant residential lands.

VAU-2: Palm Springs/Cathedral City

VAU-2 begins at the intersection of CV Link and Vista Chino, and extends southeast along the west bank of the Whitewater River Stormwater Channel to Dinah Shore Drive. Urban development is denser along this portion of the CV Link route. Nonetheless, large expanses of the broad river channel, portions of which are improved with golf courses, comprise a major part of the viewshed in this area. Foreground and middle ground views of adjoin and nearby urban development generally include medium density residential development, golf courses, limited commercial development, domestic water wells, other drainage facilities, and pockets of undeveloped land. Distant views include the San Jacinto Mountains to the west, San Bernardino and Little San Bernardino Mountains to the north, and Santa Rosa Mountains to the south.

VAU-3: Tahquitz Creek

VAU-3 begins at the western terminus of CV Link in central Palm Springs at South Palm Canyon Drive, and continues east along Tahquitz Creek to the Whitewater River Stormwater Channel. Foreground views on all sides include long established development, including light industrial, residential and recreational (golf course, municipal park, water park) uses. Distant views include the San Jacinto Mountains to the west, which are as close as ¼-mile to the westerly CV Link terminus, and the Santa Rosa Mountains approximately 1 mile to the south.

VAU-4: Central Valley

VAU-4 roughly parallels the State Highway 111 corridor through the central portion of the valley, and extends from Dinah Shore Drive and the Whitewater River on the west to Washington Street on the east. This section of the project route passes through the Coachella Valley's urban core and is characterized by residential and retail/service commercial development, arterial roadways, golf courses, resort hotels, and recreational and institutional facilities. Urban development dominates both sides of the channel.

Foreground and middle ground views are dominated by urban development, roads, infrastructure, and landscaping. The bottom of the Whitewater River Stormwater Channel is typically dry and consists of sandy soils and sparse desert vegetation, although it can become inundated during larger major flood events. In some portions of the channel, landscaped golf courses are developed within the channel bottom and constitute key components of the foreground landscape.

The dominant scenic vista is the Santa Rosa Mountains, which are south of and roughly parallel to this stretch of CV Link. The distance between the proposed pathway and mountain slopes is roughly ½ mile in most locations, but ranges from 0 feet (immediately adjacent) at Paxton Road in Rancho Mirage and Point Happy in La Quinta, to 3± miles in Palm Desert.

VAU-5: La Quinta/Indio

VAU-5 extends from Point Happy at Washington Street in La Quinta and eastward to Dillon Road in Indio. At Jefferson Street near the La Quinta/Indio city limits, VAU-5 follows the channel and turns northeast, away from the mountains and into the central portion of the east valley. It then proceeds due east and again turns southeast along the channel. West to east, prevailing views at each turn are to the northeast, east, and finally southeast along the long axis of the valley.

East of Golf Center Parkway views to the east begin to include more farmland and open views of the valley floor and mountains beyond. Proceeding east to west, views are predominantly northwest and west along the valley's long axis with the Indio Hills and beyond the Little San Bernardino Mountains in the distance, and turning southwest and then west the foothills of the Santa Rosa Mountains, of which Point Happy is the most extended outlier.

As with VAU-4, foreground and middle ground views along VAU-5 are dominated by adjacent residential and commercial development, as well as the La Quinta High School and farther east the Indian Springs Golf Course driving range. Along the northeast leg of this unit, adjoining and nearby development includes predominantly single-family and scattered multi-family neighborhoods, a wholesale nursery, and the historic Coachella Branch of the All-American Canal.

Northeast of Indio Boulevard and along the channel alignment adjoining land uses change to business park and then single-family homes backing onto the flood control channel and CV Link alignment. Land uses along the southeast leg of this unit include the Coachella Valley Wild Bird Center and the Valley Sanitary District wastewater treatment plant. Excepting the aforementioned driving range just east of Jefferson Street the channel bottom is undeveloped and consists of sandy soils and a mix of desert scrub and riparian vegetation throughout the VAU.

VAU-6: COACHELLA

VAU-6 is the most rural segment of CV Link and extends from Dillon Road on the west to the easterly terminus of the core alignment at Airport Boulevard (Avenue 56) at the city limits of Coachella. The route continues along the channel service road in a direct southeast direction. This reach has some of the most scenic and iconic vistas of the Coachella Valley with rich farmland in various stages of cultivation and all ringed by multicolored hills and mountains to the north, east and west.

Views are largely panoramic and unobstructed. Foreground and middle ground views include undeveloped desert land, agricultural fields, and scattered residential neighborhoods and industrial yards. The Coachella Valley Stormwater Channel is unimproved and, along much of this segment, and supports a moderately dense riparian habitat that is used by a variety of native and migratory birds and other wildlife.

Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each impact that may occur as a result of the project. The three criteria for evaluating visual quality are defined below:

> **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
>
> **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
>
> **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Existing Visual Quality

The visual character of the CV Link corridor includes a combination of natural and manmade forms, including flood control channels that remain in a sandy bottom condition, native state in some locations and contain highly manicured golf courses in others. Rugged foothills and high elevation mountains dominate background viewsheds. Relatively low-profile structures, roadways, signage, and other urban improvements are evident in the foreground and middle ground of most stretches of the route. Seasonal changes in color, texture, and the continuity of form are not typical in the desert environment. The on-street alignments' visual character is strongly dominated by roadways, and adjoining residential and commercial development. Views to foothills and mountains from the public thoroughfares are limited by intervening structures with commercial buildings built closer to the street. The visual character of the eastern most portions of the CV Link are substantially different from those in the west and central valley. Panoramic views of farmland on the valley floor and highly textured and brightly colored Indio Hills, Mecca Hills and the Cottonwood Mountains to the east.

Viewer Sensitivity

Viewer sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. *Activity* relates to the preoccupation of viewers – are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewer will have of changes to visual resources. *Awareness* relates to the focus of the view – the focus is wide and the view is general, or the focus is narrow and the view specific.

Viewer Exposure

Viewer exposure is a measure of the viewer's ability to see a particular object. Viewer exposure has three attributes: location, quantity, and duration. *Location* relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure. *Quantity* refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers. *Duration* refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Roadway Travelers

CV Link intersects, shares right-of-way with, and is in proximity to numerous arterials, thoroughfares, and local connectors that carry thousands of vehicles per day and also facilitate bicyclists and pedestrians on adjacent bike lanes and sidewalks. These roads accommodate a broad mix of users, including residents, commuters, tourists, students, bus riders, and truck drivers. Viewer exposure to this group would vary, ranging from travelers on high-speed and/or high-capacity roads who are focusing on roadway traffic and have little to no opportunity to appreciate views of CV Link, to slower travelers (particularly pedestrians) who have ample time and opportunity to appreciate views of CV Link.

Residents

Numerous CV Link segments are immediately adjacent to residential properties. In many instances, CV Link is adjacent to low- to medium-density, single-family residential developments and planned communities that back onto the stormwater channels. In these cases, CV Link typically runs behind the rear residential property line but also could occur adjacent to several higher-density apartment/condominium developments and several major resort hotels.

Commercial and Industrial Users

Certain CV Link segments are adjacent to commercial and industrial land uses. There is the potential that hundreds of viewers will have access to views of the route. Employees and patrons at commercial, industrial, and professional establishments within the project corridor are typically engaged in their work or activities instead of their surrounding visual environments. For this reason, these viewers are considered to have a low visual sensitivity or awareness.

Recreational Area Users

The CV Link alignment was designed in part to be a connection of a wide range of recreational facilities and open space areas throughout the Coachella Valley. The route either traverses or is in proximity to eight public and private golf courses, municipal parks, public schools and ball fields, a golf driving range, a water park, and a championship tennis venue. CV Link will be moderately to highly visible by recreational users.

CV Link Users

CV Link users are a subset of Recreational Area Users described above. These will include pedestrians, joggers, bicyclists, LSEV users, and others. Since CV Link will be approximately 44± miles, with approximately 50 access points, it is expected to attract a large volume of users, which will have a long duration of visual exposure.

CV Link Key Views

Visual Assessment Unit 1 – North Palm Springs

Key View # 1 North Palm Canyon Drive Bridge/Overcrossing

Existing Visual Quality
The CV Link Master Plan calls for an overcrossing of North Palm Canyon Drive/Highway 111 just south of the Chino Wash in Phase I. Views were assessed and the view north was proposed for detailed analysis. Key View 1 is located at one of the primary gateway locations of Palm Springs and the western Coachella Valley. It is comprised of views of Chino Cone and the San Jacinto Mountains on the west and north, and residential development on the east. The viewshed is distinguished by its high visual quality associated with the dramatic shift from desert floor to expansive alluvial cone to the steep rocky mountains.

Key View # 2 Four Seasons Channel Levee Segment

Existing Visual Quality
This view is taken from the proposed alignment of CV Link in the channel bottom and adjacent to the channel levee, and at a location nearest to single-family residences in the Four Seasons gated community in Palm Springs. The visual quality of the key view is composed of sweeping panoramas of mountains and open desert landscape with windmills in the distance and native desert vegetation and wildlife in the foreground. This segment gives CV Link users an intimate relationship to an untouched portion of the valley floor.

Key View # 3 Gene Autry Trail Bridge/Overcrossing

Existing Visual Quality
Looking south from within the Whitewater River flood plain, this key view's visual resources are somewhat dominated by the channel and roadway foreground, but also with broad views of the San Jacinto Mountains on the west and the Santa Rosa Mountains to the south and southeast. A vacant developable parcel is located on the left just above the levee; however, no additional development beyond this site is expected that could affect this viewshed. Large power poles, a billboard and traffic signal warning beacons also are a part of the existing viewshed.

Visual Assessment Unit 2 – Palm Springs/Cathedral City

Key View # 4 Vista Chino and Whitewater River

Existing Visual Quality
This location is at the northwest end of VAU-2 and represents the somewhat cluttered conditions at this location, including cell towers, gates and fences, and service commercial and light industrial development on the north side of Vista Chino. The visual resources of the area are also affected by extensive flood control facilities but also benefit from the enhanced landscaped entry into Escena and sweeping views.

Key View # 5 Dinah Shore Drive Bridge at Whitewater River

Existing Visual Quality
Looking south along the right bank of the Whitewater River Channel, this key view's visual resources are somewhat dominated by the channel, levee and service road in the foreground, but also with broad views of the Santa Rosa Mountains to the south and southeast. The Dinah Shore Bridge is evident in the

foreground and the bridge approach and associated landscaping, which blocks some of the central mountain views, are evident on the right.

Visual Assessment Unit 3 – Tahquitz Creek

Key View # 6 South Palm Canyon Drive Bridge and Tahquitz Creek

Existing Visual Quality
VAU-3 begins at this location, which is the western terminus of CV Link in central Palm Springs at Tahquitz Creek and South Palm Canyon Drive. From this key location, CV Link proceeds east along Tahquitz Creek to its confluence with the Whitewater River Stormwater Channel. Foreground views along VAU-3 and on all sides include long established development, including light industrial, commercial, residential and recreational (golf course, municipal park, water park) uses. At the CV Link terminus close in views include the San Jacinto Mountains a short distance to the west, and the Santa Rosa Mountains approximately one mile to the south. The future CV Link rest area is currently bare dirt and an asphalt-paved drainage swell.

Key View # 7 Demuth Park

Existing Visual Quality
This view is looking northwest from within Demuth Park in Palm Springs with Tahquitz Creek golf course on the left. Foreground views are dominated by park and golf course improvements, including wide unimproved dirt path, fencing and gates, with the rising terrain of the San Jacinto Mountains in the distance on the left and the San Bernardino Mountains just visible in the central distance through trees. There is no signage or wayfinding at or near this location.

Visual Assessment Unit 4 – Central Valley

Key View # 8 Magnesia Falls Drive

Existing Visual Quality
This view looks west from the access drive to the Palm Desert Aquatic Center along Magnesia falls Drive and shows existing intersection and pathway improvements in the foreground. Ranks of date palms on the left and extending into the aquatic center lend structure to the view and contrast with the mix of landscaping across Magnesia Falls Drive. The foothills of the Santa Rosa Mountains are evident in the left mid-ground, with the ridgeline of the San Jacinto Mountains rising behind in the distance.

Key View # 9 Cook Street

Existing Visual Quality
The location of the proposed Cook Street overcrossing of CV Link in on the south (right) bank of the Whitewater River Channel and would connect the channel service road separated by this roadway. All four corner of the Cook Street/channel intersection are developed with the Palm Desert High School on the southwest corner, a well site and multi-family residential on the southeast corner, office commercial on the northeast corner, and recreational (driving range) on the northwest corner. The stormwater channel is partially vegetated and vegetation is regularly removed to maintain capacity. Cook Street crosses the channel over a set of existing low-flow culverts. Primary visual resources are those seen looking south and include the ranks of ridgelines on the Santa Rosa Mountains, including distant views of the ridgeline and peaks over 9,600 feet.

Visual Assessment Unit 5 – La Quinta/Indio Levee Condition

Key View # 10 Point Happy

Existing Visual Quality
The subject view is taken from the existing Washington Street bridge looking southwest to the proposed bridge. The channel is periodically cleared of vegetation to maintain capacity. This prominent view will be visible to southbound drives once they are on the bridge and to bicyclists and pedestrians on both sides. The Whitewater River Channel and the foreground foothills and distant Santa Rosa Mountains are important components of the existing conditions at this viewshed.

Key View # 11 Typical Levee Condition

Existing Visual Quality
The conditions at this location represent the worst-case potential impacts to residential privacy associated with CV Link development. The Indio and Coachella alignments of CV Link are located on the right bank of the Coachella Valley Stormwater Channel levee service road, with planned future phase undercrossings at some locations. In a few locations single-family residential subdivisions adjacent to the channel levee have resulted in lots whose rear yards back onto the channel right-of-way. In several locations, rear yard and home finished floor elevations are at elevations that range from six to ten feet below the channel maintenance road. Rear view from these homes and yards include decorative block walls and fences, and the slope of the levee.

Key View # 12 Jackson Park Access Point

Existing Visual Quality
This view is taken from the edge of the easterly ball field within Jackson Park in Indio looking northwest toward the channel levee and future CV Link route. The view captures the rise of the levee approximately eight feet above the park and elementary school to the south and the edge of the Indio Hills in the background. At this location the existing conditions are dominated by the fore and mid-ground ball fields and other park amenities, light standards and the channel levee. Westerly views are of the distant San Jacinto Mountains and of the Santa Rosa Mountains to the southwest.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

CV Link is a dual-path system that includes a hard-surface path for faster modes of travel, such as bicycles and neighborhood electric vehicles (NEVs), and a separate soft-surface path for slower modes, including pedestrians. The Proposed Project Alternative would include all CV Link alignments excepting those in the City of Rancho Mirage, where termini have been identified near the east and west city limits. The pathway(s) will be largely constructed atop flood control channel maintenance roads; however, in some locations, the project will share the public right-of-way with existing roads and trails, for instance the Tahquitz Creek Trail. Approximately 50 access points will be provided at key locations along the route, including parks, institutional facilities (library, visitor center), commercial centers, and residential neighborhoods. The estimated footprint of permanent impacts, including paths alignments and access point improvements, is 279± acres. Materials, forms, and color palette have been proposed to be consistent with off-street segments and are described and illustrated in the CV Link Conceptual Master Plan.

Blue and orange colored, high visibility “ladder style” crosswalks are proposed to unify the overall design along the entire route and help with way finding. The use of non-standard crosswalk colors is subject to approval by the California Traffic Control Devices Committee. Should approval not be granted, standard transverse white lines will be used with a more muted pattern between the white lines.

Construction Impacts

A moderate amount of earthwork may be required along some segments of CV Link, including rough and fine grading to provide a level and sound base for path construction. Equipment may be visible on levee service roads or along streets where Link improvements are being installed, and will progressively move along the segment as construction progresses. In addition, sites for construction staging and stockpiling have been identified along the route, which will result in the short-term storage of construction equipment and building materials. The location of construction staging/stockpiling sites are shown on the PPA Map Book, which is Appendix D of this EA. Temporary traffic cones and/or barricades would result in minor temporary potential visual impacts to the traveling public. The visible activities would include the installation of the concrete and decomposed granite (DG) path, way finding, shade structures, LSEV charging stations, restrooms and CV Link amenities. In some areas these short-term construction activities could be visible to adjacent and nearby residents.

Impacts, which will be limited and short-term, and will be reduced to low levels by incorporating fencing and screening as mitigation (see Mitigation Measure VA-1 below). Required application of best management practices (BMPs), time of day construction restrictions and other programmatic development regulation will also serve to limit impacts. Construction staging areas shall be screened from public view. The screening will consist of a perimeter chain link fence with a windscreen, which will also provide a view screen. When staging areas’ use is complete, the land shall be restored to its original condition. In addition, the construction activities will be temporary, spread out geographically, generating limited, short-term impacts during construction.

Operational Impacts

The proposed CV Link project will be developed on lands that have already been disturbed as a part of flood control facilities, and on existing roadways and paths. Most of the project alignment is planned on the service and maintenance roads of the valley’s major drainages, including Chino Creek/Whitewater River floodplain, Tahquitz Creek, and the White water River/Coachella Valley Stormwater Channel project area is located in largely on the existing levees of the Whitewater River Channel/Coachella Valley Stormwater Channel. The channel service road upon which a majority of the proposed route will be constructed will add a considerable amount of pavement, walls, and hardscape, including rest stops and access points, shade structures and low-level lights over its 40+ mile length, removing vegetation and trees in places, and adds structures which could affect views from adjacent properties. Views people have towards the facility will be impacted. Therefore, the greatest care and attention will be paid during design to improving the aesthetics of the facility. Landscape architects will design plantings to screen walls and structures, and enhance privacy, by using drought tolerant desert trees/shrubs; they will focus on using native species where-ever possible, particularly adjacent to the floodway channels (see Minimization Measure VA-1 and VA-3 below). After implementation of the mitigation measures they will further enhance the path providing additional visual character through CV Link improvements and landscaping.

The project proposes lighting along the route and at the various rest areas, which will create glare and will be addressed through shielding. No tall light standards are proposed to be used. Instead, lighting will consist of low-profile bollards, as well as embedded LED lighting within the path that would be incorporated throughout the route. The lighting will produce a limited and directed level of luminance and will result in little or no spillover effects. Lighting will be limited to necessary spot locations only. Therefore,

it poses no potential to create new shade/shadow impacts for shade/shadow-sensitive viewers. Mitigation Measure VA-2, below, ensures that lighting from all fixtures will not extend beyond the edge of the project area. Any lighting fixture proposed above the path shall be fully shielded. Consequently, adverse effects due to shade/shadow and other potential CV Link effects will not occur.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1 will be constructed with the same design elements as the Proposed Project Alternative. Alternative 1 will not include the cities of Rancho Mirage or Indian Wells and associated CV Link improvements would be limited to east and west termini at or near Indian Wells city limits. The environmental consequences of CV Link for the cities of Palm Springs, Cathedral City, Palm Desert, La Quinta, Indio, Coachella, County and Native American lands will be the same as those described above, with implementation of Mitigation Measures VA-1 through VA-5 set forth below. The Rancho Mirage and Indian Wells East-End and West-End termini will be near the cities' city limits, but will not obstruct views or otherwise affect the aesthetic resources in the vicinity. No other visual environmental consequences are expected to occur.

C. Alternative 2: Project with All Eight Cities

Alternative 2 will result in a valley-wide CV Link route that connects all eight cities, three Native American reservations, and unincorporated Riverside County lands. The environmental consequences of Alternative 2 will be the same as those addressed for the Proposed Alternatives, but will affect residents and properties in all eight cities, including Rancho Mirage. Alternative 2 will be constructed with the same design elements as the Proposed Project Alternative with all work in Rancho Mirage being comprised of flatwork and path amenities, including shade structures, EV charging stations and wayfinding signage. Overall, there will be no adverse visual impacts with implementation of Mitigation Measures VA-1 and VA-2 set forth below.

D. Alternative 3: No Build/No Project Alternative

The No Build/No Project Alternative would maintain the existing multi-modal facilities within the Coachella Valley, and for this reason it would not alter existing views. The No Build/No Project Alternative will not affect existing visual/aesthetics resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measures are required:

Mitigation Measures

VA-1: Construction staging areas shall be screened from public view. The screening will consist of a perimeter chain-link fence with a windscreen, which will also provide a view screen. When staging areas' use is complete, the land shall be restored to its original condition.

VA-2: Lighting plans shall demonstrate that lighting from all fixtures will not extend beyond the edge of the project area. Any lighting fixture proposed above the path shall be fully shielded.

VA-3: Landscaping plans will be developed by a Landscape Architect to screen walls and structures, and enhance privacy, by using drought tolerant desert trees /shrubs; they will focus on using native species where-ever possible, particularly adjacent to the floodway channels. No invasive species will be planted.

VA-4: Irrigation for plantings will be provided where appropriate and feasible. Irrigation systems will be installed at locations where appropriate, and reclaimed water will be used if it is available.

VA-5: A suitable plant establishment period (i.e., one-year) will ensure low mortality of plantings; landscape workers will maintain, care for, weed and ensure watering of plantings.

The following avoidance and minimization measures are not required to adequately mitigate project impacts but are provided to further reduce visual impacts.

Avoidance and Minimization Measures

VA-A. Design element of the proposed CV Link facility, including but not limited to color, line, texture, and style will be aesthetically pleasing and as unobtrusive as possible. Special attention will be paid to bridges, shade structures, lighting, signage, screening and other vertical design elements and their relationships to all area viewers.

VA-B. All on-site electrical power lines shall be installed underground. Transformers and other power equipment shall be placed in underground vaults or unobtrusively above ground, as determined appropriate.

VA-C. Final site plan, architectural elevations, including building materials and colors, landscaping and lighting, and other design elements that affect the appearance of the surrounding viewsheds will be approved by the participating jurisdictions.

CUMULATIVE IMPACTS

The identified six visual assessment units and their corresponding key views analyzed in this assessment and the Visual Impact Assessment prepared for this project represent the most sensitive views in the proposed project area. The Coachella Valley is largely defined by its dramatic mountain views and desert and agricultural lands that constitute valuable and valued visual resources to all users and viewers.

The CV Link project, including bridges, undercrossings and other project structures, has been designed to preserve and showcase the area's visual resources to the greatest degree practicable, while also complementing and adding to the visual quality of the area. The proposed bridge designs maximize structural transparency and aesthetic design quality, while minimizing obstruction of valued viewsheds. They will not create substantial adverse impacts to or effect on the existing visual resources.

Portions of the proposed route that border residences will be screened by landscaping and other appropriate materials; these minimization measures will avoid and minimize impacts not only to visual resources but also to privacy. Although low-level bollard-type nighttime lighting, as well as path-embedded LED is proposed as part of the project, there will be no adverse impacts on adjoining properties and the appreciation of the night sky will be favorable. The off-street portions of the CV Link alignments occur atop flood control levees and stormwater channels, where there are limited opportunities for additional sources of light and glare to be developed. On-street alignments largely benefit from existing streetlights, and the addition of CV Link lighting along these segments would not be a cumulatively considerable.

Therefore, the CV Link project will take advantage of and has been designed to enhance the appreciation and enjoyment of the region's significant visual resources and also provides an enhanced aesthetic experience along project alignments. Its alignments and design elements have been carefully designed

to complement the surrounding viewsheds and avoid and minimize potential adverse effects on all users and viewers. The project will have very modest direct, indirect or cumulative effects or impacts on regional and local visual resources.

2-1.9 CULTURAL RESOURCES

REGULATORY SETTING

The term "cultural resources," as used in this document, refers to the "built environment" (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal law, cultural resources that meet certain criteria of significance are referred to by various terms including "historic properties," "historic sites," and "traditional cultural properties." Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. It should be noted that portions of the undertaking are located within the boundaries of the Agua Caliente, Cabazon, and Twenty-Nine Palms Indian Reservations. Therefore, the *First Amended Programmatic Agreement* does not apply to this undertaking. Two of the tribes, Agua Caliente and Twenty-Nine Palms, have designated Tribal Historic Preservation Officers (THPO). See Appendix A for specific information about Section 4(f) and related resources.

AFFECTED ENVIRONMENT

The following cultural resources studies were completed for the project:

- Historic Property Survey Report (HPSR), prepared by CRM TECH. Approved May 25, 2017.
- Archaeological Survey Report (ASR), prepared by CRM TECH. Approved May 25, 2017.
- Historic Resources Evaluation Report, prepared by CRM TECH. Approved May 25, 2017
- Finding of No Adverse Effect, prepared by CRM TECH. Approved May 25, 2017.

Methods used to support these studies included literature searches, record searches and field surveys. Project research and analysis was initiated with a literature search and review. The historical/archaeological resources records search was conducted in 2015 and 2016 at the Eastern Information Center (EIC), University of California, Riverside. A standard one-mile radius was adopted for the record search. A variety of sources at the EIC were researched, including the National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, California

Points of Historical Interest, Historical Landmarks of Riverside County, California Historical Resources Inventory and the California Historic Bridge Inventory.

A written request was submitted to the State of California's Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. In response, the NAHC identified the potential for Native American cultural resources to be impacted by the CV Link project, particularly in the Palm Springs and Indio areas. For more specific information, NAHC recommended consultation with the Agua Caliente Band of Cahuilla Indians and the Cabazon Band and Twenty-Nine Palms Band of Mission Indians, among other local tribes. Each of these Tribes and others has been consulted. Representatives of each of the potentially affected cities were also contacted, as were local historical and archaeological societies.

The field surveys of the Area of Potential Effect (APE) were carried out in 2015 and 2016. The portions of the APE confined within existing paved municipal streets were surveyed at a reconnaissance level by driving along the project route and visually inspecting the surrounding ground surface for any indications of potential cultural resources. Areas containing visible ground surface, such as on levees along the Whitewater River and Tahquitz Creek Channels and in the staging areas, were surveyed on foot at an intensive level by walking parallel transects spaced 5-15 meters (approximately 15-50 feet) apart.

Area of Potential Effects (APE)

The Area of Potential Effects (APE) for CV Link was established by Caltrans professionally qualified staff, Caltrans Headquarters, and the District 8 Local Assistance Engineer. The APE for the CV Link Project was developed horizontally and vertically from the construction footprint to include all direct impacts, including staging and storage areas, temporary construction easements, right-of-way easements from the Riverside County Flood District or the Coachella Valley Water District, and utility relocations, as well as a buffer to address potential indirect effects that may develop as a result of this undertaking. It is meant to encompass the maximum extent of ground disturbance required to construct and operate this multi-modal transportation facility.

The CV Link APE totals approximately 795.4 acres and includes the following components:

- An approximately 305.94-acre Area of Direct Impact (ADI), which encompasses the construction corridor with all alternative routes, totaling approximately 63.1 linear miles long and measuring up to 100 feet wide, and 38 staging areas totaling approximately 13.8 acres;
- The balance of parcels containing portions of the ADI (with exceptions);
- Adjacent properties containing buildings or structures of historical origin that may receive visual, atmospheric, or other indirect effects due to the nature, scope, and scale of the undertaking.

The vertical extent of the APE is generally 1-2 feet along the path alignment but may reach up to 60- 120 feet at ten proposed overcrossing (bridge) sites for drilling and the installation of bridge supports. No substantial subsurface disturbance is anticipated in the construction staging areas. The entire APE stretches from Chino Canyon area at the base of the eastern foothills of the San Jacinto Mountains to the community of Thermal in the eastern portion of the valley, mostly in and near the Whitewater Floodplain, Whitewater River/Coachella Valley Stormwater Channels and Tahquitz Creek channel.

Cultural Resources in Planning Area

Project research has determined that much of the APE has been included in previous cultural resources studies completed over the past 40 years, but the APE as a whole had not been surveyed systematically prior to the HPSR study. As a result of the past studies in the vicinity, 18 known cultural resources were previously recorded within or in proximity to the APE, including 9 archaeological sites, 6 built-environment features, and 3 isolates, as listed below:

Table 2-12
Cultural Resources Previously Recorded
CV Link Planning Area

Primary Number/Trinomial	Resource Description
33-000064 (CA-RIV-64/H)	Cahuilla village site/Old Indian Wells Village
33-000149 (CA-RIV-149)	Prehistoric habitation site
33-001178 (CA-RIV-1178	Prehistoric habitation site
33-001530 (CA-RIV-1530)	Prehistoric habitation area
33-001754 (CA-RIV-1754)	Ceramic scatter
33-002935 (CA-RIV-2935)	Prehistoric habitation site
33-003005 (CA-RIV-3005)	Prehistoric artifact deposit
33-005705 (CA-IMP-7658H)	Coachella Canal
33-007513	College of the Desert Foundation Building
33-007835 (CA-RIV-5828)	Small prehistoric habitation area
33-009022	Isolate: mano fragment
33-009498 (CA-RIV-6381H)	Southern Pacific Railroad (Los Angeles to Yuma Mainline)
33-011476	La Hacienda Nursery
33-013202	Early 20th century steel pipeline
33-017259/33-017913 (CA-RIV-9456H)	Coachella Valley Stormwater Channel
33-024741	Isolate: glass fragment
33-024742	Isolate: glass and ceramic fragments
33-026436	Former Tramway Gas Station (NRHP #15000645)

In addition, the Caltrans Historic Bridge Inventory indicate that five of the highway bridges within or adjacent to the APE were previously surveyed and included in the inventory. These bridges are listed below by the official state bridge number:

Bridge 56C0408	South Palm Canyon Drive bridge at Tahquitz Creek
Bridge 56C0292	Indio Boulevard bridge (north bound) at CVSC
Bridge 56C0293	Indio Boulevard bridge (south bound) at CVSC
Bridge 56C0318	Dillon Road bridge at CVSC
Bridge 56C0020	Airport Boulevard bridge at CVSC

During the field surveys conducted for this project, ten of the previously recorded cultural resources, including nine archaeological sites and one isolate, could not be re-located or were found to be well outside the APE boundary. Seven additional cultural resources were recorded in the APE, including five buildings or group of buildings, one archaeological site, and one isolate, all of them dating to the historic period. The seven additional cultural resources recorded within the APE during this study are listed below.

Table 2-13
Additional Cultural Resources
Recorded within the Planning Area

Primary Number/Trinomial	Resource Description
33-024876 (CA-RIV-12331H)	Octagonal Concrete Footings
33-024880	Isolate: Clear Glass Bottle Base
33-026432	Cathedral Palms R.V. Resort
33-026434	Former residential property: Rancho Chiquito
33-026435	Rancho Mirage Villa Apartments
33-026433	Commercial property: MJ Custom Furniture
33-026437	Commercial property: Ayala’s Auto Repair

Cultural Resources Present in the APE

In summary, the results of the records search and the field inspections indicate that 30 cultural resources have been identified as lying within or in close proximity to the APE, as listed above. However, ten of the previously recorded cultural resources, including nine archaeological sites and one isolate, could not be re-located during the field survey or were found to be well outside the APE boundary. Eight buildings or groups of buildings, two water conveyance features, a railroad, five bridges, an archaeological site, and three isolates were found to be present within the APE at this time, all of them dating to the historic period. These 20 resources are listed below by the corresponding map reference number (MRN) in HPSR Attachment A, Map 3, and by California Historical Resources Inventory primary number or state bridge number, as appropriate.

Table 2-14
Cultural Resources Identified in Field Surveys
CV Link Planning Area

Resources Number		Resource Description
MRN 1	33-026436	Former Tramway Gas Station (NRHP #15000645) 2901 North Palm Canyon Drive, Palm Springs
MRN 2	33-024876 (CA-RIV-12331H)	Octagonal Concrete Footings (Highway 111 north of Tram Way)
MRN 3	56C0408	South Palm Canyon Drive Bridge at Tahquitz Creek
MRN 4	33-026432	Cathedral Palms R.V. Resort 35901 Cathedral Canyon Drive, Cathedral City
MRN 5	33-026434	Former residential property: Rancho Chiquito 71560 San Jacinto Drive, Rancho Mirage
MRN 6	33-026435	Rancho Mirage Villa Apartments 71760 San Jacinto Drive, Rancho Mirage
MRN 7	33-026433	Commercial Property: MJ Custom Furniture 72162 Highway 111, Rancho Mirage
MRN 8	33-007513	College of the Desert Foundation Building 43500 Monterey Avenue, Palm Desert
MRN 9	33-024880	Isolate: Clear Glass Bottle Base
MRN 10	33-011476	Commercial Property: La Hacienda Nursery 80900 Miles Avenue, Indio
MRN 11	33-017259/ 33-017913 (CA-RIV-9456H)	Coachella Valley Stormwater Channel (CVSC) Segment
MRN 12	33-005705 (CA-IMP-7658H)	Coachella Canal Segment
MRN 13	56C0293	Indio Boulevard Bridge (Southbound) at CVSC
MRN 14	56C0292	Indio Boulevard Bridge (Northbound) at CVSC
MRN 15	33-009498 (CA-RIV-6381H)	SPRR Los Angeles to Yuma Mainline at CVSC Segment
MRN 16	56C0318	Dillon Road Bridge at CVSC
MRN 17	33-026437	Commercial Property: Ayala's Auto Repair 86998 Avenue 52, Coachella
MRN 18	56C0020	Airport Boulevard bridge at CVSC
MRN 19	33-024741	Isolate: Sun-Colored Amethyst Glass Fragment
MRN 20	33-024742	Isolate: Glass Bottle Base/Ceramic Rim Sherd

The 20 properties listed above in Table 2.3 were evaluated against the official definition of "historic properties" under Section 106 provisions, and three of them, the former Tramway Gas Station at 2901 North Palm Canyon Drive (33-026436/NRHP #15000645) and segments of the Coachella Canal (33-

005705/CA-IMP-7658H) and the Southern Pacific Railroad Los Angeles to Yuma Mainline (33-009498/CA-RIV-6381H), appear to qualify. The other 17 cultural resources do not appear to meet the NRHP criteria and do not do not constitute "historic properties." None of the CV Link alignments will have an adverse effect on the three "historic properties."

Historic Properties

The identification of the former Tramway Gas Station, the Coachella Canal and the Southern Pacific Railroad (SPRR) Coachella Valley line in the APE was the result of the historical/archaeological resources records searches conducted at the Eastern Information Center (EIC), University of California, Riverside. Between July 9, 2015 and July 14, 2016, the Coachella Canal, the former Tramway Gas Station (now known as the Palm Springs Visitor Center) and the SPRR rail facilities were inspected during a series of pedestrian archaeological field surveys, and were observed intact at their respective locations. The Palm Springs Visitor Center is currently listed in the National Register of Historic Places, and segments of the Coachella Canal and the SPRR in the APE have been determined eligible for listing. These three properties are further described below:

Palm Springs Visitor Center (Former Tramway Gas Station)

An important local example of "Mid-Century Modern" architecture, the former Tramway Gas Station at 2901 N. Palm Canyon Drive (APN 504-040-001), now the Palm Springs Visitors Center, was built in 1965 and is a widely recognized architectural and historical landmark in the Palms Springs area and the Coachella Valley, and one of the best-known examples of the works of architects Albert Frey and Robson Chambers. Most prominent of the building's character-defining features is triangular roof, described as "a roof form that would come to symbolize mid-century design, the hyperbolic paraboloid" (see photo below). The distinctive canopy is constructed of ribbed, galvanized steel panels resting on steel beams, held aloft by six round steel posts, and anchored on the downward edges by stepped, triangular piers. The exterior walls are built of concrete blocks that are stacked and aligned to give the appearance of offset squares, and are generously interspersed with floor to ceiling plate glass windows.

Photo: Former Tramway Gas Station (now Palm Springs Visitor's Center). View to the north.

In 2015, the Palm Springs Visitor Center was placed in the National Register of Historic Places as a result of a multiple-property nomination, "The Architecture of Albert Frey," under Criterion C, with a local level of significance, as it "embodies the distinctive characteristics of the specific property type associated with architect Albert Frey as his designs evolved over a thirty year period in response to the desert

environment of the Coachella Valley" (Moruzzi 2015:E-1, E-24; see HPSR Attachment C). As a property that is currently listed in the National Register of Historic Places, it clearly meets the definition of a "historic property."

Coachella Canal

The Coachella Canal was built as an extension of the All-American Canal to bring Colorado River water to the Coachella Valley to irrigate crops in the east valley. This property represents the entire length of the Coachella Canal, which was constructed between 1938 and 1948. During a 2009 study, the entire length of the Coachella Canal in Riverside County was evaluated under the National Register criteria and was found to be eligible for listing under Criteria A and C because of its close association with "the enormous public works effort arising from the Boulder Canyon Act" and as an example of the "state-of-the-art construction methods and innovative approaches to working in extreme desert temperatures" (Schaefer and Ghabhláin 2003:105-106).

The segment lying closest to the APE was lined with concrete when the project was completed in 1948, and since then has remained largely unaltered (Schaefer and Ghabhláin 2003:1). At the location where the APE crosses the Coachella Canal, the concrete-lined open canal turns into an underground syphon to cross the Whitewater River/CVSC on the northwest (see photo below). Except for the construction of the flood control channel embankments and levees that most of the APE is located on, aerial photographs show no major changes in the configuration of the canal crossing since 1952 (NETR Online 1953-2012), and thus it retains excellent historic integrity.

Based on these considerations, the segment of the Coachella Canal across the APE is found to contribute materially to the historical significance of the Coachella Canal as a whole, which appears eligible for listing in the National Register of Historic Places under Criteria A and C. Therefore, it appears to meet the definition of a "historic property."

Photo:

Coachella Branch of the All-American Canal, Indio where it crosses the CV Link route.

Southern Pacific Railroad Los Angeles to Yuma Mainline

This property represents the former Southern Pacific Railroad (SPRR) Coachella Valley line, part of the Los Angeles to Yuma Mainline, which remains in operation today as a part of the Union Pacific Railroad system. The APE intersects the SPRR at the Whitewater River/CVSC in the northwestern portion of the City of Indio, about 500 feet northwest of Clinton Street.

Completed in 1876-1877, the SPRR was one of the two pillars of the Southern Pacific Company's virtual monopoly on modern transportation in California in the 1870s and the early 1880s. Over the next seven decades, the SPRR played an important role not only in the growth and economic development in the Coachella Valley and in California but also in every other aspect of state and regional history, from political change to social life. However, by the 1950s, the railroad industry had lost its dominant position in both passenger and freight transportation, and the total railroad trackage in California began to shrink as many unprofitable lines were dismantled, often to make way for highway construction.

Across the APE, Southern Pacific Railroad Los Angeles to Yuma Mainline consists of a 1.5-mile segment of the former SPRR tracks between the Coachella Canal and Monroe Street. The focal point for this study is a 1930 bridge across the Whitewater River/CVSC. Built in 1930, the bridge is a 347-foot-long through-plate girder structure with an open deck resting on a series of concrete piers (see photo below). It carries one set of railroad tracks that is flanked by the top portions of the main girders that serve as sidewalls. The rest of the segment consists of standard railroad tracks resting on wood and concrete ties and a ballast of crushed rock.

Photos: 1930 Southern Pacific Railroad bridge, views to the northwest (*left*) and the southeast (*right*, with the second railroad bridge built in 1980 and the Indio Boulevard bridges to the right.

The design and construction of the railroad segment and the 1930 bridge reflect an industry standard formulated to facilitate uniform construction, maintenance, repair, or replacement, according to Union Pacific Railroad Bridge Maintenance Manager Pete Rodriguez (personal communication 2016). Beginning in the 1950s, elements of such structures were prefabricated and prestressed as industry standards to allow assembly quickly and *in situ* with little service interruption (FHA 2015:3).

In light of the important role that it once played in the history of the Coachella Valley and the State of California, and since it exhibits fair to good historic integrity in relation to the period of significance, the segment of the SPRR Los Angeles to Yuma Mainline across the APE appears to be eligible for listing in the National Register of Historic Places under Criterion A. Therefore, the segment of Southern Pacific Railroad Los Angeles to Yuma Mainline across the APE appears to meet the definition of a "historic property."

Human Remains

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the

County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Jones, Caltrans District 8 Native American Coordinator or designee, at (909) 383-7505, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Archaeological Resources

Indian Wells Golf Resort – North Bank

Site 33-002935 (CA-RIV-2935) is located on the north (left) bank of the Whitewater River opposite and west of Site 33-001754 (see below), and was recorded in 1984 as a prehistoric habitation site with ceramics, lithics, modified bone fragments, fire affected clay, midden soil, and an ash lens suggesting a fire pit. By that time, that site had been disturbed by local pothunters and, more significantly, by flood-control work along the river channel, and part of it had been buried under two meters of fill.

An archaeological testing program was apparently implemented on the site in 1985, although the testing results were unclear based on a draft report found at the EIC (Macko et al. 1985). Subsequently, the site became a part of the Indian Wells Golf Resort, with the northern end of a bridge built in the general vicinity of the site (NETR Online 1996). During the field survey conducted for the CV Link project, no archaeological features or artifacts associated with Site 33-002935 were found on the surface.

The undertaking at this location entails only the construction of the path, and the ground disturbance will not exceed one foot in depth. Since the existing disturbances from past development clearly exceed that depth, and since previous records indicate the presence of a substantial amount of fill on the ground surface, any surviving components of Site 33-002935 (CA-RIV-2935) would be beyond the vertical limit of the APE. Nonetheless, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around this area of potential impact where monitoring will be required during site disturbance and/or excavation. The area where the site was previously recorded outside the APE will be placed in an Environmentally Sensitive Area (ESA) and demarcated with protective fencing to safeguard against inadvertent disturbance, appropriate.

Site 33-001530 (CA-RIV-1530) is located north of Highway 111 and south of Miles Avenue in Indian Wells. The site was previously recorded as a prehistoric habitation area with a variety of artifacts along with midden deposits, a hearth feature, and a human cremation. An archaeological testing program completed in 2002-2003 recovered several thousand artifacts and delineated the northern boundary of the site to be approximately 20 feet south of the Miles Avenue right-of-way and the proposed CV Link alignment. No prehistoric cultural remains associated with this site were observed within or immediately adjacent to the Miles Avenue right-of-way during the past studies or the surveys conducted for the CV Link project. As in the case of Site 33-000064 (CA-RIV-64/H), any remaining components of Site 33-001530 adjacent to Miles Avenue would be located outside the horizontal and vertical extent of the undertaking since all project activities will occur on the existing pavement and sidewalk.

Site 33-003005 (CA-RIV-3005) is a prehistoric artifact deposit located south of Miles Avenue and west of Washington Street in Indian Wells. Recorded as an extensive deposit of prehistoric artifacts found both on top of and within sand dunes, Site 33-was treated with archaeological testing, data recovery, and grading monitoring in 1998-2000. As a result, most of the cultural materials were collected, and the site area was subsequently leveled and developed into a sod grass farm. During the field surveys conducted for the CV Link project, no cultural remains were observed in and near that portion of the APE. The ultimate site limit established by the 1998-2000 studies lies nearly 100 feet from the nearest ground disturbance required by the project where the proposed path will be constructed in a 25-foot-wide corridor on heavily disturbed soils along the west side of Washington Street, with the maximum depth of

disturbance limited to 2-4 feet. Any remaining subsurface deposits associated with Site 33-003005 if present, would be well outside the horizontal and vertical extent of the APE.

Indian Wells Golf Resort – South Bank

Site 33-001754 (CA-RIV-1754) is located on the south side of the Whitewater River and to the west of the Miles Avenue bridge in Indian Wells. It was first recorded in 1979 as a surface scatter of 40 pottery sherds. The artifacts were described as being "spread about an open desert locale…suggest[ing] a trail rather than an occupation site…possibly between established villages in the area". The site was revisited in 1984, and was determined at that time as "a secondary deposit of isolated sherds" resulting from channelization of the river and construction of the channel embankment. Therefore, the site was considered to be of "little value," and no further archaeological work was considered necessary. Due to limitation of the locational data, it is unclear whether the site extended into the APE.

Since that time, the site area has been developed into the Indian Wells Golf Resort and the Esmeralda Hotel. Field survey efforts during the study conducted for the CV Link project yielded no prehistoric cultural remains at or near the recorded location of Site 33-001754. Only a small portion of the Link route through this area will require grading, if any, and then only to a depth of about one foot. Therefore, the construction of CV Link facilities along this portion of the Whitewater Stormwater Channel will not have an adverse effect on cultural or historic resources. Nonetheless, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around this area of potential impact where monitoring will be required during site disturbance and/or excavation.

Kavinish Village – Indian Wells

Site 33-000064 (CA-RIV-64/H) is a large site in Indian Wells that represents the general locations of both the 19th century Cahuilla village of Kavinish and the early 20th century Old Indian Wells Village, is probably one of the most important archaeological sites in Riverside County, and is currently a designated California Point of Historical Interest (No. Riv-017). The site was first recorded in 1954 as a "camp site evidenced by scattered sherds," together with a walk-in well that had been filled with sand. Other artifacts observed at the site in 1954 included beads, groundstone, and bone tools, the distribution of which extended "for miles in each direction". In 1963, additional archaeological remains were reported at 33-000064, including two sets of cremation remains. During a more recent revisit in 1994, several historic-period features were also noted at the site, such as refuse dumps and foundations, along with several concentrations of fire-affected rock and clay. The density of artifacts found at the site suggest that it was an area of extensive use by Native American inhabitants, and because of its location, CA-RIV-64/H is believed to be associated with Kavinish.

One CV Link alignment would extend across the northern portion of Site 33-000064, on the existing paved cross section of Miles Avenue beginning at the Miles Avenue bridge and proceeding east to Washington Street. During the field survey, no archaeological features or artifacts of either prehistoric of historical origin were observed on the surface in or near this portion of the APE. The heavily disturbed surface and near surface soil within the Miles Avenue right-of-way is unlikely to contain any archaeological remains that may contribute to the significance of the site. Therefore, there will be no subsurface disturbance and this alignment will have no impact on the subject resource area.

CVSC in Central La Quinta

Located a short distance west of Jefferson Street, Site 33-007835 (CA-RIV-5828) was recorded in 1996 as a sparse scatter of pottery sherds and camp debris, such as fire-affected rock, shell, burned bone, and semi-fired clay. The location of the site was on the south side of the Whitewater River and the west side of Jefferson Street, in this portion of the City of La Quinta. The limitation of data available from the EIC precludes a positive determination of whether Site 33-007835 indeed extended into the APE, and the extent of subsequent archaeological investigation at the site in unknown. By 2002, the Home Depot project for which the 1996 survey was conducted had been completed, as had an apparently improved

levee on which the APE at this location lies. The field survey for this study encountered no archaeological remains along the Link alignment or in the vicinity. The undertaking across Site 33-007835 (CA-RIV-5828) consists of the construction of the path on the artificial fill of the levee, and does not involve deep excavations that may reach undisturbed native soil. Site 33-007835, therefore, is determined to be outside the APE. Therefore, the construction of CV Link facilities in the vicinity of Site 33-007835 will not have an adverse effect on cultural or historic resources. Nonetheless, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around this area of potential impact where monitoring will be required during site disturbance and/or excavation.

CVSC at Jefferson Street

This cultural resource site (Site 33-001178 (CA-RIV-1178)) was recorded in the 1970s as a large prehistoric habitation area lying between the Whitewater River and Highway 111 near Jefferson Street, on the western edge of the City of Indio. At the time, it was described as “a number of areas of exceptionally heavy surface scatter” of pottery sherds, lithic debitage, and fired clay, with one human cremation noted near the southeastern extremity of the site.

The EIC’s files contain no records of any further archaeological investigations on Site 33-001178. However, since the site was first reported, the entire area of the site has been thoroughly disturbed, most notably by the construction of the La Quinta Evacuation Channel and the residential neighborhood on either side of the new channel between 1972 and 1996, followed by the Jefferson Plaza shopping center over the ensuing decade. As a result, the sand dunes on which the surface scatters of artifacts were notes in the 1970s were completely removed. A 2013 archaeological survey along the Whitewater River channel encountered no remnant of Site 33-001178.

The portion of the APE in this area lies on an elevated levee and an artificial terrace at the confluence of the Whitewater River and the La Quinta Evacuation Channel, which also dates to the 1972-1996 era. During the field survey, the ground surface in and near the APE was closely inspected for any remnants of Site 33-001178 or of the original landscape, but none was found. However, deep excavations for one of the proposed bridge piers will occur at the bottom of the La Quinta Evacuation Channel. A geotechnical boring drilled in this area shows the presence of 10 feet of artificial fill on the surface along the channel, including the height of the levee. The bottom of the La Quinta Evacuation Channel, meanwhile, lies some 15-20 feet below the surrounding ground surface, indicating a significant amount of soil removal during its construction in the 1972-1996 era. In light of the past ground disturbances, no cultural remains associated with Site 33-001178 (CA-RIV-1178) are expected to survive within the horizontal and vertical extent of the APE. Therefore, the construction of CV Link facilities in the vicinity of Site 33-001178 will not have an adverse effect on cultural or historic resources. Nonetheless, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around this area of potential impact where monitoring will be required during site disturbance and/or excavation.

CVSC at Dillon Road/Twenty-Nine Palms Reservation

As noted elsewhere in this EA, the CV Link alignment would pass through the Twenty-Nine Palms Tribe’s reservation as it runs along and atop the south (right) bank of the channel in the vicinity of Dillon Road. The Link would be built on the existing levee grade. Located on the southern tip of the Twenty-Nine Palms Indian Reservation, Site 33-000149 (CA-RIV-149) was first recorded in 1951 as a large prehistoric habitation area with assorted lithic, ceramic, and faunal artifacts such as beads, bone fragments, shells, pot sherds, points, knives, scrapers, manos, metates, and a stone ball. The original dimension of the site is unknown, but the 1951 site record indicates that most of the site had been destroyed by the development of Indio. The current location and dimension of the site, as reflected in EIC records, were evidently established during a revisit to the site in 1972.

During the field survey conducted on this site for the CV Link project, no features or artifacts associated with the site were found in or near the APE. The proposed Dillon Road at-grade crossing Link alignment

lies on the existing levee built of 3-5 feet of fill material excavated from the channel. Portions of the APE, therefore, are unlikely to contain intact, potentially significant subsurface archaeological deposits within its vertical extent. Also, it should be noted the nature of Link construction at this location will involve minor grading and little or no excavation. Therefore, the construction of CV Link facilities in the vicinity of Site 33-000149 (CA-RIV-149) will not have an adverse effect on these resources. Nonetheless, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around this area of potential impact where monitoring will be required during site disturbance and/or excavation.

Isolates

The three historic-period isolates (glass shards, stoneware crock rim sherd) in the APE were all found in greatly disturbed settings, essentially on artificial ground surface created by flood-control work far post-dating the origins of the artifacts. Their presence at the recorded locations is likely the result of fill material being imported from elsewhere. Due to the lack of any contextual integrity, such isolates do not qualify as archaeological sites, according to guidelines set forth by the California Office of Historic Preservation, and are not considered to be potential "historic properties." Therefore, the construction of CV Link facilities in the vicinity of these isolates will not have an adverse effect on these resources. A separate isolate, Isolate 33-009022, was found in 1998 to the west of Washington Street and north of the Whitewater River, on the eastern edge of the City of Indian Wells. It consisted of unifacial granitic mano fragment. However, despite diligent efforts during the field survey, this isolate could not be found probably due to the highly disturbed nature of the site and has been used in the past by CVWD for channel maintenance access. The three historic-period isolates found during project surveys are described below.

Isolate 33-024880 consists of a historic-period clear glass bottle base found within the Whitewater River channel, near the Miles Avenue bridge in the City of Indian Wells. The bottle base measures approximately 2.5 inches in diameter and, with remnants of the sidewall, approximately 1 inch tall. Several air bubbles are visible in the glass. Judging from the location, the placement of the artifact appears to be the result of secondary deposition caused by construction activities associated with the levee or channel maintenance.

Isolate 33-024741 is of the historic-period and was originally recorded in 2015 as a single sun-colored amethyst glass bottle body shard. It was found on the western slope of the levee on the west side of CVSC, between Avenue 54 and Airport Boulevard in the Thermal area. During the field survey for this study, the artifact was observed intact at its recorded location. Based on its location, the placement of the artifact appears to be the result of secondary deposition caused by construction activities associated with the levee or channel maintenance.

Isolate 33-024742 was recorded in 2015 and consists of an amber-glass liquor bottle base and a stoneware crock rim sherd. The bottle base has an Owen's suction scar and an embossed number, "6." The stoneware crock rim sherd has a dark-brown salt glaze. They were discovered on the western, or outer, slope of the same segment of the levee as Isolate 33-024741, and were found at their recorded location during the field survey for this study. Based on the location, the placement of the artifacts appears to be the result of secondary deposition caused by construction activities associated with the levee or channel maintenance.

Summary of Native American Consultation

On June 29, 2015, a written request was submitted to the State of California's Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. In response, the NAHC states in a letter dated July 10, 2015, that the Sacred Lands File indicated the potential for Native American cultural resources to be impacted by the undertaking, particularly in the Palm Springs and Indio areas. For more specific information, the NAHC recommends contacting the Agua Caliente Band of Mission Indians and the Cabazon Band of Mission Indians, among other local tribes identified in a referral list.

On May 16, 2016, written requests for comments were sent to seven of the eight individuals on the referral list. The eighth person on the list, Mathew Krystal of the Torres Martinez Desert Cahuilla Indians, was replaced by his successor in the position, Michael Mirelez. In addition, as referred by the appropriate tribal government staff, four other individuals were also contacted. In total, 12 local Native American representatives were contacted. Follow-up telephone solicitations were carried out between June 30, 2016, and January 18, 2017. To date, five tribal representatives have responded, as listed below:

• Victoria Harvey, Archaeological Monitoring Coordinator for the Agua Caliente Band of Cahuilla Indians, responded in a letter dated May 20, 2016, in which she states that the CV Link Project is located both on and off current reservation land, but is completely within the tribe's traditional use area. Therefore, she requests continued consultation regarding this undertaking. Caltrans will pursue formal consultation with the Agua Caliente THPO concurrently with SHPO consultation.

• Judy Stapp, Director of Cultural Affairs for the Cabazon Band of Mission Indians, responded in a letter dated May 23, 2016. In the letter, Ms. Stapp also identifies the APE as a part of the tribe's traditional use area, but states that the tribe has no specific information regarding Native American cultural resources in the vicinity. However, in light of previous discoveries in and near the Whitewater River channel, she recommends archaeological monitoring during ground disturbing activities. Caltrans has adopted Ms. Stapp's recommendation for monitoring (see the accompanying Finding of No Adverse Effect [FOE]).

• Anthony Madrigal, Tribal Historic Preservation Officer for the Twenty-Nine Palms Band of Mission Indians, responded by telephone on July 1, 2016. He expressed concerns that tribal cultural resources may be impacted by the undertaking, especially near previous finds along the Whitewater River. Mr. Madrigal recommended Native American monitoring during any ground disturbing activities during the undertaking. Caltrans has adopted Mr. Madrigal's recommendation for monitoring (see FOE). Formal consultation with the Twenty-Nine Palms THPO will commence concurrently with SHPO consultation.

• Amanda Vance, Chairperson of the Augustine Band of Cahuilla Indians, responded in a letter dated August 29, 2016. She states that the tribe is unaware of any specific cultural resources that may be affected by the undertaking, but encourages further consultation with other tribes in the vicinity. In addition, she recommends monitoring for Native American cultural remains during the undertaking and requests to be notified immediately should any cultural resources be encountered. Caltrans has adopted Ms. Vance's recommendation for monitoring (see FOE). She will be notified of any pertinent cultural resource findings.

• Michael Mirelez, Cultural Resource Coordinator for the Torres Martinez Desert Cahuilla Indians, responded in a letter dated January 18, 2017. He identifies the APE as a part of the tribe's traditional use area and expresses a high level of concerns for inadvertent archaeological discoveries. However, the tribe will only disclose the information to the lead agency for the undertaking. Therefore, Mr. Mirelez requests formal, government-to-government consultation, copies of the cultural resources study for tribal review, and the presence of a Native American monitor from the tribe during all ground-disturbing activities. Caltrans will honor Mr. Mirelez' request for monitoring (see FOE). A copy of the report will be forwarded to him upon completion to facilitate further consultation.

In summary, four of the five tribes that responded, namely Augustine, Cabazon, Torres Martinez, and Twenty-Nine Palms, requested or recommended archaeological and/or Native American monitoring during ground-disturbing activities associated with the undertaking. Due to archaeological sensitivity of portions of the APE, Caltrans will honor the tribes' requests/recommendations, as discussed in the FOE for this undertaking, including the attached Post-Review Discovery and Monitoring Plan. Meanwhile, Caltrans will pursue formal, government-to-government consultation with the Agua Caliente THPO, the

Twenty-Nine Palms THPO, and the Torres Martinez Desert Cahuilla Indians per tribal requests concurrently with SHPO consultation.

Summary of Local Consultation

As a part of the research procedures, local historical/archaeological organizations and city government staff in each community along the project route were consulted regarding potential cultural resources of local significance in or near the APE. In total, eight cities and eight local historical/archaeological organizations were contacted by e-mail and telephone between July 5 and September 20, 2016. As of this time, eight responses have been received:

- Ken Lyon, Associate Planner with the City of Palm Springs, stated that the Palm Springs Visitor Center at Tram Way and Palm Canyon Drive was the only historical resource in or near the APE that he was aware of in the City of Palm Springs. The Palm Springs Visitor Center/Tramway Gas Station is located in the APE, is listed on the NRHP, and is addressed in the FOE for this undertaking.

- David Gassaway, Interim Community Development Director for the City of Indian Wells, stated that the City's General Plan noted the presence of the Cahuilla village *Kavinish* near the APE. In a follow-up call, Mr. Gassaway further stated that the City opposed the CV Link Project. Archaeological monitoring and avoidance measures near the former site of *Kavinish* have been formulated in consultation with Native American groups (see FOE). The rest of Mr. Gassaway's comment is directed towards the undertaking as a whole and does not pertain to cultural resources issues. A response is not required at this time as CVAG will follow up with pertinent communities regarding support for or opposition to the undertaking through other channels.

- Luis Lopez, Development Services Director for the City of Coachella, stated that the City was concerned that the CV Link Project might impact other upcoming transportation/street improvements projects that the City of Coachella had planned. With regards to historical/ archaeological resources, Mr. Lopez stated that the City would defer to the Torres Martinez Desert Cahuilla Indians.

- Gabriel Perez, Planning Manager for the City of La Quinta, stated that he was concerned about the potential for the undertaking to affect a known prehistoric site located at the northeast corner of Highway 111 and Dune Palms Road. When informed that the site he noted, 33-016950 (CA-RIV-8835), was located outside the APE on APN 600-030-018 (see Attachment A, Map 3-51), Mr. Perez maintained his concerns and stated that he would support any response or recommendations made by the Agua Caliente Band of Cahuilla Indians regarding this undertaking.

- Linda Williams, President of the La Quinta Historical Society, stated that the CV Link Project did not appear to be near any known historic buildings in La Quinta.

- Harry M. Quinn, President of the Historical Society of Palm Desert, stated that the CV Link Project was mainly located in areas already disturbed and thus would not present a high potential for damage to historical or prehistoric sites. However, Mr. Quinn recommended that extensive excavation of any area outside the active wash system, man-made levees, or existing roads/ highways be monitored. Caltrans will support monitoring as determined through consultation with Native American groups.

- Britt Wilson, President of the Coachella Valley Archaeological Society, requested avoidance of all cultural resources that might be impacted by the undertaking and further consultation regarding treatment plans if any cultural resources could not be avoided. Avoidance measures and treatment plans are typically used only for cultural resources that are considered "historic properties." Caltrans will support avoidance measures for archaeological resources as determined through consultation with Native American groups.

- Gloria Franz, Second Vice President of the Coachella Valley History Museum, expressed enthusiasm for the CV Link Project but offered no comments or any cultural resources concerns.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Identification efforts for the Undertaking have resulted in the identification of eleven (11) historic properties within the APE.

Caltrans in consultation with the California SHPO and Tribal Historic Preservation Officers has determined that three built-environment properties in the APE meet the definition of "historic properties," as outlined in 36 CFR 800.16(l)(1): the former Tramway Gas Station (33-026436), a segment of the Coachella Canal (33-005705/CA-IMP-7658H), and a segment of the Southern Pacific Railroad Los Angeles to Yuma Mainline (33-009498/CA-RIV-6381H). In addition, as documented in the HPSR and Finding of No Adverse Effect prepared for the undertaking, there are eight prehistoric archaeological sites in the APE that were not evaluated as part of the Undertaking but are considered "historic properties" for the purpose of this undertaking (see HPSR Attachment D). The "historic properties" are described below.

Palm Springs Visitor's Center (Former Tramway Gas Station)
The potential for CV Link to affect the former Tramway Gas Station stems from the proposed use and extension of the existing walkway to connect to the recreational path alignment at points on the eastern and western perimeters of the property. The project will not directly impact the original 1965 building of the former Tramway Gas Station, which stands approximately 100 feet from the ADI, or alter the significant aspects of Albert Frey's iconic design that contribute to the significance and integrity of the building. The access point planned at this location will occur within the existing parking lot and previously disturbed lands behind the building. With regard to potential visual and atmospheric effects, the setting and feeling on the perimeter of the property will be altered by the addition of the recreational path and the shade structures, but these low-profile facilities will not constitute a prominent intrusion into the viewshed of the building, nor a substantial detraction from its atmospheric surrounding, especially in light of the existing modern facilities of similar nature. In particular, all project activities will occur to the rear of the building, and most of them on the west side, where the existing landscape is dominated by the paved parking lot and the line of sight is partially obscured by the restroom building, both of which date to 2002-2004 (Google Earth 2002; 2004; see App. 2, Plate 1).

In summary, the proposed undertaking will not affect Albert Frey's original architectural design of the former Tramway Gas Station, the primary source of the historic significance of the property. The effect of the undertaking is limited to the once open desert setting of the building, which has been substantially altered since the 1990s and is no longer a significant aspect of the former Tramway Gas Station's historical character.

Coachella Canal
The proposed recreational path will cross the underground syphon of the Coachella Canal on the existing levee on the southeast side of the Whitewater River/CVSC, between the channel and the concrete headwall on that end of the culvert (see App. 2, Plate 2). As such, the undertaking will have no direct impact on any of the character-defining features of the Coachella Canal, either those associated with the open canal or those associated with the syphon. The potential for effect on this property lies primarily in visual and atmospheric concerns associated with the path as well as a proposed rest area to be constructed approximately 60 feet northeast of the canal crossing, which will feature two shade structures with electric vehicle charging stations and interpretative signage.

With the construction of the new facilities, the setting and feeling of the canal will be somewhat altered at this location. However, considering the factors that its significance is derived from, the most important aspects in the historic integrity of the Coachella Canal are the location of its entire 120-mile course and the physical features that embody its overall design and construction methods rather than microscopic originality in terms of materials and workmanship or localized setting and feeling. These macro-level aspects of integrity will not be substantially compromised by the 12 proposed new facilities, which have much less potential to detract from the historic appearance of the canal than the multitude of modern development that has occurred along its course in the Coachella Valley.

For the small segment of the Coachella Canal in the APE, the historic integrity of the property remains largely intact in terms of location, design, materials, and workmanship. In the aspects of setting, feeling, and association, in contrast, the integrity has been significantly compromised by the presence of the frequently upgraded and constantly maintained levee along the Whitewater River/CVSC and a residential neighborhood on the adjacent property to the east, which was developed in 2006-2009 (Google Earth 2006; 2009). In comparison to these existing modern features, the potential of the proposed new facilities to detract further from the historical characteristics of the canal is minimal. In sum, while the proposed undertaking will inevitably have an effect on certain aspects of the historic integrity of the segment of the Coachella Canal at this location, such effect would not reach the level of an "adverse effect."

Southern Pacific Railroad Los Angeles to Yuma Mainline (33-009498/CA-RIV-6381H)
This property represents the former Southern Pacific Railroad's Coachella Valley line, which remains in operation today as a part of the Union Pacific Railroad system. It was constructed in 1876-1877 as a part of the Southern Pacific line from Los Angeles to Yuma, Arizona. The entire route was recorded into the California Historical Resources Inventory in 1999. The APE for this undertaking crosses the rail line under an existing bridge in the western portion of the City of Indio, on the northeastern side of Indio Boulevard.

At its intersection with the Southern Pacific Railroad, the undertaking consists solely of the construction of the proposed recreational path along the Whitewater River/CVSC and under the 1930 railroad bridge. As with Coachella Canal, the overall significance and integrity of the Southern Pacific Railroad reach well beyond the APE for this undertaking. Specific to the segment of the Southern Pacific Railroad at its intersection with the project alignment, the undertaking will have no direct impact on any physical element of the bridge or the rail line it carries. Furthermore, the undertaking proposes no aboveground construction at this location, and the path to be built under the bridge will not constitute a prominent visual or atmospheric intrusion into the setting and feeling of the Southern Pacific Railroad. As such, the undertaking will not result in an alteration to any of the character-defining features of this "historic property."

The Finding of No Adverse Effect also addresses avoidance and prevention of project effects on the eight prehistoric archaeological sites in the APE that are considered to be historic properties for the purpose of this undertaking (see HPSR Attachment D). These eight sites are described below.

• 33-000064/CA-RIV-64/H Cahuilla village site/Old Indian Wells Village in the City of Indian Wells:

The proposed project alignment through this location crosses above the northern portion of Site 33-000064 (CA-RIV-64/H) within the Miles Avenue right-of-way in the City of Indian Wells (see HPSR Attachment A, Map 3-46). All project activities will be limited to the existing surface of the paved Miles Avenue roadbed and sidewalk, and no subsurface ground disturbances is proposed (see FOE App. 2, Plate 5). Beyond the ADI, previously recorded portions of Site 33-000064 (CA-RIV-64/H) are found on both sides of Miles Avenue, where the land have evidently been disturbed in the past but remain largely

undeveloped. Therefore, Site 33-000064 (CA-RIV-64/H) will be protected within an ESA, but no AMA will be necessary at this location.

• 33-000149/CA-RIV-149) prehistoric habitation area in the City of Coachella:

This site lies across the APE near the intersection of Dillon Road and the Whitewater River/Coachella Valley Stormwater Channel (CVSC) in the City of Coachella (see HPSR Attachment A, Map 3-62). The project alignment crosses this area on a five- to six-foot-tall earthen levee built of imported fill material, and the undertaking at this location consists solely of the CV Link path alignment, with excavations not to exceed one foot and confined to the levee (see FOE App. 2, Plates 6, 7). The site extends to both sides of the levee, where the land remains undeveloped. Both an ESA and an AMA will be established at Site 33-000149 (CA-RIV-149).

• 33-001178/CA-RIV-1178 prehistoric habitation area on the boundary between the City of La Quinta and the City of Indio:

This site intersects the APE on an elevated levee and an artificial terrace at the confluence of the Whitewater River/CVSC and the La Quinta Evacuation Channel, to the east of Jefferson Street and on the boundary between the City of La Quinta and the City of Indio (see HPSR Attachment A, Maps 3-51 and 3-52). Proposed construction activities include the path, an access ramp at the Jefferson Street undercrossing, and a new bridge across the La Quinta Evacuation Channel (see FOE App. 2, Plates 8-10). Most of the ground disturbance will fall within the 2-4 feet limit, with deeper excavations required for a bridge support structure at the bottom of the La Quinta Evacuation Channel. Both an ESA and an AMA will be established at Site 33-001178 (CA-RIV-1178). The land in the ESA has mostly been developed for residential use (see HPSR Attachment A, Maps 3-51 and 3-52), and the ESA fencing will incorporate segments of existing fences and walls of the residential properties.

• 33-001530/CA-RIV-1530 prehistoric habitation area in the City of Indian Wells:

This site lies just to the south of the ADI along Miles Avenue in the City if Indian Wells, where the land remains undeveloped (see HPSR Attachment A, Map 3-47). As in the case of Site 33-000064 (CA-RIV-64/H), all project activities at this location will occur on the existing pavement and sidewalk (see FOE App. 2, Plate 11). An ESA will be established around the site, but no AMA will be necessary.

• 33-001754/CA-RIV-1754 ceramic scatter in the City of Indian Wells:

This site is located on the south side of the Whitewater River channel and to the west of Miles Avenue, in the City of Indian Wells (see HPSR Attachment A, Map 3-45). The proposed project alignment intersects the site within the Indian Wells Golf Resort and the grounds of the Esmeralda Hotel, near a parking garage on the property. Project activity at this location consists solely of path construction, with ground disturbances limited to the depth of one foot (see FOE App. 2, Plate 12). The area of the site is now partially occupied by the parking garage. The rest of the site area is a part of the landscaped grounds of the hotel, where both an ESA and an AMA will be established.

• 33-002935/CA-RIV-2935 prehistoric habitation area in the City of Indian Wells:

This site is located on the opposite bank of the Whitewater River channel from Site 33-001754 (CA-RIV-1754), also within the Indian Wells Golf Resort in the City of Indian Well (see HPSR Attachment A, Map 3-45). The undertaking entails solely path construction at this location, and the depth of subsurface disturbances will not exceed one foot (see FOE App. 2, Plate 13). The site area has clearly been disturbed and is now covered by turfs of the golf course. Nevertheless, an ESA and an AMA will be established at Site 33-002935 (CA-RIV-2935) as a precautionary measure.

• 33-003005/CA-RIV-3005 prehistoric artifact deposit in the City of Indian Wells:

This site lies to the southwest of the intersection of Miles Avenue and Washington Street in the City of Indian Wells, approximately 100 feet from the nearest ground disturbance required by the undertaking (see HPSR Attachment A, Maps 3-47 to 3-49). The area is currently occupied by a sod grass farm. The undertaking near the site entails mainly path construction along the western edge of the Washington Avenue right-of-way, with a maximum depth of disturbance of 2-4 feet, while the segment of the ADI along Miles Avenue will be limited to the existing roadbed and sidewalk (see App. 2, Plates 14-16). Site 33-003005 (CA-RIV-3005) will be protected in an ESA during construction, and an AMA will be established along Washington Street (see App. 2, Plates 14-16).

• 33-007835/CA-RIV-5828 small prehistoric habitation area in the City of La Quinta:

This site was recorded on the south side of the Whitewater River/CVSC and approximately 250 feet west of Jefferson Street, in the City of La Quinta (see HPSR Attachment A, Map 3-51). The project alignment intersects the site on the existing Whitewater River/CVSC levee, and the depth of ground disturbances required will not exceed the height of the level. Today, the site area lies partially under the levee and under the paved parking lot of an adjacent shopping center. An ESA will be established around Site 33-007835 (CA-RIV-5828), partially utilizing an existing wall separating the shopping center from the levee, along with an AMA in the portion of the ADI that overlaps the site (see App. 2, Plate 17).

The prehistoric archaeological sites discussed above were previously recorded in the APE but determined to be outside the Area of Direct Impact. They have not been evaluated but are assumed to be eligible for listing in the National Register of Historic Places, and all of them will be protected through the establishment of Environmentally Sensitive Areas (ESA), as discussed in the Environmentally Sensitive Area Action Plan.

In summary, at six of the eight sites, namely 33-000149/CA-RIV-149, 33-001178/CA-RIV-1178, 33-001754/CA-RIV-1754, 33-002935/CA-RIV-2935, 33-003005/CA-RIV-3005, and 33-007835/CA-RIV-5828, monitoring by qualified archaeologists and local Native American representatives will be required. Archaeological Monitoring Areas (AMA) will be established at and near the portions of these sites in the APE, as outlined in the Post-Review Discovery and Monitoring Plan. At Sites 33-000064/CA-RIV-64/H and 33-001530/CA-RIV-1530, no AMA will be necessary because all project activities in the vicinity will occur on the existing pavement, and no further ground disturbances will be required. Through the use of ESAs and AMAs established at and near the locations of the prehistoric sites, inadvertent disturbance to any potentially significant subsurface archaeological deposits will be prevented.

In summary of the information and analysis presented above, the proposed undertaking will not directly or indirectly alter any of the characteristics of the former Tramway Gas Station (33-026436), the Coachella Canal (33-005705/CA-IMP-7658H), or the Southern Pacific Railroad (33-009498/CA-RIV-6381H) that qualify them for inclusion in the National Register of Historic Places. Furthermore, the undertaking is not anticipated to disturb any cultural remains associated with the eight prehistoric sites previously recorded in the APE, all of which were determined to be outside the ADI.

Pursuant to 36 CFR 800.5(a)(1-2), Caltrans concludes that the undertaking will not cause an adverse effect to any historic properties within the APE and has determined that a Section 106 finding of No Adverse Effect is appropriate for the undertaking. Caltrans initiated consultation with the State Historic Preservation Officer (SHPO), the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Officer (THPO), and the Twenty-Nine Palms Band of Mission Indians THPO on July 31, 2017 on the adequacy of the application of 36 CFR § 800 procedures for the CV Link Project. Caltrans received concurrence from the Agua Caliente THPO on August 15, 2017, from the Twenty-Nine Palms THPO on

September 19, 2017, and from the SHPO on September 29, 2017 that identification, evaluation, and effect finding are adequate for the undertaking. All correspondence is attached in Appendix H.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1 would result in a CV Link project that would exclude the cities of Rancho Mirage and Indian Wells. The balance of the CV Link alignments could be constructed in a manner identical to that of the Proposed Project. The cultural resources analysis conducted for the CV Link project evaluated all of the possible project alignments, including those located within the cities of Indian Wells and Rancho Mirage. The analysis identified numerous historic and prehistoric resources almost all of which had been previously identified. Potentially significant historic resource sites were identified within the Indian Wells city limits that are in proximity to the CV Link alignments. The project has been revised to avoid impacts to sites 33-002935, 33-001754 and 33-003005, including the elimination of excavation. While impacts to these sites are not expected, in an abundance of caution an Archaeological Monitoring Area (AMA) has been delineated around these areas of potential impact where monitoring will be required during site disturbance and/or excavation. However, Alternative 1 does not include the subject Indian Wells alignments and therefore there would be no CV Link development near these resource sites under the Alternative 1 scenario.

No historic properties in Rancho Mirage would be affected under the Alternative 1 project. Therefore, effects on historic properties with the implementation of the Alternative 1 project will be the same as those for the Proposed Project Alternative, which will be avoided with the implementation of mitigation measures.

The impacts to archaeological resources under the Alternative 1 project would be the same as for the Proposed project, with the exception that potential impacts to such resources in the City of Indian Wells would not occur. A wide range of archaeological resources and sites have been identified over the course of conducting the cultural resources assessment for the CV Link project. These include village sites, cremations, pottery shards and other cultural items. The resource survey indicates that there are no such archaeological resources in the Rancho Mirage portion of the CV Link planning area.

While the cultural resource assessment prepared for CV Link concluded that the project's development would not result in substantial adverse impacts to archaeological resources, any potential effects would be precluded by the Alternative 1 project.

C. Alternative 2: Project with All Eight Cities

Alternative 2 would result in a CV Link project that would include all jurisdictions located along the core alignments, including the cities of Rancho Mirage and Indian Wells. All CV Link alignments could be constructed in a manner identical to that of the Proposed Project and as planned within the City of Rancho Mirage. The impacts associated with the Alternative 2 project are essentially the same as those identified for the Proposed Project, excepting that consideration is given to potential resources that occur in Rancho Mirage.

Archival research and field inspections resulted in the identification of a National Register-listed property, the former Tramway Gas Station, a National Register-eligible property the Coachella Canal (33-005705), and the Southern Pacific Railroad Los Angeles to Yuma Mainline (33-009498/CA-RIV-6381H that extend into portions of the APE for the CV Link Project, and including the proposed and build alternatives. These three qualify as "historic properties" in accordance with the 36 CFR 800.5(c). As discussed in Appendix A of this EA, the Alternative 2 project will not have an adverse impact on any Section 4(f) resources in the project vicinity.

While the cultural resource assessment prepared for CV Link concluded that the project's development would not result in unacceptable adverse impacts to archaeological resources, any potential effects would be kept to insignificant levels through adherence to the avoidance, minimization and mitigation measures.

D. Alternative 3: No Build/No Project Alternative

Alternative 3 is the No Build/No Project alternative. CV Link project would not be built and none of the potential impacts to cultural resources would occur. There would be no uniform multi-modal transportation facility built on local drainage levees or elsewhere.

The No Project alternative would preclude CV Link-related land disturbances or other activities that could uncover or damage sensitive cultural resources. Therefore, the Alternative 3 scenario would result in no impacts to these resources.

Section 4(f) Resources

Caltrans conducted an analysis of possible Section 4(f) resources along all of the CV Link alignments, including Section 4(f) historic sites that qualify for inclusion in the National Register of Historic Places. In consultation with SHPO, Caltrans has determined that the project will result in a Section 106 finding of No Adverse Effect on all three built environment historic properties within the project APE-- former Tramway Gas Station (33-026436), the Coachella Canal (33-005705/CA-IMP-7658H), and the Southern Pacific Railroad (33-009498/CA-RIV-6381H). Caltrans therefore intends to make a Section 4(f) *de minimis* use determination for all three properties. The eight archaeological sites assumed to be NRHP eligible are assumed eligible under Criterion D and do not warrant preservation in place. They are therefore not considered to be Section 4(f) historic sites. Please see Appendix A of this EA, which includes Section 4(f) letters and the policy analysis.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CUL-1: If any potentially prehistoric features, artifacts, ecofacts, manuports, or evidence of midden soil are discovered during the undertaking, all construction activities within a 60-foot (approximately 18-meter) radius of the find will be halted until a qualified archaeologist can determine the nature and the significance of the find. If such find occurs in or near the previously established boundary of a prehistoric sites identified in the APE during this study, construction activities will be halted within 60 feet of any portion of the site that falls within or close to the ADI.

CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are found to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant (MLD). The person who discovered the remains will contact Gary Jones, Caltrans District 8 Native American Coordinator, at (909) 383-7505 to facilitate cooperation with the MLD on the respectful treatment and disposition of the remains. Further provisions of California Public Resources Code Section 5097.98 are to be followed as applicable.

CUL-3: Archaeological and tribal monitors shall be present during any construction or preconstruction-related activity in all areas designated as Archaeological Monitoring Areas. In the event that cultural deposits are uncovered, the archaeological monitor shall be empowered to implement protective measures outlined above in CR-1. Details of the monitoring plan are located in the PRDMP (see App. 4).

CUL-4: The portions of Sites 33-000064/CA-RIV-64/H, 33-000149/CA-RIV-149, 33-001178/CA-RIV-1178, 33-001530/CA-RIV-1530, 33-001754/CA-RIV-1754, 33-002935/CA-RIV-2935, 33-003005/CA-

RIV-3005, and 33-007835/CA-RIV-5828 lying outside the horizontal limits of the ADI shall be designated as Environmentally Sensitive Areas, where all project-related activities or inadvertent disturbances shall be prohibited. Further provisions regarding the ESAs are located in the ESAAP (see App. 3).

CUMULATIVE IMPACTS

The geographic scope of analysis of potential cumulative impacts on cultural, historical, and tribal resources includes the Area of Potential Effect (APE), the immediate vicinity and the traditional use areas of the Cahuilla people in the Coachella Valley. The project would contribute considerably to cumulative impacts if it were to have a substantial adverse effect on these cultural and historical resources in the Coachella Valley. With the application of avoidance and minimization measures set forth above, there will be no adverse impacts to cultural resources under any of the project alternatives. Other land use activities in the Coachella Valley have the potential to impact sensitive cultural and historic resources, including future land conversion. In the vicinity of CV Link, most adjoining lands have been developed as stormwater channels and urban uses, in many cases with the benefit of cultural resource surveys and resource recordation and recovery.

It should also be noted that the CV Link cultural resources surveys have consolidated a wide range of literature, data and information on historic and archaeological resources that has added to our knowledge and understanding of these resources and the people who made them. Therefore, in this regard the project and associated analyses of cultural resources has enhanced our understanding of archaeological and historic resources in the planning area, which results in a positive contribution to cumulative impacts. No new impacts to historic or archaeological resources will result from the CV Link project.

The project EA has assessed the potential impacts of the Proposed Project Alternative on cultural, historical, tribal and resources and indicates that the project will not impact these resources. In addition, avoidance and minimization measures have been set forth above requiring that if such resources are encountered during project construction, impacts to these resources will be mitigated and the project will not have a substantial impact on these resources. Therefore, the Proposed Project Alternative's incremental impacts to these resources, if any, will not be cumulatively considerable.

2-2 PHYSICAL ENVIRONMENT

2-2.1 HYDROLOGY AND FLOODPLAIN

REGULATORY SETTING

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 Code of Federal Regulations (CFR 650) Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Clean Water Act (CWA)

The federal Clean Water Act, enacted by Congress in 1972, as amended, is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws and regulations throughout the country. The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States. The CWA gives the U.S. Environmental Protection Agency (USEPA) the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the USEPA and U.S. Army Corps of Engineers (ACOE).

Under Section 404 of the Clean Water Act, proposed discharges of dredged or fill material into waters of the United States require ACOE authorization. Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands). The ACOE identifies wetlands using a multi-parameter approach, which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. According to the Corps of Engineers Federal Wetlands Delineation Manual, except in certain situations, all three parameters must be satisfied for an area to be considered a jurisdictional wetland. The Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (ACOE 2008) is also used when conducting jurisdictional wetland determinations in areas identified within the boundaries of the arid west. The Coachella Valley falls within the Arid West Region. A CWA Section 404 permit application has been filed with the US Army Corps of Engineers for CV Link-related dredge and fill activities that will take place within “waters of the US”. Please see Section 4.4: Biological Resources of this EIR for a breakdown of temporary and permanent impacts to waters of the United States and of the State.

The federal CWA prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the water discharge permitting authority in California, and adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009, as amended by Order No. 2010-0014). The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. When applicable, the Construction General Permit requires that the landowner and/or contractor file permit registration documents prior to commencing construction and then pay a fee annually through the duration of construction. These documents include a notice of intent, risk assessment, site map, stormwater pollution prevention plan (SWPPP), and signed certification statement. The SWPPP must include measures to ensure that: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs installed to reduce or eliminate pollutants after construction are completed and maintained. The Construction General Permit specifies minimum BMP requirements for stormwater control based on the risk level of the site. The Permit also specifies minimum qualifications for a qualified SWPPP developer and qualified SWPPP practitioner.

AFFECTED ENVIRONMENT

Hydrology and floodplain analysis for the CV Link project is based upon the following studies:

- "Location Hydraulic Study for CV Link", prepared by Stantec Consulting, Inc. in 2016,
- "Water Quality September Report for CV Link", prepared by Stantec Consulting, Inc. in 2016,
- "Summary Floodplain Encroachment Report for CV Link Project", prepared by Stantec Consulting, Inc. in 2016,
- "CV Link Hydrology and Hydraulic Report", Stantec Consulting Services, Inc. in July 2016,
- "CV Link – Hydraulic Impact Analysis Summary", Stantec Consulting Services, Inc., March 2016.
- Whitewater River/Coachella Valley Stormwater Channel Hydraulic Analysis, Northwest Hydraulic Consultants, 2014.
- CVWD Development Design Manual – Design Criteria Stormwater Facilities, CVWD, 2013.

Regional Hydrology

The Coachella Valley can be characterized as a hot and dry subtropical desert bounded by steep slopes of the San Jacinto, Santa Rosa, San Bernardino and Little San Bernardino Mountains. Mean annual rainfall is very low (2 to 6 inches) on the desert floor and in some years no measurable rainfall has been reported within the CV Link planning area. Most of the rainfall occurs during the cooler months of November through March, but occasional high-intensity thunderstorms and tropical storms occur in late summer and early fall.

Floods that impact the planning area can be attributed to three different types of storm events: (1) general winter storms, combining high-intensity rainfall and rapid melting of the mountain snowpack; (2) tropical storms out of the southern Pacific Ocean; and (3) summer thunderstorms. Summer storms pose a greater threat of flooding to the Valley than winter storms because of their high intensity, short duration rainfall with high volumes of runoff. Major historic and benchmark storm events have generated 6.45 inches of rain in a period of 6 hours.

The combined 50-mile length of the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel (WWRSC/CVSC) is the largest drainage feature within the project area. The Whitewater River is a natural watercourse that originates from the southerly and easterly slopes of the San Bernardino Mountains, at the western portion of the Coachella Valley. Several of its tributaries originate from the easterly slopes of the San Jacinto and Santa Rosa Mountains. The Whitewater River eventually discharges to the Salton Sea through the man-made extension of the stormwater channel system known as the CVSC and extends 22 miles southeast from the City of La Quinta, through the cities of Indio and Coachella, and the agricultural communities of Thermal and Mecca down to the north end of the Salton Sea. The drainage area of the WWRSC/CVSC is approximately 1,500 square miles at the Salton Sea.

Benchmark storms and historic data are used by the US Army Corps of Engineers and other flood control agencies to gauge the potential for future flooding. In the Coachella Valley, these include two distinct storm events that occurred in 1939 and 1979. The 1939 storm event occurred on September 24, was centered over Indio and originated off the west coast of Mexico. This storm generated 6.45 inches of rain in a 6-hour period. The 1979 storm event was due to the Tropical Storm Kathleen, which impacted the area from September 9 through 11 and generated 6.81 inches of rain in the low-lying areas of the central Valley, and as much as 14 inches in the surrounding mountains. The projected 100-year 24-hour storm event in the planning area is 5.42 inches of rain over a 24-hour period (NOAA Atlas 14).[16]

In the upper Whitewater Stormwater Channel 100-year storm flows are calculated to be approximately 47,000 cubic feet per second (cfs) in the vicinity of the confluence Tahquitz Creek and the Whitewater Channel, to about 43,000 cfs east of Point Happy in La Quinta. The Standard Project Flood (SPF) flow

[16] NOAA's National Weather Service Hydrometeorological Design Studies Center; accessed 07.08.2016.

at these locations range from 85,000 cfs on the west to 83,000 cfs at Point Happy. East of Point Happy, this drainage is called the Coachella Valley Stormwater Channel and is projected to carry a 100-year flow of approximately 43,000 cfs and an SPF flow of about 82,000 in the eastern portion of the CV Link planning area.[17]

Throughout its length the Whitewater/Coachella Valley Stormwater Channel has been excavated below adjacent ground and is bounded by earthen embankments or levees. Most of the channel slopes are lined with concrete slope protection but the channel bed is only concrete-lined at drop structures and low water crossings. Golf courses occupy about 7 miles of the bottom of the channel; the remaining bed is sandy, with varying amounts of natural vegetation.

The channel generally has a trapezoidal cross section. The top width reduces from about 1,100 feet upstream of Ramon Road to 700 feet at Dinah Shore Drive, to 500-550 ft at Cathedral Canyon Drive, then to 300-400 feet at Country Club Drive. Downstream of Bob Hope Drive, the channel top width generally remains between 400 and 500 feet. The channel depth is typically about 10-20 feet between Ramon Road and Paxton Drive and 20-30 ft downstream of Paxton Drive. The average bed slope reduces from about 0.004-0.005 in the upper part of the study reach to 0.002-0.003 in the lower reaches. The channel bed material is predominantly sand with median sizes of about 0.7 mm at the upstream end and median sizes of about 0.2 mm downstream of Bob Hope Drive. In-channel vegetation includes grass (within golf course areas) and brush.[18]

CV Link Segments on Native American Lands

Portions of the CV Link alignments would cross Native American Tribal and allottee lands of the Agua Caliente, Twenty-nine Palms and Cabazon Tribes. In these areas where CV Link encroaches into “waters of the US”, US Environmental Protection Agency (USEPA) will be responsible for implementation the requirement of Section 401 of the Clean Water Act and will implement EPAs General Construction Permit and EPA’s NPDES Permit No. CAR10001 for construction activities.

Main Areas of Flood Deficiency Along CV Link

Most of the CV Link segments will be located atop drainage channel maintenance roads. As noted below, portions of the channel CV Link follows are currently inadequate to meet the 100-year design standard, which includes the provision of four feet of freeboard (in a “levee” condition). CVWD and RCFCWCD have evaluated these areas of levee or embankment elevation deficiencies and are developing plans to remedy these issue areas. CVWD and RCFCWCD will be raising channel embankment and levee elevations at various locations along the CV Link Route.[19,20]

Conditions and Improvements

At most channel locations coterminous with CV Link, the channel freeboard meets FEMA and flood control agency criteria. At a few locations within the Whitewater and Coachella Valley Stormwater Channels, existing channel conditions do not appear to meet 100-year standards, including the provision of adequate freeboard. These channel locations include those in the vicinity of Dinah Shore Drive, Ramon Road, Cathedral Canyon Drive, Date Palm Drive, Buddy Rogers Avenue, Frank Sinatra Drive, Butler-Abrams Trail, Tennis Club Drive, Paxton Drive, Cook Street, Fred Waring Drive, Bob Hope Drive,

17 Whitewater River/Coachella Valley Stormwater Channel Hydraulic Analysis (Ramon Road to Jefferson Street Bridges), prepared by Northwest Hydraulic Consultants and CVWD. September 2014.

18 Ibid.

19 Ibid.

20 Whitewater River/Coachella Valley Stormwater Channel Hydraulic Analysis (Ramon Road to Jefferson Street Bridges), prepared by Northwest Hydraulic Consultants and CVWD. September 2014.

Monterey Avenue, Portola Avenue, Miles Avenue, Washington Street, Adam Street, Dune Palms Road, and Indio Boulevard. CV Link issues associated with these existing deficiencies are addressed in the CV Link Stormwater Design Report prepared for CVWD.[21]

Project Area Hydraulic Conditions

The main drainage feature in the project area is the Whitewater River (WWR) Floodplain, which originates from the southerly and easterly slopes of the San Bernardino Mountains, at the western portion of the Coachella Valley. Several of its tributaries originate from the easterly slopes of the San Jacinto and Santa Rosa Mountains. The Whitewater River eventually discharges to the Salton Sea through the man-made extension of the stormwater channel system known as the Coachella Valley Stormwater Channel (CVSC), extends the Whitewater River Channel 22 miles southeast from the City of La Quinta, through the cities of Indio and Coachella, and the agricultural communities of Thermal and Mecca down to the north end of the Salton Sea. The drainage area of the WWRSC/CVSC is approximately 1,500 square miles at the Salton Sea. In addition to the WWR floodplain and channel, and the CVSC, the CV Link project would also be built along the Tahquitz Creek Channel, which extends from Tahquitz Canyon in Palm Springs to its confluence with the WWR Channel.

The Whitewater/Coachella Valley Stormwater Channel and its small tributaries are subject to flooding throughout the winter and summer. Throughout its length, the Whitewater/Coachella Valley Stormwater Channel has been excavated below adjacent ground and is bounded by earthen embankments or levees. Most of the banks are lined with concrete slope protection but the channel bed is only concrete-lined at drop structures and low water crossings. The projected 100-year 24-hour storm event in the planning area is 5.42 inches of rain over a 24-hour period.

The Coachella Valley Water District (CVWD) and the Riverside County Flood Control and Water Conservation District (RCFCWCD) are the regional flood control agencies within the CV Link planning area. Portions of the CV Link project are subject to flooding from 100-year storms and have been mapped by the Federal Emergency Management Agency (FEMA) (See Appendix F: FEMA FIRM Maps). Major portions of the CV Link alignments will be located atop the service roads at the top of major channel embankments and levees, which generally have adequate 100-year channel capacity and requisite freeboard. Several levee locations along the route are currently not high enough to contain the 100-year flood or provide requisite freeboard. CVWD has initiated a program to raise these topographically low areas along levees to meet capacity and design requirements as set forth in Title 44 of the Code of Federal Regulations (CFR), Section 65.10.

At most channel locations co-terminus with CV Link, the channel freeboard meets FEMA and flood control agency criteria. However, several locations are deficient in freeboard. These locations include: Dinah Shore Drive, Ramon Road, Cathedral Canyon Drive, Date Palm Drive, Buddy Rogers Avenue, Frank Sinatra Drive, Butler-Abrams Trail, Tennis Club Drive, Paxton Drive, Cook Street, Fred Waring Drive, Bob Hope Drive, Monterey Avenue, Portal Avenue, Miles Avenue, Washington Street, Adam Street, Dune Palms Road, and Indio Boulevard. Per FEMA requirements, CVWD and RCFCWCD will be raising channel embankment and levee elevations along those CV Link locations to reduce the risk of flooding up to a specific level.

Water Resources

The CV Link planning area is located within the western portion of the Colorado River Watershed, which locally drains into the Salton Trough, a terminal lake that straddles the Riverside/Imperial County line. The climate of this low desert locale is characteristically dry, with an annual average rainfall of 2 to 6 inches on the Valley floor. Despite the limited surface water supplies the Coachella Valley is underlain by a substantial subsurface groundwater basin, which has accumulated runoff over millions of years.

[21] "CV Link Stormwater Design Report, prepared by Stantec Consulting Services, Inc. August 2016.

The Whitewater River Groundwater Basin generally extends from the mouth of the Whitewater River in the northwest to the Salton Sea in the southeast. The aquifer is naturally subdivided by fault barriers into subbasins, which are further divided into subareas. Desert Water Agency (DWA) and the Coachella Valley Water District (CVWD) jointly utilize and manage a replenishment program for the local groundwater basin, the Upper Whitewater River Subbasin. Estimates of groundwater storage in the Upper Whitewater River Subbasin range from 10.5 to 14.2 million acre-feet. In total, the subbasins underlying the Coachella Valley contain approximately 39.2 million acre-feet of water in storage, of which about 28.8 million are within the Whitewater River subbasin. Natural recharge from precipitation and mountain runoff, supplemented with artificial recharge from imported Colorado River and State Water Project water, and recycled water from wastewater treatment plants also provide water to the Coachella Valley.

During the twentieth century the Coachella Valley experienced a rapid depletion of its groundwater in storage. CVWD data shows that significant increases in total water demand in the Coachella Water Valley occurred during over the decades from 92,400 acre feet/year (AFY) in 1936 to 376,000 AFY in 1999. The increase in water demand reflects both municipal water and agricultural irrigation. This is consistent with the growth of two primary economic activities in the Coachella Valley, agriculture and tourism. Agriculture began to develop as a viable industry in the Coachella Valley in the early 1900's, especially in the eastern Valley where groundwater was then easily accessible. More recently, the region has emerged as a leading destination resort area, characterized by golf courses and residential communities. Over the past several years, groundwater use has decreased through the implementation of extensive conservation measures and source substitution projects.

Water Quality and Water Quality Standards

Water for CV Link landscaping and potable use will come from the local domestic water purveyors, including DWA, CVWD, Indio Water Authority and Coachella Water Department. The providers supply their customers from wells extracting groundwater.

All providers comply with state (California Department of Public Health) and federal (U.S. Environmental Protection Agency) drinking water quality standards. Each year, domestic water providers monitor for more than 100 regulated and unregulated chemicals that are not detected during regular, ongoing monitoring. The domestic water supply meets current state and federal standards; however, drinking water supplied to some service areas does contain low levels of naturally occurring hexavalent chromium (Cr6), arsenic, radon, and nitrate.[22]

Impaired Water Bodies: The Coachella Valley Stormwater Channel is listed as being impaired for Toxaphene, DDT (Dichlorodiphenyltrichloroethane), Nitrogen, Dieldrin, ammonia (Total Ammonia), PCBs (Polychlorinated biphenyls), Toxicity and Indicator Bacteria under Section 303(d) of the Clean Water Act (CWA). Total Maximum Daily Loads (TMDLs) for those pollutants listed above occur in the Coachella Valley Stormwater Channel downstream of the Valley Sanitary District's wastewater outfall. Many of the identified pollutants are associated with agricultural runoff.

Summary

The CV Link is a unique multi model transportation route from Palm Springs to Coachella. The project may have a nexus with a variety of regulatory programs, including those managed by federal and state agencies, as well as those managed by RCFCWCD and CVWD, as well as the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio, and Coachella. All the local, state, and federal agencies were contacted to coordinate with respect to floodplain management policies because of encroachment on a regulatory floodway, increase in the base flood elevation, and subsequent actions such as the need for the floodplain map revisions.

[22] Coachella Valley Water District (2013-2014 Annual Review); http://www.cvwd.org/ArchiveCenter/ViewFile/Item/59; Accessed 8.30.2016.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

A major portion of CV Link facilities will be constructed along and within major valley drainages, which are described in detail below. The location of the CV Link path, access points, rest areas and path design details have been reviewed by the RCFCWCD and CVWD, who are responsible for the management and maintenance of the potentially affected drainages and flood control facilities. The design and location of pathways and other CV Link facilities, including shade structures, railings, charging station, signage and other improvements, has been refined based upon detailed and on-going consultations with the flood control agencies. Agency consultations have resulted in the establishment of minimum equipment clearances needed for these agencies to access and effectively manage and maintain drainage facilities. CVAG shall continue to coordinate with and must secure approvals from RCFCWCD and CVWD before work can proceed on their lands or facilities. With adherence to flood control agency design guidance, there will be no conflicts between CV Link and flood control facilities and their management and maintenance.

This analysis evaluates the potential effects of the CV Link alignments on the major floodplains and/or drainages in the project area. The discussion is generally jurisdictional and is from west to east along the CV Link route.

Whitewater Floodplain Levee

CV Link alignments immediately east of Highway 111/North Palm Canyon Drive in Palm Springs proceed atop the levee to just east of Sunrise Way, where one of three alignments places CV Link at the bottom of and immediately adjacent to the levee slope protection and in the floodplain. The hydraulic analysis conducted for this portion of the project within the channel indicates that the facility will not have a substantial impact on floodwater elevations in this area. The alignment atop the levee can be constructed consistent with guidance provided by Riverside County Flood Control, which is responsible for managing and maintaining flood control facilities in this area of the CV Link route. The design of Link flatwork and vertical elements will conform to County Flood guidance and potential conflicts between CV Link and flood control facilities and management will be avoided.

Farther east and at the easterly extension of San Rafael Drive, CV Link may also be located on the channel bottom on a near- or long-term basis. However, the alignments at-grade channel bottom crossing at this location will not impede side channel or floodplain flows, and will have no adverse impact on floodwater elevations in this area. The alignment atop the levee can be constructed consistent with guidance provided by Riverside County Flood Control. The design of Link flatwork and vertical elements will conform to County Flood guidance, which will avoid conflicts between CV Link and flood control facilities management and maintenance.

Tahquitz Creek Drainage

At Sunrise Way, one CV Link option is to descend into the channel bottom and pass under Sunrise Way and back out at or just beyond the existing concrete apron providing scour protection under the bridge. The channel would be accessed via a ramp starting a short distance west of Sunrise Way. Except for limited reaches, CV Link will have no adverse effects of 100-year water surface elevations. The three exceptions are where CV Link improvements could raise 100-year storm water surface elevations from 0.1 to 0.51 feet. The hydrology analysis indicates that these impacts are mitigated by existing channel capacity and compliance with County Flood design guidelines. Channel encroachments, including ramp and channel bottom design, will be coordinated with and approved by Riverside County Flood Control to ensure that channel capacity and maintenance access are maintained. CV Link impacts on this segment of Tahquitz Creek will have no adverse impacts.

East of Sunrise Way, the Tahquitz Creek alignment eventually returns to follow the channel along south (right) bank west of El Cielo Road, crosses to lands north of the channel at this location, and proceeds in places along the north (left) bank of the channel, much of which has been developed as golf course. There will be no encroachment into the channel along these reaches of the channel, and the design of Link flatwork and vertical elements will conform to County Flood guidance. Potential conflicts between CV Link and flood control facilities and management are expected to be limited.

Whitewater Stormwater Channel-Cathedral City Reach

At Golf Club Drive, CV Link crosses the channel within the road right of way, then crosses the road and proceeds east along the south (right) bank of the channel to its confluence with the Whitewater Stormwater Channel. Within the Whitewater Channel, the Link splits into two alignments with one branch crossing the channel and continuing east on the north (left) bank, along with the continuation of the south (right) bank alignment. To the west end of the future Cathedral Canyon Drive bridge. The north (left) bank alignment turns south just before the bridge and crosses the channel to rejoin the south channel alignment. The hydraulic analysis conducted for these facilities indicate that the channel crossing at the confluence of the two drainages and at the bridge will not have a substantial effect on the flood water elevation along the channel and will not impact channel capacity, maintenance or emergency access.

East of Cathedral Canyon Drive, CV Link continues southeast atop the south (right) bank levee to Date Palm Drive bridge, where the alignment continues southeast under the bridge and returns to the top of levee, then bears south across a peninsula of land and the West Cathedral Canyon Channel just upstream of its confluence with the Whitewater Channel. The alignment then continues southeast along the south (right) bank of the West Cathedral Canyon Channel, bridges the outlet of the East Cathedral Canyon Channel into the Whitewater Channel, and continues atop the Whitewater Channel to two points of terminus, one (Terminus A) being off-channel at Buddy Rogers Drive. The second prospective terminus (B) is discussed briefly below. CV Link improvements along this reach will include single piles and bridging over the West and East Cathedral Canyon Channels near their points of discharge in to the Whitewater Channel. Final design of the Date Palm Drive undercrossing, as well as the two bridges, flatwork and vertical elements will conform to County Flood guidance. This portion of CV Link will not conflict with flood control facilities, or their management or maintenance.

Whitewater Stormwater Channel-West Rancho Mirage Reach

Two prospective West-End termini have been developed for analysis in the City of Rancho Mirage. Terminus B would be at the northwest corner of Da Vall and Frank Sinatra Drives within the Rancho Mirage city limits. The route between the aforementioned terminus A and B would be atop the south (right) channel bank and would connect to the existing (or comparable) channel crossing, which extends east, parallel to and just north of Frank Sinatra Drive. At this location the proposed Link path alignment would increase the WSE at these stations by 0.52 to 0.88 feet. Although these increases in water surface elevations are the greatest of any CV Link impact area, they are still considered to have no adverse impacts and will not result in flooding conditions. However, due to an associated loss of channel freeboard as a result of the project, the project hydrology analysis indicates that a portion of the west bank must be elevated to ensure adequate freeboard at this location. This inadequacy in embankment height is already an existing condition, which CV Link may help remedy. As noted above, the City of Rancho Mirage and Caltrans are processing a new all-weather channel crossing (bridge) at Frank Sinatra Drive, which may also enhance existing channel capacity. It should also be noted that the City of Rancho Mirage and Caltrans are processing a new bridge at this location, which will also enhance channel capacity.

Whitewater Stormwater Channel-East Palm Desert Reach

The CV Link alignment again follows the Whitewater Channel beginning at the north end of Deep Canyon Drive in Palm Desert and proceeds southeast atop the south (left) bank maintenance road to Cook Street where a bridge over this roadway is planned. An off-channel at-grade crossing is also planned at the signal just south of this location. Details of the planned bridge indicate that pylons carrying suspension cables may be anchored at or below the 100-year storm WSE. As presently conceived, it is unclear

whether or to what extent these bridge supports would interfere with the channels hydraulic function, although the pylon anchors may occur within the freeboard portion of the channel cross section. As presently designed, the potential exists for one of the two CV Link Cook Street bridge supports to encroach into the requisite freeboard portion of the channel cross-section. The Cook Street bridge design is at 30% and future refinements will ensure that the bridge does not impact channel function at this location or requisite freeboard. As set forth in the mitigation measure below, prior to the completion of 60% plans for the Cook Street bridge, the project designers shall ensure that bridge supports do not impact requisite stormwater channel freeboard at these locations and shall secure CVWD concurrence before final design engineering is completed. Mitigation measures set forth below, will ensure that the Cook Street bridge does not alter the local drainage pattern, generate substantial additional runoff or result in on-site or off-site flooding.

East of Cook Street, the Link alignment continues along the south (right) channel bank for approximately 1,400 feet, at which point the alignment splits with one proceeding north and directly across the channel while the south bank alignment continues to Fred Waring Drive. Once across the channel, the northerly split proceeds southeast both atop the channel embankment and in the channel bottom adjacent to the channel side slope protection. Ramps into and out of the channel will be needed and the path across the channel bottom must be designed to not substantially alter the 100-year WSE in this reach of the channel. The final design of the channel access ramps and crossing, as well as flatwork and vertical elements, will conform to CVWD guidance. There will be no conflicts between CV Link and flood control facilities, or their management or maintenance.

Whitewater Stormwater Channel-West Indian Wells Reach

On the west end of Indian Wells, CV Link would enter the city limits northwest of Fred Waring Drive on both the north and south banks of the channel. Immediately north of Fred Waring Drive, the Link would provide a connector between the north and south bank alignments. The south (right) bank alignment would also continue southeast under the future Fred Waring bridge to the Eldorado Drive bridge, which it would pass under and ramp out of the channel and onto the Eldorado Drive right of way. The bridge undercrossing will require that channel access ramps and channel bottom path design that avoids impacts to channel capacity at these locations. Final design of the channel access ramp and bridge undercrossing, as well as all related flatwork and vertical elements, will conform to CVWD guidance. There will be no conflicts between CV Link and flood control facilities or their management or maintenance.

The north (left) bank Link alignment exits the channel at Fred Waring Drive and conveys Link travelers on at-grade intersection crossings on both the east and west side of Eldorado Drive. The west side Waring crossing proceeds south and swings under the channel bridge to emerge on the east atop the channel levee, joining the east Fred Waring Drive crossing and proceeding southeast along the top of the channel embankment. As with the aforementioned bridge undercrossing, final design of the channel access ramp and bridge undercrossing, as well as all related flatwork and vertical elements, will conform to CVWD guidance. There will be no conflicts between CV Link and flood control facilities or their management and maintenance.

Whitewater Stormwater Channel-Middle Indian Wells Reach

East of Eldorado Drive and opposite the Indian Wells Golf Resort complex, the Link would split to cross the channel on the existing (or modified) bridge and directly connect to the hotel complex on the south side of the channel and proceed east along the south (right) channel embankment. At the east end of the hotel complex, CV Link provides another cross-channel connection to the north (left) bank alignment, following the existing golf cart path. No new impacts to channel hydrology from these two crossings are anticipated. Nonetheless, it is expected that any modifications to the existing bridge or paths will require final design level hydraulic analysis and approval of improvements by CVWD, which will ensure that any impacts to the channel's function will have no adverse impacts. The hydraulic analysis conducted at this

location (based on 30% plans) indicates that the proposed channel crossings will not have a substantial adverse effect on channel functions or capacity in this reach.

At the Miles Avenue bridge over the Whitewater Stormwater Channel, the two north and south bank channel alignments enter the channel and pass under the bridge, ramping back out of the channel on the east side, where only the south (right) bank alignment continues east along and atop the channel service road. The Miles Avenue bridge undercrossing will require that channel access ramps and channel bottom path designs avoid or minimize impacts to channel capacity at these locations. As noted above, upstream and downstream of Miles Avenue Bridge (Station 1420+87, Station 1411+98 and Station 1406+82) the construction of CV Link improvements would increase the 100-year WSE by 0.30, 0.81 and 0.83 feet, respectively. The hydraulic analysis included the effects of the channel encroachments and bridge undercrossings, based on CV Link 30% level grading plans for these channel encroachments. The hydraulic analyses of existing channel conditions indicate excess capacity and freeboard, and that the channel can accommodate the change in WSE associated with the proposed channel encroachments in the vicinity of the Miles Avenue bridge.

As elsewhere along the CV Link channel encroachments and crossings, both the 100-year storm and standard project flood (SPF) were modeled in the existing and proposed condition. As with other CV Link components encroaching into flood control agency rights-of-way and/or facilities, final design of the channel encroachments, as well as all related flatwork and vertical elements, will conform to CVWD guidance. There will be no conflicts between CV Link and flood control facilities or their management and maintenance.

Whitewater Stormwater Channel-East Indian Wells Reach

East of the Miles Avenue bridge and immediately west of the Washington Street bridge, there are three channel encroachments associated with the CV Link project: (1) the Deep Canyon Channel bridge, the (2) Point Happy bridge, and (3) the Washington Street channel crossing, which includes both bridge and channel bottom alignments.

The Deep Canyon Channel bridge is a continuation of the south (right) bank channel Link alignment and crosses the mouth of this channel where it discharges into the Whitewater Channel. It will be constructed with one pier anchored in the center of the channel with two additional supports embedded in the existing side slope protection. As presently designed, it appears that bridge supports could interfere with the channels hydraulic function, or occur within the freeboard portion of the channel cross section. Further design analysis and close coordination with CVWD will be required to ensure that bridge supports result in a minimal increase on water service elevations, adversely affect the channel's hydraulic function or compromise the provision of requisite freeboard at this location.

Final bridge design, as well as all related flatwork and vertical elements, will conform to CVWD requirements for at minimum 100-year design standards. Final CVWD review and approval of final design and hydraulic analysis at this location will ensure that potential conflicts between CV Link and Deep Canyon and Whitewater drainage facilities and management at this location do not occur.

The Point Happy bridge is designed to swing the alignment around a spur of rock that juts out into the Whitewater Channel and otherwise blocks the pathway. Details of the planned bridge indicate that pylons carrying suspension cables may be anchored at or near the 100-year storm WSE. As presently designed, the potential exists for the two CV Link Point Happy bridge supports to encroach into the requisite freeboard portion of the channel cross-section. The Point Happy bridge design is at 30% and future refinements will ensure that the bridge does not impact channel function at this location or requisite freeboard. As set forth in the mitigation measures below, prior to the completion of 60% plans for the Point Happy bridge, the project designers shall ensure that bridge supports do not impact requisite stormwater channel freeboard at this location and shall secure CVWD concurrence before final design

engineering is completed. Final Point Happy bridge design, as well as all related flatwork and vertical elements, will conform to CVWD requirements for at minimum 100-year design standards. Adherence to mitigation measures requiring CVWD review and approval of final design and hydraulic analysis at this and other locations will avoid or minimize conflicts between CV Link and Deep Canyon and Whitewater drainage facilities and their management and maintenance.

As presently conceived, it is unclear whether or to what extent these bridge supports would interfere with the channels hydraulic function, although the pylon anchors may occur within the freeboard portion of the channel cross section. As presently designed, bridge supports could interfere with the channels hydraulic function or occur within the freeboard portion of the channel cross section. Further design analysis and close coordination with CVWD will be required to ensure that Point Happy bridge supports do not increase water service elevations to unacceptable levels, adversely affect the channel's hydraulic function or compromise the provision of requisite freeboard at this location. It is anticipated that impacts will not be substantial in that the project will mitigate impacts by raising the elevation of the pathway where needed in order to meet the CVWD's design criteria. Therefore, the flood control functions of these facilities will not be impacted.

Final Point Happy bridge design, as well as all related flatwork and vertical elements, will conform to CVWD requirements for, at minimum, 100-year design standards. CVWD review and approval of final design and hydraulic analysis at this location will further ensure that potential conflicts between CV Link and Deep Canyon and Whitewater drainage facilities are avoided or minimized.

Both the bridged and at-grade channel bottom crossing planned just west of the Washington Street bridge also have the potential to affect the capacity and hydraulic function of the channel at this location. For the channel bottom alignment access ramps will be needed, while for the bridge five piers would carry the bridge across the channel to landings at the channel maintenance roads. The hydraulic analysis conducted at this location for the subject bridge and channel crossing indicates that that these facilities will alter the SPF WSE by 0 to 0.03 feet, and therefore will have no adverse effect on channel functions or capacity in this reach. For both the channel bottom and bridge crossing alignments, final bridge and path designs will require refined hydraulic analysis and approval of improvements by CVWD, which will ensure that any impacts to the channel's function are avoided or minimized. The hydraulic analysis conducted at this location indicates that the proposed bridge crossing will not adversely affect channel functions or capacity in this reach.

Coachella Valley Stormwater Channel-La Quinta Reach

East of the Washington Street bridge, CV Link continues east along the south (right) bank of the channel and will be accommodated by undercrossings at Adams Street (existing) and Dune Palms Road, as well as at Jefferson Street. The existing Adams Street and the designed Dune Palms Road undercrossing have been reviewed by CVWD, which has included detailed analyses of the hydraulic effects of these undercrossings on channel capacity. These analyses have determined that this design can be accomplished without having an adverse effect of channel capacity or channel maintenance. The Jefferson Street bridge undercrossing will require comparable channel access ramps and path design that avoids impacts to channel capacity at this location. Final design of the bridge undercrossing, as well as all related flatwork and vertical elements, will be reviewed and approved by CVWD. Therefore, potential conflicts between CV Link and flood control facilities and management at this location will be avoided or minimized.

Coachella Valley Stormwater Channel-Indio Reach

From Jefferson Street, the CV Link alignment proceeds northeast approximately 1,450 feet along the right channel bank to its confluence with the La Quinta Evacuation Channel at the La Quinta/Indio city limits. The alignment then bridges across the evacuation channel and proceeds northeast along and atop the right channel embankment. Bridging the evacuation channel will be accomplished using a single center channel pier. This single, mid-channel bridge support would have no adverse impact on the

channel's hydraulic function. Hydraulics conditions at the confluence with the CVSC are predominately defined by the hydraulics of the larger channel. The bridge structure will be situated within the final channel reach just upstream of the CVSC. As such, the water surface in CVSC is governing the water surface in the connecting channel at the bridge location. At that and comparable locations along CV Link, the water surface increase caused by the pier width will be minimal given that flow depth in the side channel is already artificially high in order to match the water surface in the CVSC. Nonetheless, further analysis and close coordination with CVWD will be required to ensure that impacts to the channel's hydraulic function at this location are acceptable.

Farther northeast, the Link alignment would pass under existing bridges at Miles Avenue, Fred Waring Drive, Indio Boulevard and Union Pacific Railroad, Monroe Street, Jackson Street, Avenue 44, and Golf Center Drive. In each case, ramps into and out of the channel at these locations will be needed and the path paralleling the channel bottom must be designed to minimize the path's effect on the 100-year WSE in this reach of the channel. The 100-year hydraulic analyses for these locations included the effects of the channel encroachments and bridge undercrossings, based on CV Link 30% level grading plans and indicate no adverse impacts to the WSE at these locations:

- Miles Avenue Bridge: -0.1 to 0.1 feet
- Fred Waring Bridge: 0.0 to 0.1 feet
- Indio Blvd: 0.0 to 0.1 feet
- Union Pacific RR Bridge: 0.0 to 0.2 feet
- Monroe Street Bridge: 0.0 feet
- Jackson Street Bridge: 0.0 feet
- Golf Center Parkway Bridge: 0.0 feet

As indicated above, the 100-year hydraulic analyses of existing channel conditions at these locations indicates excess capacity and freeboard, and that the channel can accommodate the change in WSE associated with the proposed channel encroachments in the vicinity of these bridges. Nonetheless, final design of the channel access ramps and crossing, as well as flatwork and vertical elements, will conform to CVWD guidance. Potential conflicts between CV Link and flood control facilities and management will be limited.

Coachella Valley Stormwater Coachella Reach

The Coachella reach of the CV Link alignment runs along the south (right) bank of the channel to its termination at Avenue 56 (Airport Boulevard). Along this route, the Link alignment provides for long-term undercrossings of bridges at Dillon Road, and Avenues 50 and 52. In each case, ramps into and out of the channel at these locations will be needed and the path paralleling the channel bottom has been designed to minimize the path's effects on channel flows. CV Link improvements will not alter the 100-year WSE in this reach of the channel. Final design of the channel access ramps and crossing, as well as flatwork and vertical elements, will conform to CVWD guidance. No conflicts between CV Link and flood control facilities and management are anticpated.

Impacts on Natural and Beneficial Floodplains Values

Natural and beneficial floodplain values are described in terms of aesthetics and nutrient filters. In the project area, CV Link alignments will be placed on top of the Whitewater/Coachella Valley Stormwater Channel and/or levees. Alignments that may encroach into an existing floodplain includes: crossings at Ramon Road, N Gene Autry Trail, near Golf Club Drive, Kirkwood Drive, Cathedral Canyon Drive, El Cielo Road, Date Palm Drive, Frank Sinatra Drive, Tennis Club Drive, El Dorado Drive, Indian Wells Lane, Manitou Drive, Washington Street, near Jefferson Street and Avenue 44. The Coachella Valley Water District completed a jurisdictional delineation for the Whitewater River and Coachella Valley Stormwater Channel, which included a wetlands designation and analyzed the potential impacts to the floodplains and associated wetlands. The resulting analysis concluded that along the Proposed Project

Alternative (and not including waters occurring in the City of Rancho Mirage), CV Link will have the following impacts:

Table 2-13
Proposed Project Alternative: Impacts to Jurisdictional Waters

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
4.78	1.85	0.06	0.03	26.72	13.44

These impacts will require permits from the USACE, CDFW, and RWQCB. As a result of CV Link, the nature and shape of the floodplain will not be changed, and the level of floodplain encroachment is minimal. A CWA Section 404 permit application has been filed with the US Army Corps of Engineers for CV Link-related dredge and fill activities that will take place within "Waters of the US". A 1602 Streambed Alteration Agreement application has also been filed with and is being processed by the CDFW. CWA 401 certification applications have been filed with the California Regional Water Quality Control Board, USEPA and Twenty-Nine Palms Band of Mission Indians. Mitigation is expected to include use of the Coachella Valley Conservation Commission (CVCC)/US Army Corps In-Lieu Fee Program[23], which will at least in part also address impacts to waters of the State. The in-lieu fee program will offset impacts to waters of the US by providing funds for the acquisition, restoration and long-term management of mitigation lands. Please see the discussion of avoidance, minimization and mitigation measures below.

Practicability of Alternatives to any Longitudinal Encroachments: The Proposed Project Alternative provides multiple alignments along some portions of the route, especially where opportunities exist to cross or run parallel alignment along both sides of the channel. Longitudinal encroachments along the route are limited to in-channel locations immediately adjacent to channel side slope protection (lining), including along the Whitewater Floodplain in north Palm Springs, and in the Palm Desert/Indian Well boundary area of the WWR Channel. Neither of these longitudinal encroachments will affect channel hydraulics or capacity.

Risks of the Action: There are no substantial risks associated with the implementation of the Proposed Project Alternative. On-going coordination and design review by the RCFCWCD and CVWD are ensuring that specifics of the pathway's design and engineering do not compromise channel structure or capacity, requisite freeboard or maintenance access.

Impacts on Natural and Beneficial Floodplain Values: As set forth above, the Proposed Project Alternative will impact the natural and beneficial values of the potentially affected drainages. As indicated above, the Proposed Project Alternative will result in permanent impacts to approximately 0.19 acre of wetlands (temporary impact to 0.40 acre of wetlands), and 2.28 acres of permanent impacts to "waters of the US". Considering the scope of this alternative, potential impacts to drainage are limited and will be mitigated through participation in the CVCC/Army Corps In-Lieu Fee Program, which was established in

[23] "Coachella Valley In-Lieu Fee Program Enabling Instrument, 2014. The CVILFP is a joint agreement of the Coachella Valley Conservation Commission, the US Army Corps of Engineers, the US Environmental Protection Agency, California Regional Water Quality Control Board and the California Department of Fish and Wildlife, which comprise the Interagency Review Team.

2015 to perform habitat restoration and enhancement projects. The in-lieu fee program and associated restoration/enhancement projects are the preferred method of mitigation for impacts to jurisdictional waters. As noted, CVAG is also processing other federal Clean Water Act Section 401 certifications, as well as a streambed alteration permit through the CDFW. These additional agency reviews and project mitigation (also see Sections 2-2.2: Water Quality and Stormwater Runoff and 2-3.2: Wetlands and Other Waters), including participation in the CVCC/USACE In-Lieu Fee Program, the CV MSHCP mitigation program, and the implementation of BMPs and other construction regulation will ensure that impacts to the natural and beneficial values of the floodplain are adequately mitigated.

Support of Incompatible Floodplain Development: Except where the Link is integrated with the roadway network, CV Link is essentially a stand-alone transportation project, and will not induce, encourage or facilitate any other development in the potentially affected drainages or otherwise support development that is incompatible with the floodplain's function.

Measures to Minimize Floodplain Impacts and to Preserve/Restore Any Beneficial Floodplain Values Affected by the Project: CV Link has been through several design iterations that has resulted in a project design that will result in limited and fully mitigable impacts to the potentially affected drainages (also see Section 2-3 of this EA). Impacts to the floodplain are limited by minimal CV Link permanent improvements within the floodplain, which will be further reduced by adherence to construction BMPs set forth in Sections 2-2.2 and 2-3.2 of this EA. Channel encroachments are limited and have been designed to have no adverse impact on 100-year flood water surface elevations.

Based on the above discussion and analysis, the Proposed Project Alternative will have no adverse effect on hydrology and floodplains.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Consistent with the analysis of the Proposed Project Alternative, under Alternative 1, the existing drainage pattern in the project area would be maintained during construction and operational activities. When existing drainage facilities are impeded by construction and/or operational activities, storm flows would be temporarily detoured as necessary, but would not result in altering the existing drainage pattern. In addition, there are several locations where the CV Link alignments may encroach into the water of the US within or adjacent to the WWR Channel. In Rancho Mirage these include the channel reach just north of Frank Sinatra Drive, an upgrade to the existing Butler-Abrams Trail channel crossing, and the bridging of West Magnesia Falls Channel.

In Indian Wells, possible encroachments include the WWR Channel reach just north of Fred Waring Drive. Encroachments are also possible at the Eldorado Drive bridge and farther east within the municipal golf course/resort hotel complex built along and within the WWR Channel. At the Miles Avenue bridge, there are possible encroachments on the north (left) bank and farther east on the south (right) bank where CV Link would bridge over the mouth of the Deep Canyon Channel where it enters the WWR Channel. Under this alternative, those areas of potential encroachment into jurisdictional waters will be eliminated; therefore, overall impact would be less than the Proposed Project Alternative and have no adverse impacts.

Table 2-14
Alternative 1 Impacts to Jurisdictional Waters

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
4.45	1.65	0.06	0.03	16.81	7.99

Note: These acreages do not include alignment impacts in Rancho Mirage or Indian Wells.

Overall, existing hydrological and flood conditions would not be modified and no substantial adverse effects would occur.

Practicability of Alternatives to any Longitudinal Encroachments: Alternative 1 provides multiple alignments along some portions of the route, especially where opportunities exist to cross or run parallel alignment along both sides of the channel. Longitudinal encroachments along the route are limited to in-channel locations immediately adjacent to channel side slope protection (lining), including along the Whitewater Floodplain in north Palm Springs, and in the Palm Desert/Indian Well boundary are of the WWR Channel. Neither of these Alternative 1 longitudinal encroachments will affect channel hydraulics or capacity, and all avoid "waters of the US".

Risks of the Action: There are no substantial risks associated with the implementation of Alternative 1. On-going coordination and design review by the RCFCWCD and CVWD are ensuring that specifics of the pathway's design and engineering do not compromise channel structure or capacity, requisite freeboard or maintenance access.

Impacts on Natural and Beneficial Floodplain Values: As set forth above, Alternative 1 will impact the natural and beneficial values of the potentially affected drainages. Alternative 1 will result in permanent impacts to approximately 0.185 acre of wetlands (temporary impact to 0.396 acre of wetlands), and 2.10 acres of permanent impacts to "waters of the US". Considering the scope of this alternative, potential impacts to drainage are limited and will be mitigated through participation in the CVCC/Army Corps In-Lieu Fee Program, which was established in 2015 to perform habitat restoration and enhancement projects. The US EPA, CDFW and CRWQCB are also parties to this program. The in-lieu fee program and associated restoration/enhancement projects are the preferred method of mitigation for impacts to jurisdictional waters. As noted, CVAG is also processing other federal Clean Water Act Section 401 certifications, as well as a streambed alteration permit through the CDFW. These additional agency reviews and project mitigation (also see Sections 2-2.2: Water Quality and Stormwater Runoff and 2-3.2: Wetlands and Other Waters), including participation in the CVCC/USACE In-Lieu Fee Program, the CV MSHCP mitigation program, and the implementation of BMPs and other construction regulation will ensure that impacts to the natural and beneficial values of the floodplain are adequately mitigated.

These additional agency reviews and project mitigation (also see Sections 2-2.1: Hydrology and Floodplain, 2-2.2: Water Quality and Stormwater Runoff and 2-3.2: Wetlands and Other Waters), including participation in the CVCC/USACE In-Lieu Fee Program, the CV MSHCP mitigation program, and the implementation of BMPs and other construction regulation will ensure that impacts to the natural and beneficial values of the floodplain are adequately mitigated.

Support of Incompatible Floodplain Development: Except where CV Link is integrated with the roadway network, CV Link is essentially a stand-alone transportation project, and Alternative 1 will not induce, encourage or facilitate any other development in the potentially affected drainages or otherwise support development that is incompatible with the floodplain's function.

Measures to Minimize Floodplain Impacts and to Preserve/Restore Any Beneficial Floodplain Values Affected by the Project: CV Link has been through several design iterations in consultation with responsible flood control agencies that has resulted in a project design that will limit impacts to potentially affected drainages, all of which are fully mitigable. Channel encroachments under Alternative 1 are limited and have been designed to have no or a minimal impact on 100-year floodwater surface elevations.

Based on the above discussion and analysis, Alternative 1 will have no adverse effect to hydrology and floodplains.

C. Alternative 2: Project with All Eight Cities

Alternative 2 would involve all jurisdictions and provide a continuous CV Link facility from Palm Springs to Coachella without interruption. Alternative 2 includes the City of Rancho Mirage, where there are three locations where the CV Link alignments do or may encroach into the water of the US. As noted above, at this location the proposed Link path alignment would increase the water surface elevation (WSE) at these stations by 0.52 to 0.88 feet. Although these increases in WSEs are the greatest of any CV Link impact area, they are not considered to be substantial with mitigation, which has been prescribed by the flood control agency (CVWD). It should also be noted that the City of Rancho Mirage and Caltrans are currently processing a new all-weather bridge at this location, which will also enhance existing channel capacity. Final design of the channel access ramp and bridge undercrossing, as well as all related flatwork and vertical elements, will conform to CVWD guidance. CV Link development in this reach of the channel will also be subject the Sections 404 and 401 of the CWA.

At the Miles Avenue bridge over the Whitewater Stormwater Channel in Indian Wells, the two north and south bank channel alignments enter the channel and pass under the bridge, ramping back out of the channel on the east side, where only the south (right) bank alignment continues east along and atop the channel service road. These Miles Avenue bridge undercrossings will require that channel access ramps and channel bottom path designs avoid or minimize impacts to channel capacity at these locations. As noted above, at three locations upstream and downstream of Miles Avenue Bridge the construction of CV Link improvements would increase the 100-year WSE by 0.30, 0.81 and 0.83 feet. However, as indicated above, this reach of the channel has excess freeboard that is more than adequate to accommodate the calculated increase in the WSE, while remaining compliant with applicable CVWD and FEMA requirements. Final design of the channel access ramp and bridge undercrossing, as well as all related flatwork and vertical elements, will conform to CVWD guidance. Therefore, potential conflicts between CV Link and flood control facilities and their management and maintenance at this location will be avoided.

Table 2-15
Alternative 2 Impacts to Jurisdictional Waters (All Alignments)

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
5.86	2.34	0.06	0.03	28.95	14.68

Practicability of Alternatives to any Longitudinal Encroachments: Alternative 2 provides for all of the project alignments along all portions of the route. Longitudinal encroachments along the route are limited

to in-channel locations immediately adjacent to channel side slope protection (lining), including along the Whitewater Floodplain in north Palm Springs, and in the Palm Desert/Indian Well boundary are of the WWR Channel. Neither of these Alternative 2 longitudinal encroachments will affect channel hydraulics or capacity, and all avoid "waters of the US".

Risks of the Action: There are no substantial risks associated with the implementation of Alternative 2. On-going coordination and design review by the RCFCWCD and CVWD are ensuring that specifics of the pathway's design and engineering do not compromise channel structure or capacity, requisite freeboard or maintenance access.

Impacts on Natural and Beneficial Floodplain Values: As set forth above, Alternative 2 will have limited impacts on the natural and beneficial values of the potentially affected drainages. Alternative 2 will include Rancho Mirage and areas within the channel that are already impacted by city trails. Overall, development of Alternative 2 would result in permanent impacts to approximately 0.19 acres of wetlands (temporary impact to 0.40 acre of wetlands), and 2.84 acres of permanent impacts to "waters of the US". These impacts are a negligible increase compared to the Proposed Project Alternative alternative. Alternative 2 impacts will be mitigated through participation in the CVCC/Army Corps In-Lieu Fee Program. Considering the scope of this alternative, potential impacts to drainage are limited and will be mitigated through participation in the CVCC/Army Corps In-Lieu Fee Program, which was established in 2015 to perform habitat restoration and enhancement projects. The US EPA, CDFW and CRWQCB are also parties to this program. The in-lieu fee program and associated restoration/enhancement projects are the preferred method of mitigation for impacts to jurisdictional waters. As noted, CVAG is also processing other federal Clean Water Act Section 401 certifications, as well as a streambed alteration permit through the CDFW. These additional agency reviews and project mitigation (also see Sections 2-2.2: Water Quality and Stormwater Runoff and 2-3.2: Wetlands and Other Waters), including participation in the CVCC/USACE In-Lieu Fee Program, the CV MSHCP mitigation program, and the implementation of BMPs and other construction regulation will ensure that impacts to the natural and beneficial values of the floodplain are adequately mitigated. Therefore, the Alternative 2 project will not have an unmitigated substantial impact on natural or beneficial floodplain values.

Support of Incompatible Floodplain Development: Except where CV Link is integrated with the roadway network, CV Link is essentially a stand-alone transportation project, and Alternative 2 will not induce, encourage or facilitate any other development in the potentially affected drainages or otherwise support development that is incompatible with the floodplain's function.

Measures to Minimize Floodplain Impacts and to Preserve/Restore Any Beneficial Floodplain Values Affected by the Project: CV Link has been through several design iterations of all of the CV Link alignments, which has resulted in a project design that will limit impacts to the potentially affected drainages, all of which are fully mitigable. Channel encroachments under Alternative 2 are the greatest of all three build alternatives. These include the aforementioned access ramps into and out of the channel, alignments within and crossing the channel bottom, and bridges with structural supports within the channel cross section.

CV Link designs associated with channel facilities have incorporated standards and guidance from the flood control agencies (RCFCWCD and CVWD), such as those previously approved and constructed for the Adams Street undercrossing, which will be a part of the CV Link alignment in La Quinta. Bridge designs have minimized the structural cross section within channels and hydraulic modeling indicates that impacts to the floodplain will no adverse impacts.

Temporary impacts to soft bottom portions of the channel will be mitigated through re-vegetation of these areas, which will serve to restore at least some of the beneficial floodplain values. Off-site mitigation will also occur via the existing CVCC/Army Corps In-Lieu Fee Program to compensate for areas of permanent

impact. A mitigation by design approach has allowed the project to avoid and minimize impacts to channel capacity and beneficial values. Therefore, the Alternative 2 project will minimize floodplain impacts and restore beneficial floodplain values within affected drainages or elsewhere in the Whitewater River basin.

Overall, existing hydrological and flood conditions would not be modified by the Alternative 2 project, and with mitigation no substantial adverse effects would occur.

D. Alternative 3: No Build/No Project Alternative

Because no construction or operational activities would occur under the No-Build Alternative, no changes to the existing hydrological or floodplain conditions would result. As such, there would be no adverse effects.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Impacts to regional and local hydrology, and to potentially affected floodplains will be reduced to acceptable levels with the application of avoidance and minimization measures set forth below. Longitudinal encroachments have been limited, there are no flooding risks associated with any of the build alternatives, neither are there substantial impacts to the natural or beneficial values of the floodplain. The project does not support incompatible floodplain development and minimizes floodplain impacts and preserves beneficial values.

Therefore, in most respects the project will have no adverse impact on area drainages, and on water quality and supplies. Nonetheless, in an abundance of caution, the following mitigation measures and avoidance and minimization measures will further reduce potential impacts. Avoidance and minimization measures include requirements for final design and engineering review and approval by flood control agencies, provisions for requisite channel embankment/levee elevation adjustments, and BMPs that provide necessary construction-related stabilization practices or structural controls.

<u>Mitigation Measures</u>

In order to adequately mitigate for impacts to waters of the US and otherwise address potentially significant impacts, the following mitigation measures shall be implemented.

HYD 1 In order to reduce impacts to waters of the State and US in the Whitewater Floodplain in the vicinity of the Four Seasons development, the in-channel alignment shall be merged with the top of channel alignment in the vicinity of the DWA well site (APN: 669-590-064) and shall remain atop the levee as far as the San Rafael discharge channel.

HYD 2 In order to mitigate for impacts to waters of the United States (and as appropriate waters of the State), including wetlands and other jurisdictional waters, CVAG shall participate in the CVCC/USACE In-Lieu Fee Program Mitigation shall be paid for each affected site before any ground disturbance shall be permitted in each impact area.

<u>Avoidance and Minimization Measures</u>

HYD-A. Prior to finalizing design and engineering plans for all CV Link facilities that are located atop, within or adjacent to CVWD and/or RCFCWCD facilities and drainages, said plans shall be reviewed and approved by the responsible flood control agency to ensure that these improvements do not interfere with or adversely affect channel capacity or the ability of the flood control agencies to management maintain these facilities.

HYD-B. Prior to the completion of 60% plans for the Cook Street and Point Happy bridges, the project designers shall ensure that bridge supports do not impact requisite stormwater channel freeboard at these locations and shall secure CVWD concurrence before final design engineering is completed.

HYD-C. A wide range of effective construction BMPs, further described below, are available and shall be implemented during construction activities to prevent pollutants of concern from entering nearby receiving waters, which will avoid or minimize short-term water quality impacts caused by the construction of the Proposed Project Alternative.

HYD-D. As applicable, CV Link construction shall follow the design and development standards and guidelines promulgated by CVWD and RCFCWCD, including but not limited to the Riverside County Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development (RCFCWCD, 2014) and the CVWD Development Design Manual (CVWD, 2013).

HYD-E. At sections of the WWR Channel and the CVSC that do not meet requisite 100-year capacity or freeboard standards, necessary embankment or levee adjustment shall be accomplished before or concurrent with CV Link improvements construction.

HYD-F. Construction activities for the project could result in erosion and siltation from earthmoving and other construction activities. Earthmoving activities at all sites would temporarily alter existing drainage patterns to some degree, including grading, excavation, and soil stockpiling. Exposed soil from excavated areas, stockpiles, and other areas where ground cover are be removed could be inadvertently transported offsite by wind or water. Construction activities would disturb more than one acre of soil; therefore, project construction activities would be subject to the NPDES Construction General Permit requirements. Implementation of a Stormwater Pollution Prevention Plan will ensure that erosion, siltation and runoff do not result in flooding on or off the project sites, and would reduce this impact to an acceptable level.

HYD-G. Erosion and sediment controls, including any necessary stabilization practices or structural controls, shall be implemented at and in all potentially affected drainages. General structural practices may include, but are not limited to, silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary or permanent sediment basins and flow diversion. Temporary erosion and sediment control measures shall be installed during or immediately after initial disturbance of the soil, maintained throughout construction (on a daily basis), and reinstalled as necessary until replaced by permanent erosion control structures or restoration of the construction right-of-way is complete. In addition, the following specific actions shall be taken to ensure that impacts are avoided and minimized.

a. CV Link construction shall be avoided within the limits of identified waterways as depicted on the Jurisdictional Delineation Report prepared for this project, except where authorized by federal, state or local permits.

b. Protect inlets and outlets of culverts from construction material intrusions to prevent channel incision, erosion, and sedimentation.

c. Erosion control measures appropriate for on-the-ground conditions including percent slope, length of slope, and soil type and erosive facto shall be implemented.

d. Temporary erosion controls shall be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling) until replaced with permanent erosion controls or restoration is complete.

e. Where jurisdictional waters are adjacent to the construction right-of-way, the contractor shall install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way.

f. Ensure that all employees and contractors are properly informed and trained on how to properly install and maintain erosion control BMPs. Contractors shall require all employees and contractors responsible for supervising the installation and maintenance of BMPs and those responsible for the actual installation and maintenance to receive training in proper installation and maintenance techniques.

g. Project scheduling will include efficient staging of CV Link construction, and reduce the amount of soil exposed and the duration of its exposure to wind, rain, and vehicle tracking.

h. The use of a schedule or flow chart will be incorporated to lay out the construction plan.

i. The sequencing and time frame for the initiation and completion of tasks, such as site clearing, grading, excavation, path construction, and reclamation, shall be planned in advance to ensure minimization of potential impacts.

j. Erosion and sediment control BMPs shall be incorporated into travelway construction plans.

HYD-H. To prevent construction-related petroleum products from contaminating soils and water bodies, the following BMPs shall be implemented, as appropriate:

a. Construction equipment and vehicles shall be properly maintained to prevent leakage of petroleum products.

b. Herbicides, fertilizers, vehicle maintenance fluids, petroleum products shall be stored, and/or changed in staging areas established at least 100 feet from delineated streams and other drainages. These products must be discarded at disposal sites in accordance with state and federal laws, rules, and regulations.

c. Drip pans and tarps or other containment systems shall be used when changing oil or other vehicle/equipment fluids.

d. Areas where discharge material, overburden, fuel, and equipment are stored shall be designed and established at least 300 vegetated (permeable) feet from the edge of delineated streams.

e. Any contaminated soils or materials will be disposed of off-site in proper receptacles at an approved disposal facility.

f. All erosion control measures shall be inspected and repaired after each rainfall event that results in overland runoff. The project contractor and CVAG shall be prepared year round to deploy and maintain erosion control BMPs, as necessary.

g. Existing culverts shall be carefully maintained in place in order to ensure that they function properly. Considerations include: maintenance of inlet and outlet elevations, grade, adequate compacted material cover, and inlet/outlet protection.

HYD-I. Restoration involves restoring the right-of-way to pre-construction conditions by final grading, installation of permanent erosion control measures such as slope breaks at appropriate distances to prevent rill (channel) formation between slope breaks, and re-establishing vegetation.

a. Cleanup operations shall commence immediately following backfill operations on slopes approaching delineated streams and other drainages.

b. Final grading to restore pre-construction contours shall be completed and soil left in pre-existing condition within 7 days after backfilling the trench.

c. Restoration crew shall follow construction crews as they work systematically from one end to the other end of the pipeline alignment. If crews cannot work systematically from one end to the other end, then erosion control BMPs shall be maintained on all slopes approaching a delineated stream and adjacent to these sensitive areas. If seasonal or other weather related conditions prevent compliance with these time frames, maintain erosion control BMPs shall be maintained until conditions allow completion of cleanup.

HYD-J. Human access into the channels during periods of storms and potential flooding shall be restricted to ensure that there is minimal risk of injury or death.

CUMULATIVE IMPACTS

The geographic scope for the analysis of cumulative surface water hydrology and water quality/resources impacts consists of the individual CV Link sites and their adjacent surface drainages. The scope of analysis also includes and takes into consideration the effects of other development on the subject flood control facilities, including development along all areas tributary to these drainages. The various stormwater management plans implemented by CVWD and the RCFCWCD include requirements of all new development to detain or retain stormwater it generates, and to implement control measures that protect both surface and groundwater quality.

Implementation of any of the three CV Link build alternatives will result in two locations along the route where the project may raise WSEs to a degree that requires participation in already planned embankment and levee improvements. Future projects that will also impact the CV Link drainages include new and expanded bridges at Vista Chino, Ramon Road, Cathedral Canyon Drive, Date Palm Drive, Frank Sinatra Drive, Cook Street, Fred Waring Drive, Dune Palms Road, Avenue 44, Dillon Road, Avenue 50 and Avenue 56. In-channel structural supports and erosion control lining will affect channel hydraulics and beneficial uses to varying degrees. Several of these projects have already been processed and approved with mitigation set by the local jurisdictions, as well as the USACE, USEPA, CRWQCB and CDFW.

It should also be noted that several reaches of the Whitewater and Coachella Valley Stormwater Channels do not currently meet FEMA 100-year capacity standards, including prescribed freeboard. CVWD has identified these locations and has conducted hydraulic analysis that identifies the locations and extent of future channel improvements, which may also have an effect on the beneficial values of these drainages. It must also be noted that on-going vegetation removal and other channel maintenance will also periodically affect beneficial values. Other future impacts to the subject drainages are not known or anticipated.

Under the most intense development scenario (Alternative 2) CV Link will result in 2.84 acres of permanent impacts to waters of the US and 0.19 acres of permanent impacts to wetlands. By comparison,

the recently approved 404 permit for the Cathedral Canyon Drive bridge over the Whitewater Channel resulted in more than 2.0 acres of permanent impacts to waters of the US. Within the context of other possible impacts to the subject channels and the limited CV Link impacts, the project will not result in substantial adverse cumulative impacts to hydrology and floodplains.

Completion of the CV Link project and its on-going operation and maintenance will ensure that project impacts to local drainages are minimal and, in fact, may facilitate or accelerate the correction of existing levee and bank elevation deficiencies. In this context and in light of the very limited impacts associated with CV Link, the project will have a less than cumulatively substantial impact on area drainages and water quality.

2-2.2 WATER QUALITY AND STORM WATER RUNOFF

REGULATORY SETTING

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[24] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

[24] A point source is any discrete conveyance such as a pipe or a man-made ditch.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[25] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial

[25] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- National Pollutant Discharge Elimination System (NPDES) Program

  Municipal Separate Storm Sewer Systems (MS4)

  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water." The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department's MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

  The Department's MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0077-DWQ (effective July 1, 2014) and Order No. 2015-0036-EXEC (effective April 7, 2015) has three basic requirements:

  1. The Department must comply with the requirements of the Construction General Permit (see below);

  2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

  3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

  To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Other MS4 Permits that apply or may apply to the CV Link project include:

- Order No. R7-2013-0011, NPDES No. CAS617002. Discharges from the Municipal Separate Storm Sewer System (MS4) within the Whitewater watershed *(for properties within county and incorporated cities within the Whitewater Watershed including the Agua Caliente Band of Cahuilla Indians)*
- Federal Agency specific Water Quality Management Plans *(for properties within Federal Lands, aka BLM)*

- EPA NPDES permit & construction permit *(for tribal lands except for Agua Caliente Band of Cahuilla Indians)*

Construction General Permit

Construction General Permit, Order No. 2009-2009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

California Fish and Game Code 1602

California Fish and Game Code 1602 require that the California Department of Fish and Wildlife (CDFW) be notified prior to commencing any activity that may substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. A 1602 Streambed Alteration Agreement application has been filed with and is being processed by the CDFW.

California Regional Water Quality Control Board (CRWQCB) Region 7
The State Water Resources Control Board (SWRCB) carries out its water quality protection authority through the adoption of Basin Plans. These plans establish water quality standards for particular bodies of water. California water quality standards are composed of three parts: the designation of beneficial uses of water, water quality objectives to protect those uses, and implementation programs designed to achieve and maintain compliance with water quality objectives. The CRWQCB is responsible for the Basin Plan for project due to its location. The RWQCB implements management plans to modify and adopt standards under provisions set forth in Section 303(c) of the CWQ and the California Water Code (Division 7, Section 13240).

The SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California in 2000. This policy provides implementation measures for criteria contained in the California Toxics Rule, promulgated in May 2000 by USEPA. When combined with the beneficial use designations in the Basin Plan, these documents establish statewide water quality standards for toxic constituents in surface water.

CVWD Ordinance No. 1234 (as amended)
As noted above, CVWD is the designated flood control agency within its service area. CVWD Ordinance No. 1234 provides conditions of approval for development in flood hazard areas within the CVWD stormwater service area. Ordinance No. 1234 provides design standards to minimize flood damage, and indicates that any flood protection facilities not designed and constructed to these standards will not normally be owned, operated or maintained by CVWD. CVWD has adopted the Development Design Manual (2013) that sets forth CVWD standards for stormwater facilities.

CVWD Ordinance No. 1302 (as amended)
CVWD mandates efficiency in newly installed landscape irrigation systems via Ordinance No. 1302 (Valley-wide Water Efficient Landscaping Model Ordinance). This ordinance establishes effective water-efficient landscape requirements for newly installed and rehabilitated landscapes. The ordinance also implements the requirements of the State of California Water Conservation in Landscaping Act. Most cities in the Coachella Valley have adopted the CVWD ordinance or a version thereof; some have adopted more stringent or completely different ordinances. Riverside County has adopted its own ordinance that is consistent with the State model ordinance, but less stringent than CVWD's. CVWD's ordinance is significantly more stringent than the State model ordinance.

AFFECTED ENVIRONMENT

The analysis of water quality and storm water runoff evaluates major drainages and their facilities that will be used by CV Link, as well as lands located immediately adjacent to those features. The affected environment for water quality and storm water runoff is defined by the baseline conditions for the hydrologic features within the impact area of influence. Major drainages in the project area include the Whitewater Floodplain, Tahquitz Creek Channel, and the Whitewater and Coachella Valley Stormwater Channels. Smaller drainages crossed or in proximity to the Link alignments include the East and West Cathedral Canyon Channels, Magnesia Falls Channel, Deep Canyon Channel and the La Quinta Evacuation Channel. These drainages receive water during storm events at the nearby mountains. These drainages also receive unauthorized inflows from storm water and irrigation return flow from lands adjacent to these drainages.

There are limited water quality data available on the small drainages in the project area. A primary source of the water quality data for this analysis is CVWD and their published annual reports. In addition, a wide range of other resources, including those of the Desert Water Agency and the California Department of Water Resources, were also reviewed as a part of this analysis. A "Water Quality Assessment Report" (WQAR) (September 2016) was also prepared for CV Link to ensure that the project is compliant with the National Pollution Discharge Elimination System (NDPES) permit for this area.

Regional and local drainage master plans and analyses were evaluated to establish existing regional and local hydrological conditions, and to assess the potential impacts of the CV Link project on local and regional drainages. Studies prepared for the CV Link project include a hydrology and hydraulic report[26], a Hydraulic Impact Analysis Summary[27], Summary Floodplain Encroachment Report[28], CV Link Stormwater Design Report[29] and other analyses. A variety of channel and facility analyses conducted by the CVWD and RCFCWCD have also been used to analyze the potential impacts of the CV Link project on flood control facilities and water quality

CV Link's planning area is located within the western portion of the Colorado River Watershed, which locally drains into the Salton Trough, a terminal lake that straddles the Riverside/Imperial County line. In the subsurface, the Whitewater River Groundwater Basin generally extends from the Whitewater River in the northwest to the Salton Sea in the southeast and the respective aquifer is naturally subdivided by geological fault into subbasins, which are further divided into subareas.

The Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel (WWRSC/CVSC) is the largest drainage feature within the project area with a watershed that extends from the San Gorgonio Pass on the northwest to the Salton Sea terminal lake on the southeast. The Whitewater River is a natural watercourse that originates from the southerly and easterly slopes of the San Bernardino Mountains, at the western portion of the Coachella Valley. Several of its tributaries originate from the northern and eastern slopes of the San Jacinto and Santa Rosa Mountains. The Whitewater River Stormwater Channel becomes the Coachella Valley Stormwater Channel at Point Happy in La Quinta, which extends 22 miles southeast of Point Happy through the cities of Indio and Coachella, and the agricultural communities of Thermal and Mecca, and south to the north end of the Salton Sea. The drainage area of the WWRSC/CVSC is approximately 1,500 square miles at the Salton Sea.

Water for CV Link landscaping and potable use will come from the local domestic water purveyors, including DWA, CVWD, Indio Water Authority and Coachella Water Department. The providers supply their customers through from wells extracting groundwater. All providers comply with state (California Department of Public Health) and federal (U.S. Environmental Protection Agency) drinking water quality standards. Each year, domestic water providers monitor for more than 100 other regulated and unregulated chemicals that are not detected during this monitoring. The domestic water supply meets state and federal standards; however, drinking water supplied to some service areas does contain low levels of naturally occurring hexavalent chromium (Cr6), arsenic, radon, and nitrate.

The Coachella Valley Stormwater Channel is listed as being impaired[30] for Toxaphene, DDT (Dichlorodiphenyltrichloroethane), Nitrogen, Dieldrin, ammonia (Total Ammonia), PCBs (Polychlorinated biphenyls), Toxicity and Indicator Bacteria under Section 303(d) of the Clean Water Act (CWA). Total Maximum Daily Loads (TMDLs) for those pollutants listed above occur in the Coachella Valley Stormwater Channel. Chino Creek and the Whitewater Floodplain, Tahquitz Creek Channel, Palm Canyon Channel, Whitewater Stormwater Channel, and East and West Cathedral Canyon Channels are not included in the 303(d) list.

26 "CV Link Hydrology and Hydraulic Report", prepared by Stantec Consulting Services, Inc. July 2016.
27 "CV Link – Hydraulic Impact Analysis Summary", prepared by Stantec Consulting Services, Inc. March 2016.
28 "Summary Floodplain Encroachment Report – CV Link Project", prepared by Stantec Consulting Services, Inc. July 2016.
29 "CV Link Stormwater Design Report, prepared by Stantec Consulting Services, Inc. August 2016.
30 Water Management Plan, prepared by the Coachella Valley Water District. 2015.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Water quality within the major drainages of Whitewater Floodplain, Tahquitz Creek Channel, Whitewater and Coachella Valley Stormwater Channels, and smaller drainages of East and West Cathedral Canyon Channels, Magnesia Falls Channel (Alternative 2), Deep Canyon Channel, and the La Quinta Evacuation Channel is dependent on upstream flows during storms/floods, and stormwater runoff from urban and agricultural land uses.

A variety of potential water contaminants could be emitted during construction and operational phases of CV Link. These include sediments, trash and debris (construction material and equipment, and humans and dog), oil and grease, fuels, lubricants, concrete waste, paints, sanitary waste, nutrients and other chemicals from landscaped areas, and bacteria from pavement runoff, and miscellaneous chemicals. However, a set of stringent mitigation measures is designed to minimize the potential impacts and keep them below levels of significance (see Section 4.10 of CV Link DEIR). In addition, the proposed guidelines for construction and operational activities outlined in the CV Link Master Plan and Design Criteria would further ensure that impacts are minimized.

The Proposed Project Alternative would require construction activities to take place from mid-2017 to mid-2020, during which precipitation events may occur. The floods usually occur in the Coachella Valley during large winter storms that drop most of their precipitation in the mountains west and north of the Valley (larger drainages), or during intense summer thunderstorms (smaller drainages). The last large flood on the Whitewater River was in 1938, and most floods that occur at a frequency of every 2 years or more often are relatively small and transport only small amounts of fine-grained sediments in comparison with the larger events. Other than precipitations events, the Coachella Valley including the project area remains dry. Consequently, water quality of drainages would not be jeopardized during storm flows and/or flooding.
Drainages would be affected during construction of the project; however, none of them would need to be rerouted as part of this Project. The Project would be constructed during the months when drainages runs dry, however, if any unpredictable precipitations events would occur then a set of mitigation measures (including the Best Management Practices or BMPs), are designed to minimize the discharge of pollutants into the surrounding drainages and to protect surface water quality from erosion during construction.

Construction Phase
A variety of potential water contaminants could be emitted during project construction. These include sediments, trash and debris, oil and grease, fuels, lubricants, concrete waste, paints, sanitary waste and miscellaneous chemicals. Construction activities such as grading and excavation could expose soil and increase the chances of soil erosion and sediments traveling downstream. Sediments in receiving waters can increase turbidity, overwhelm bottom dwelling organisms and suppress aquatic vegetation growth. Concrete and/or asphalt applications could be a source of fine sediment, metals and chemicals that could change the pH levels in water bodies. Oil, grease, fuels and lubricants from construction equipment that may be leaking could affect receiving waters during construction activities. Temporary or portable sanitary facilities provided for construction workers could be a source of sanitary waste that could affect the human use environment.

All potential water contaminations during construction will be temporary and short-term. To further mitigate the potential impacts, construction BMPs set forth in Section 2-2.1: Hydrology and Floodplain, above, are designed to effectively reduce any pollutants of concern that may enter nearby receiving

waters and affect the water quality. Contractors will be required to include runoff and wind erosion control plans, and other BMPs in construction plans and bid packages.

Operational Phase

A variety of potential water pollutants that could be generated during operations include trash and debris from humans, dog waste, nutrients and other chemicals from landscaped areas, and bacteria from pavement runoff. These pollutants could be of concern for receiving waters of the Proposed Project Alternative. However, the provision of trash containers, dog waste receptacles, and regular maintenance activities are intended to minimize or eliminate the impacts from these pollutants.

There are no biological resources of special significance located within the vicinity of the Proposed Project Alternative, with the exception of the state-recognized burrowing owl (*Athene cunicularia*); however, biological resources are dependent on aquatic resources downstream of the project site. Mitigation measures will be implemented during operations of the project to control the potential water pollutants before they enter the nearby receiving waters and affect the water quality.

In addition to Best Management Practices, a CWA Section 404 permit application has been filed with the US Army Corps of Engineers for CV Link-related dredge and fill activities that will take place within "Waters of the US". A California Fish and Game Code Section 1602 Streambed Alteration Agreement application has also been filed with and is being processed by the CDFW.

RWQCBs have shown specific concerns with discharges into the "Waters of the State" associated with development. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that would be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project. A CWA 401 certification application has been prepared and is being processed by the Regional Water Quality Control Board. A copy of this application packet has also been submitted to the US EPA for review and approval on behalf of Native American Tribes.

As noted in the WQAR prepared for this project, CV Link runoff will discharge to adjoining receiving waters, including the Whitewater Floodplain, Tahquitz Creek Channel, Tahquitz Creek, Palm Canyon Channel, East and West Cathedral Canyon Channels, and the Whitewater and Coachella Valley Stormwater Channels, all of which ultimately discharge to the Salton Sea. The total disturbed surface area of the Proposed Project Alternative is approximately 279± acres (209± acres of permanent disturbance), with 69% imperviousness and 31% perviousness. It should also be noted that there is only approximately 3 to 4 inches of annual precipitation expected in the region, which would mean that there is little to no base flow in the study area.

Given the very limited potential for CV Link-generated stormwater runoff and the Link's proximity to drainage channels and public streets, the project will make a negligible contribution to runoff and will not substantially contribute to an exceedance of existing or planned channel capacity in the project area, nor will the project make a substantial contribution to existing sources of polluted runoff. Also, please see BMPs set forth in the minimization and mitigation discussion below.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Under the Alternative 1 scenario, CV Link segments would not be built in Rancho Mirage or Indian Wells, although Link termini may occur within the corporate limits of each. The introduction of Indian Wells termini to the plan, as have been provided in the Proposed Project Alternative scenario for Rancho Mirage, do not create any new or additional sources of project runoff. Rather, the exclusion of these two cities under Alternative 1 will further reduce the surface area of project improvements generating runoff. The total disturbed surface area of the Alternative 1 Project is approximately 234± acres (175± acres of

permanent disturbance), with 69% imperviousness and 31% perviousness. Therefore, the impacts to water quality and stormwater runoff would be less than those impacts associated with the Proposed Project Alternative. As for all the build alternatives, the avoidance and minimization measures set forth below will further ensure that project impacts to water quality and runoff will be avoided or minimized.

C. Alternative 2: Project with All Eight Cities

Under Alternative 2, all of the CV Link segments, including those in Rancho Mirage and Indian Wells, would be constructed. The inclusion of Rancho Mirage is the only difference between Alternative 2 and the Proposed Project Alternative, which somewhat increases the surface area of project improvements generating runoff. The total disturbed surface area of the Alternative 2 Project is approximately 312± acres (234± acres of permanent disturbance), with 69% imperviousness and 31% perviousness. Therefore, the impacts to water quality and stormwater runoff would be greatest under this alternative; however, impacts to water quality and storm water runoff would still be very limited. As for all the build alternatives, the avoidance and minimization measures set forth below will further ensure that project impacts to water quality and runoff are avoided or minimized.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build/No Project Alternative, no changes to the existing condition would occur. As such, there would be no increase in run-off flow velocities, volumes, or peak flow rates. Therefore, no adverse impacts to water quality and storm water runoff would result from this alternative.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The CV Link design process has taken into consideration the relationship to and potential impacts on the various drainages that CV Link will utilize. Construction-related ground disturbance is minimized and essentially inert paving materials will be used for the path. Other than infrequent flood control agency vehicles, only LSEVs will be permitted on those portions of CV Link located along or within the project-related stormwater channels. Also, path profiles within drainages are designed to have a limited impact on the drainage patterns and capacities of these drainages. The landscape plans for CV Link rely on native and other drought-tolerant planting materials that limit water use to the lowest degree practicable. The application of programmatic BMPs typical of this type of construction project will mitigate impacts on area drainages, and on water quality and supplies. The following avoidance and minimization measures are set forth to ensure that project impacts are kept below levels of significance.

<u>Avoidance and Minimization Measures</u>

WQ-A. Prior to finalizing design and engineering plans for all CV Link facilities that are located atop, within or adjacent to CVWD and/or RCFCWCD facilities and drainages, said plans shall be reviewed and approved by the responsible flood control agency to ensure that these improvements do not interfere with or adverse effect channel capacity or the ability of the flood control agencies to management maintain these facilities.

WQ-B. A wide range of construction BMPs are available and shall be implemented during construction activities to reduce any pollutants of concern that may enter nearby receiving waters, which will reduce short term water quality impacts caused by the construction of the Proposed Project Alternative.

WQ-C. As applicable, the CV Link project construction shall follow the design and development standards and guidelines promulgated by CVWD and RCFCWCD, including but not limited to the Riverside

County Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development (RCFCWCD, 2014) and the CVWD Development Design Manual (CVWD, 2013).

WQ-D. At sections of the WWRSC/CVSC that do not meet requisite 100-year freeboard standards, necessary embankment or levee adjustment shall be accomplished before or concurrent with CV Link improvements construction.

WQ-E. Construction activities for the project could result in erosion and siltation from earthmoving and other construction activities. Earthmoving activities at all sites would temporarily alter existing drainage patterns to some degree, including grading, excavation, and soil stockpiling. Exposed soil from excavated areas, stockpiles, and other areas where ground cover shall be removed could be inadvertently transported offsite by wind or water. Construction activities would disturb more than one acre of soil; therefore, project construction activities would be subject to the NPDES Construction General Permit requirements. Implementation of a Stormwater Pollution Prevention Plan will ensure that erosion, siltation and runoff do not result in flooding on or off the project sites, and would reduce this impact to a less than significant level.

WQ-F. Erosion and sediment controls, including any necessary stabilization practices or structural controls, shall be implemented at and in all potentially affected drainages. General structural practices may include, but are not limited to, silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary or permanent sediment basins and flow diversion. Temporary erosion and sediment control measures shall be installed during or immediately after initial disturbance of the soil, maintained throughout construction (on a daily basis), and reinstalled as necessary until replaced by permanent erosion control structures or restoration of the construction right-of-way is complete. In addition, the following specific actions shall be taken to ensure that impacts are less than significant.

a. CV Link construction shall be avoided within the limits of identified waterways as depicted on the Jurisdictional Delineation Report prepared for this DEIR, except where authorized by federal, state or local permits.

b. Protect inlets and outlets of culverts from construction material intrusions to prevent channel incision, erosion, and sedimentation.

c. Erosion control measures appropriate for on-the-ground conditions including percent slope, length of slope, and soil type and erosive facto shall be implemented.

d. Temporary erosion controls shall be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling) until replaced with permanent erosion controls or restoration is complete.

e. Where jurisdictional waters are adjacent to the construction right-of-way, the contractor shall install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way.

f. Ensure that all employees and contractors are properly informed and trained on how to properly install and maintain erosion control BMPs. Contractors shall require all employees and contractors responsible for supervising the installation and maintenance of BMPs and those responsible for the actual installation and maintenance to receive training in proper installation and maintenance techniques.

g. Project scheduling will include efficient staging of CV Link construction, and reduce the amount of soil exposed and the duration of its exposure to wind, rain, and vehicle tracking.

h. The use of a schedule or flow chart will be incorporated to lay out the construction plan.

i. The sequencing and time frame for the initiation and completion of tasks, such as site clearing, grading, excavation, path construction, and reclamation, shall be planned in advance to ensure minimization of potential impacts.

j. Erosion and sediment control BMPs shall be incorporated into travelway construction plans.

WQ-G. To prevent petroleum products from contaminating soils and water bodies, the following BMPs shall be implemented, as appropriate (also see Section 2-2.1: Hydrology and Floodplain for additional avoidance and minimization measures:

a. Construction equipment and vehicles shall be properly maintained to prevent leakage of petroleum products.

b. Herbicides, fertilizers, vehicle maintenance fluids, petroleum products shall be stored, and/or changed in staging areas established at least 100 feet from delineated streams and other drainages. These products must be discarded at disposal sites in accordance with state and federal laws, rules, and regulations.

c. Drip pans and tarps or other containment systems shall be used when changing oil or other vehicle/equipment fluids.

d. Areas where discharge material, overburden, fuel, and equipment are stored shall be designed and established at least 300 vegetated (permeable) feet from the edge of delineated streams.

e. Any contaminated soils or materials will be disposed of off-site in proper receptacles at an approved disposal facility.

f. All erosion control measures shall be inspected and repaired after each rainfall event that results in overland runoff. The project contractor and CVAG shall be prepared year round to deploy and maintain erosion control BMPs, as necessary.

g. Existing culverts shall be carefully maintained in place in order to ensure that they function properly. Considerations include: maintenance of inlet and outlet elevations, grade, adequate compacted material cover, and inlet/outlet protection.

WQ-H. Restoration involves restoring the right-of-way to pre-construction conditions by final grading, installation of permanent erosion control measures such as slope breaks at appropriate distances to prevent rill (channel) formation between slope breaks, and re-establishing vegetation.

a. Cleanup operations shall commence immediately following backfill operations on slopes approaching delineated streams and other drainages.

b. Final grading to restore pre-construction contours shall be completed and soil left in pre-existing condition within 7 days after backfilling the trench.

c. Restoration crew shall follow construction crews as they work systematically from one end to the other end of the pipeline alignment. If crews cannot work systematically from one end to the other end, then erosion control BMPs shall be maintained on all slopes approaching a delineated stream and adjacent to these sensitive areas. If seasonal or other weather related conditions prevent compliance with these time frames, maintain erosion control BMPs shall be maintained until conditions allow completion of cleanup.

WQ-I. Human access into the channels during periods of storms and potential flooding shall be restricted through the use of gates and barriers, with appropriate danger warning signs, to avoid and minimize the risk of injury or death.

CUMULATIVE IMPACTS

Implementation of any of the three CV Link build alternatives will result in construction activities and operations, which have the potential to impact surface and groundwater quality in the project area, especially at locations within and adjacent to local drainage facilities. Future projects that will also impact the CV Link drainages include new and expanded bridges where construction activities could affect water quality to varying degrees. Several of these projects have already been processed and approved with mitigation set by the local jurisdictions, as well as the USACE, USEPA, CRWQCB and CDFW.

It should also be noted that several reaches of the Whitewater and Coachella Valley Stormwater Channels do not currently meet FEMA 100-year capacity standards, including prescribed freeboard. CVWD has identified these locations and has conducted hydraulic analysis that identifies the locations and extent of future channel improvements, which also have the potential to affect surface water quality in these drainages. Other future impacts to the subject drainages are not known or anticipated.
Project contractors will be required to provide a comprehensive menu of Best Management Practices that are based upon the avoidance/minimization/mitigation measures set forth above. Contractors will also be subject to any additional requirements set forth by Caltrans, the USACE, USEPA, Twenty-Nine Palms Tribe, and the CRWQCB to protect surface and groundwater resources from contamination. Post-construction, CV Link will provide restrooms, trash and dog waste receptacles, and signage encouraging Link users to keep it clean. Since the Proposed Project Alternative would not substantially increase the amount of impervious surface, it would not create a substantial change in water quality or the amount or location of additional stormwater runoff. As a result, project construction and operation will not result in considerable or substantive adverse cumulative impacts to water quality and stormwater runoff.

2-2.3 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

REGULATORY SETTING

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.”

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 Department’s Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Department’s Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

Federal

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features."

Coachella Canal Area Resources Management Plan
A very short of the CV Link project is located within the boundaries of the Recreation Areas, specifically, that portion which crosses the canal in the City of Indio. These and other US Bureau of Reclamation lands are subject to the policies set forth in Reclamation's "Coachella Canal Area Resource Management Plan."[31] The National Environmental Policy Act (NEPA) requires analysis of Project impacts on federally-owned land in the Project area and impacts to the Coachella Canal Area Resource Management Plan.

State

Seismic Hazards Mapping Act
Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690 to 2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically-induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act; the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards. Cities and counties are required to regulate development within mapped Seismic Hazard Zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been conducted and measures to reduce potential damage have been incorporated into the development plans. According to the preliminary geotechnical reports prepared for the project, the project sites are not within areas designated by Riverside County as Seismic Hazard Zones.

Alquist-Priolo Earthquake Fault Zoning Act
The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972. Its purpose is to prohibit structures intended for human occupancy across active surface traces of fault lines until a site is determined to be safe based on site-specific geotechnical investigations. [32] The Alquist-Priolo Act also requires local jurisdictions to publicly disclose areas that are subject to seismic hazards.

California Building Codes
The California Building Code (CBC), which is codified in CCR Title 24, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, egress facilities, and general building stability. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all building and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which by law is responsible for coordinating all building standards.

The 2013 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments that are based on

31 "Coachella Canal Area Resource Management Plan/ Environmental Assessment," prepared by U.S. Department of the Interior in 2006; http://www.usbr.gov/lc/yuma/environmental_docs/Coachella/coachella-ea-1.pdf

32 California Department of California; http://www.conservation.ca.gov/cgs/rghm/ap; Accessed 08.01.2016.

the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (e.g., flood, snow, wind) for inclusion in building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at a given site, and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

California Code of Regulations, Title 14, Division 2, Chapter 8, Article 10
These regulations govern the exercise of city, county and state agency responsibilities to identify and map seismic hazard zones and to mitigate seismic hazards to protect public health and safety in accordance with the provisions of Public Resources Code, Section 2690 et seq. (Seismic Hazards Mapping Act). [33]

AFFECTED ENVIRONMENT

Regional Geologic Setting
The Coachella Valley is located across the boundary of two geologic-geomorphic provinces: the Colorado Desert Province and Peninsula Ranges Province. The Colorado Desert Province is a low-lying desert basin and a depressed block between active branches of the alluvium-covered San Andreas Fault with the southern extension of the Mojave Desert on the east. The Peninsular Ranges Province is a group of mountain ranges separated by northwest trending valleys, sub-parallel to faults branching from the San Andreas Fault. These provinces include low-lying basins, northwest-trending valleys, and mountain ranges.

The Coachella Valley is surrounded by mountain ranges, including the San Bernardino, San Jacinto, Santa Rosa and Little San Bernardino Mountains. The foothills of the San Bernardino Mountains extend along the northerly, easterly, and southeasterly portion of the valley. The foothills of the Santa Rosa and San Jacinto Mountains extend along the westerly and southerly portions of the valley.

Regional Fault Systems
San Andreas Fault System runs through the northeastern portion of the valley from along the east shore of the Salton Sea to the San Bernardino Mountains at Mission Creek. San Jacinto Fault System runs along western portion of the San Jacinto Mountains but is very active and capable of generating strong groundshaking in the Coachella Valley. Both the fault systems have a complex structural characteristics and slip rates. The slip rate along southern portion of the San Andrea Fault is approximately 23 to 35 mm/yr.[34] The slip rate along San Jacinto Fault is approximately 7 to 11 mm/yr.[35] During the offset along San Andrea Fault system and associated smaller faults, sediments have been eroded from the

33 Guidelines For Evaluating And Mitigating Seismic Hazards in California", Special Publication 117, 2008

34 Stein, R. S., King, G. C., & Lin, J. (1992). Change in failure stress on the southern San Andreas fault system caused by the 1992 magnitude= 7.4 Landers earthquake. Science, 258(5086), 1328-1332.

35 Bennett, R. A., Rodi, W., & Reilinger, R. E. (1996). Global Positioning System constraints on fault slip rates in southern California and northern Baja, Mexico. Journal of Geophysical Research: Solid Earth, 101(B10), 21943-21960.

topographic highs (mountains) to fill the lows (valleys) and developed geologic units in such areas as the Indio and Mecca hills, which are now exposed.[36]

Erosion of these elevated areas, along with deposition from the Gulf of California and Colorado River, have provided as much as 12,000 feet of sediments in the basin. Soils of different ages and compositions have developed on these sedimentary units, and on the younger alluvial units filling the valley floor. Coachella Valley is underlain by a thick sequence of sedimentary deposits.[37]

Sediments, three to five million years old, within the valley are typically associated with shallow seas (Marine: Imperial Formation) and lakes (Lacustrine: Palm Spring Formation). Imperial and Palm Spring Formations are typically composed of salt beds, fine-grained muds (silts and clays) and relatively minor sand and channel gravels. The fine-grained basin deposits typically pinch out and interfinger with coarser grained sediments along the trough margin. Along CV Link route, these units typically consist of sands, gravel and conglomerates, which include relatively young fluvial fan deposits. Geologic units along the western CV Link alignment (from the western termini to about Jefferson Street) are primarily young alluvial (stream-laid) sandy deposits. East of Jefferson Street to the east terminus of CV Link at Avenue 56, the geologic units are interlayered sandy alluvial and dune deposits, and fine sand, silts and clayey lake deposits.

The valley floor is traversed by multiple strands of the San Andreas Fault, and is punctuated by localized compressional squeeze-ups that form dome-shaped hills of uplifted sand and gravel[38], as evidenced by Edom Hill and the Indio Hills. The valley floor is a contractional region that has developed over the last 1 million years in response to left steps among various strands of the San Andreas fault. This left step still is taking place today, and provides the background for current earthquake activity in the Coachella Valley region. Sedimentary materials that are filling up the basin record information about interactions among the various fault systems, including their origin and movement history.

Site-Specific Geologic Setting

Along CV Link route, the geologic units typically consist of sands, gravel and conglomerates, which include relatively young fluvial fan deposits. Geologic units along the western CV Link alignment (from the western termini to about Jefferson Street) are primarily young alluvial (stream-laid) sandy deposits. East of Jefferson Street to the east terminus, the geologic units are interlayered sandy alluvial and dune deposits, and fine sand, silts and clayey lake deposits.

The San Bernardino, San Jacinto, and Santa Rosa Mountain Ranges are uplifted blocks of igneous and metamorphic rocks lying between two major fault systems, the San Jacinto and the San Andreas Fault. They consist of early Mesozoic granitic and metamorphic rocks intruded by Mesozoic granitic rocks ranging in composition from granite to granodiorite to tonalite. The project and surrounding areas are located in a region that is dominantly clay, sand, and gravel. Clay (Ql) is a lacustrine deposit that has low potential for collapse in this area. Sand (Qa) and gravel (Qf) are relatively young and are more susceptible to erosion (wind/water) and shaking during an earthquake.

Soils: CV Link alignments cross or abut a wide range of soil types, including windblown (aeolian) soils, water transported soils (fluvial) and to a very limited extent rocky outcrop lands. Most of the soils crossed by project alignments include those of the following soil series: Carsitas, Coachella, Fluvents, Gilman, Indio and Myoma, as well as riverwash. For the project, the one approach to the toe of slope is at Point

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36 Keller, E. A., Bonkowski, M. S., Korsch, R. J., & Shlemon, R. J. (1982). Tectonic geomorphology of the San Andreas fault zone in the southern Indio Hills, Coachella Valley, California. Geological Society of America Bulletin, 93(1), 46-56.

37 Ibid.

38 Proctor, R. J. (1968). Geology of the Desert Hot Springs—Upper Coachella Valley area, California. With a bibliography of the Coachella Valley, Salton Sea, and Vicinity. California Division of Mines and Geology, Special Report, 94.

Happy in the vicinity of the Indian Wells/La Quinta city limits. Historically, (prior to 1960), large areas of the project alignment and surrounding general area was primarily covered with wind-deposited sands. As urban development expanded throughout the greater Coachella Valley, the flow and deposition of aeolian sand from the west and north has been interrupted and slowed by these manmade impediments. This has resulted in the gradual stabilization and compaction of sands that were once continuous, loose and dynamic.

Seismic Faults and Groundshaking: The Coachella Valley, including the project planning area, lies within Seismic Zone 4, the designation assigned by the California Geological Survey to a geographic location with a high probability of significant seismic activity. As noted above, there are numerous earthquake-producing faults in this region, including the San Andreas Fault Zone and San Jacinto Fault Zone.[39] The nearest active fault to the project area is the San Andreas Fault, which is located 1± mile to the northeast, and the San Jacinto Fault Zone located 10± miles to the southwest. Both are capable of generating large earthquakes and, given their proximity to the project site, moderate to severe ground shaking is considered the primary geologic hazard affecting the site. Ground acceleration associated with a maximum probable earthquake on these faults would range from 0.59 to 0.84g (gravity, or 32 feet per second). Potential impacts associated with this level of ground shaking include slope collapse, seismically induced ground cracking or buckling of the pathway associated with soils settlement or collapse, damage to shade structures and other vertical improvements associated with the project.

Overall, only the San Andreas Fault Zone is in proximity to the CV Link planning area, with the closest approach being approximately one mile in the Indio-Coachella area. No active or potentially active faults are known to cross the project alignments. Along the South San Andreas fault zone shake maps for Coachella Valley indicate that earthquakes on the San Andreas Fault Zone could generate maximum earthquake magnitudes of 7.1 to 7.4 on the Richter Scale, resulting in estimated site intensities of IX on the Modified Mercalli scale. Earthquakes on the San Jacinto fault zone were estimated to be capable of generating magnitudes of 6.8 to 7.2 and result in MM intensities of VII to VIII in the Project area.[40]

The project-specific geology report prepared for the CV Link project has identified Peak Ground Acceleration with a probability of 2 percent in 50 years (~ 2475 year return period) is given for three CV Link alignments, which ranges from 0.59 to 0.84g.

Table 2-16
Peak Ground Acceleration in the CV Link Planning Area

Location	Latitude, Longitude	Peak Ground Acceleration (g)
West (111/Palm Springs)	33.868205, -116.567940	0.84
Central (Fred Waring Dr.)	33.736242, -116.365748	0.59
East (Avenue 56)	33.642026, -116.136162	0.79

Source: "Preliminary Subsurface Investigation and Geotechnical Background Report, CV Link Project, CVAG, Coachella Valley, Riverside County, California," prepared by Petra Geoscience Inc. 2016.

An earthquake on faults close to the planning area could generate groundshaking that could cause significant damage in the planning area. Potential impacts include slope collapse, seismically induced ground cracking or buckling of the pathway associated with soils settlement or collapse, or damage to shade structures, bridges and other vertical improvements associated with the Proposed Project Alternative.

[39] Sharp, R. V. (1967). San Jacinto fault zone in the Peninsular Ranges of southern California. Geological Society of America Bulletin, 78(6), 705-730.

[40] United States Geological Survey: http://earthquake.usgs.gov/earthquakes/shakemap/sc/shake/s._san_andreasco_m7.0_se/; Accessed 06.01.2016.

Liquefaction: Liquefaction occurs when the strength and stiffness of unconsolidated soils is reduced by seismic shaking or other rapid loading usually in the presence of groundwater. During liquefaction, soils lose their bearing or shear strength needed to support structural foundations and can cause structural failures. For liquefaction to occur groundwater levels must generally be within 50 feet of the ground surface and lands must be subject to strong groundshaking. The majority of the project site is located in an area with no liquefaction susceptibility. However, those portions adjacent to Coachella Valley Stormwater Channel in the cities of Indio and Coachella have a "high" liquefaction susceptibility due to a combination of youthful, unconsolidated sediments and a historically shallow groundwater table that is 30 to 50 feet below the ground surface and higher at the southeast terminus of the Route.[41,42]

Seismically Induced Slope Failures and Landslides: Strong groundshaking can result in unstable slope conditions, including rock falls and landslides. The project site is located within the valley floor with relatively flat terrain. There is a "low" susceptibility to slope instability on most portions of the CV Link alignments, including the potential for soil slumps, soil block slides, and rock falls. Although, the vast majority of the project will be located within areas of relatively flat terrain, much of the Route will be constructed on manufactured fill used to construct channel levees, which occur along different CV Link alignments. Also, the slopes associated with the project stormwater channels will also be subject to lateral forces during a strong quake. These slopes are on the order of a few feet to over 20 feet in height and are typically sloped at 2:1 (horizontal:vertical) to 4:1 (h:v) slope ratios. There is also one location of the project where a rockfall hazard potential exists along project alignments at Point Happy in Indian Wells and La Quinta.

Soil Erosion: CV Link would extend through an area of the valley with wind erosion or erodability ratings of "moderate" to "very high", with most of the Route occurring in the "high" rating[43], a condition that is widespread throughout much of the valley. Portion of CV Link alignments are subject to severe wind erosion.[44] Small portions of CV Link in Rancho Mirage, Indio, and Coachella are designated as "high wind erodibility," with the exception of a few pockets of "moderate wind erodibility".

Expansive Soils: Expansive soils, also referred as swelling soils, are soils that have a tendency to increase volume with an increase in the moisture content. These soils swell when water is added to them and shrink when they dry out. Foundations with swelling soils will heave and can cause lifting of a building or structure when the moisture content rises. This can ultimately lead to the failure of foundations and structures. Expansive soils are common in the lakebed soils in the eastern area of CV Link but do not occur elsewhere in the CV Link planning area.

Soils in the Palm Springs and Cathedral City portions of CV Link mainly consist of Coachella fine sand (CcC), Indio very fine sandy loam (Is), and Carsitas gravelly sand (CdC), which have a low shrink/swell potential.[45] The area near the Whitewater Floodplain mainly consists of Indio very fine sandy loam (Is) and Riverwash (RA). The project site near the Gene Autry, Vista, and Mesquite Avenue is mainly consists of Coachella fine sand (CcC), Carsitas gravelly sand (CdC), and Riverwash (RA). Non-expansive soils predominate along the Route and only occur in the eastern CV Link Route in areas with lakebed soils.

Collapsible Soils: Collapsible soils are unsaturated soils that exhibit a high strength when dry but experience a large and rapid volume reduction upon saturation, which can result in substantial structural

41 Exhibit IV-3, La Quinta General Plan, 2013.

42 Ibid.

43 Riverside County Safety Element Technical Report, prepared by Earth Consultants International. Riverside County General Plan, 2015.

44 "Preliminary Subsurface Investigation and Geotechnical Background Report, CV Link Project, CVAG, Coachella Valley, Riverside County, California", prepared by PETRA Geoscience Inc. on August 2016.

45 Lommler, J. C., & Bandini, P. (2015). Characterization of Collapsible Soils. In IFCEE 2015 (pp. 1834-1841). ASCE.

damage. Alluvial and aeolian sediments in the planning area have the potential for settlement and collapse even under relatively low loads. Collapsible soils were primarily found in the near surface of wind and water-deposited soils, and have been noted in the mid and east valley areas (Palm Desert, Indian Wells, La Quinta, Indio, and Coachella).

Lateral Spreading: Lateral spreading is the lateral displacement of gently sloping ground that is underlain by loose sands and a shallow water table. It is caused by seismically induced liquefaction and can result in fracturing, rotation, or liquefaction and flow of structures. If located in areas with sloping ground or where an open free face exists such as along a stormwater channel, lateral spreading towards the channel may occur where the liquefiable materials are located at a depth less than two times the height of the open free face (channel depth). The potential for lateral spreading along CV Link is generally from Indio to the CV Link terminus at Airport Boulevard.

Subsidence: Ground subsidence involves the settling or sinking of a body of rock or sediment due to either natural or human-caused activities. Groundwater held in pore spaces between sediment grains maintains the open internal structure of the sediments; and when the water is extracted, grains compact causing subsidence at the surface. In the Coachella Valley, the main source of ground subsidence has been associated with the pumping of groundwater. Beginning in the late 1940s, pumping of groundwater resulted in water-level declines as much as 15 meters. Since 1996, the U.S. Geological Survey (USGS) and Coachella Valley Water District (CVWD) have investigated land subsidence associated with groundwater level declines.[46] Results show that the land surface subsided from about 220 to 600 mm (0.72 to 1.97 ft) in three areas of the Coachella Valley: near Palm Desert, Indian Wells, and La Quinta and are associated with areas of substantial and on-going groundwater pumping. The potential for groundwater extraction-related ground subsidence along the CV Link Route is considered to be limited due to reduction in pumping in these areas. On-going groundwater recharge, water conservation and conversion of golf courses to canal and reclaimed water are designed to reduce or stop subsidence.

Seiches and Tsunamis: A seiche is defined as “an occasional and sudden oscillation of the closed water body (lake, bay, estuary, etc.) producing fluctuations in the water level.” There are many causes that can produce seiches, for example, wind, earthquakes, and changes in barometric pressure. The seiche hazard associated with the planning area include above-ground water reservoirs, golf course lakes and other impoundments. Domestic water reservoirs in the Coachella Valley have been constructed to resist the effects of groundshaking that could compromise the integrity of these structures. Golf course lakes and other impoundments are relatively small and shallow, and do not pose a significant seiche hazard. Given the valley’s location more than 100 miles east of the Pacific Ocean, the potential for tsunamis in the project area is negligible.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Under the Proposed Project Alternative, all CV Link alignments could be constructed excepting those located within Rancho Mirage. There are two basic categories by which geological and seismological impacts are assessed, those impacts that are the result of natural events and those that occur as a direct result of construction of the project. Examples of the former include fault displacement, earthquake shaking, liquefaction, and landslides. These can often be reduced to a level of insignificance through avoidance or by proper engineering design. Examples of potential geological impacts that can occur as a result of project construction are typically related to disturbance of surficial geologic formations and

[46] “Land Subsidence, Groundwater Levels, and Geology in the Coachella Valley, California, 1993–2010”, Scientific Investigations Report 2014-5075, US Geological Survey in Cooperation with the Coachella Valley Water District. 2014.

include induced hydroconsolidation of collapsible soils, induced slope instability, and increased soil erosion. Regardless of whether the impact is due to a natural event or a direct result of the CV Link project, the following potential for impacts have been identified and are discussed below.

Earthquake Fault Hazard

The CV Link planning area is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known active or potentially active faults in the planning area or within the immediate vicinity. The nearest major active fault is the San Andreas Fault and its splays (Mission Creek fault), which is located approximately one mile to the northeastern near Indio and Coachella. This fault is capable of generating large earthquakes and, given its proximity to the subject site, moderate to severe ground shaking is considered the primary geologic hazard affecting the site. However, there will be no impact to the CV Link Project from fault-related ground rupture.

Seismic Groundshaking

There is a high probability that all of the CV Link alignments will be subject to strong groundshaking during the life of this facility. There are numerous earthquake-producing faults in this region, including the San Andreas Fault Zone, San Jacinto Fault Zone and others. The nearest faults to the project area are part of the San Andreas Fault system located at its closest approach approximately one mile to the northeast. The CV Link geotechnical report calculated peak ground acceleration values at three locations within the planning area, West (111/Palm Springs), Central (Fred Waring Drive), and East (Avenue 56) with peak ground acceleration values of 0.84, 0.59, and 0.79g, respectively. During strong seismic groundshaking, stress to pavements or stormwater channel slopes will occur. Buckling of pavements and damage to shade structures, bridges and other vertical elements of the project could also be caused by strong groundshaking. All elements of CV Link, including flatwork, shade structures, bridges and other vertical elements, will be constructed in compliance with applicable seismic safety codes, including the California Building Code and other relevant codes. Based upon the adherence of project structural design to applicable seismic and other codes, the effects of seismically induced groundshaking on CV Link facilities and users can be reduced to acceptable levels.

Ground Failure

As noted above, the eastern portions of the CV Link Route are located in a liquefaction hazard area with high groundwater, poorly consolidated and liquefiable soils, and the potential for strong groundshaking. Most of the CV Link alignments will be located within areas of relatively flat terrain, including those portions within the liquefaction hazard area, and will be constructed on manufactured fill used to construct channel levees. Also, the slopes associated with the project stormwater channels will also be subject to lateral forces during a strong quake. These slopes are on the order of a few feet to over 20 feet in height and are typically sloped at 2:1 (horizontal:vertical) to 4:1 (h:v) slope ratios.

Therefore, in the eastern most portions of the CV Link Route the potential exists for lateral spreading to occur. Lateral displacement can occur on gently sloping ground that is underlain by loose sands and a shallow water table. It is caused by seismically induced liquefaction and can result in fracturing, rotation, or liquefaction and flow of structures. If located in areas with sloping ground or where an open free face exists such as along a stormwater channel, lateral spreading towards the channel may occur where the liquefiable materials are located at a depth less than two times the height of the open free face (channel depth). The potential for lateral spreading along CV Link is generally from Indio to the CV Link terminus at Airport Boulevard.

The potential impacts of liquefaction on CV Link improvements and users can be effectively mitigated through standard methods of soil engineering, including overexcavation and hydroconsolidation, spread footings and other means. With the application of recommendations set forth in the CV Link geotechnical report and the mitigation measures set forth below, there will be no adverse impacts on CV Link facilities and users.

Landslides

The potential for large-scale landslides or slope failures were assessed by the project geotechnical engineers. As noted, the large majority of CV Link alignments will be located within areas of relatively flat terrain. However, there are extensive slope areas associated with the various drainage channels along and through which CV Link will run. These channel slopes are on the order of a few feet to over 20 feet high and are typically sloped at 2:1 (horizontal:vertical) to 4:1 (h:v) slope ratios. Portions of the slope are lined with concrete and the rest are earthen materials.

The slope stability analysis conducted as a part of the geotechnical evaluation assumed a worst-case scenario, and indicates that minor surficial slope failures can be expected in areas of the project next to unlined portions of the channel. Channel slopes could fail as a result of scour and removal of supporting soils during rapid flash flooding along unlined portions of the channel. The potential for minor slope failures are on a nuisance rather than substantial impact level; therefore, the Proposed Project Alternative will not result in a potentially substantial landslide hazard.

According to the CV Link geotechnical report and review of a variety of Safety Element technical reports prepared for local General Plans, there is one location where a rockfall hazard potential exists along the Proposed Project Alternative alignment, this being Point Happy at the Indian Wells /La Quinta city boundary west of Washington Street. Point Happy is a spur of the Santa Rosa Mountains foothills that juts north and into the Whitewater Stormwater Channel. Around the tip of Point Happy a bridge is planned that will be suspended on and supported by a tubular steel arch and cable stays, and away from the rock face. With the type of conventional rock face stabilization recently carried out on the Highway 111 side of this spur of rock, and with the proposed innovative bridge design, potential rock fall impacts will not be adverse with mitigation.

Soils Erosion

CV Link would extend through an area of the valley that is considered to have a wind erosion or erodability rating of “moderate” to “very high”, with most of the Route occurring in the “high” rating. [47] The potential for wind-related soils erosion exists along the entire length of CV Link. However, construction of the CV Link alignments will result in very limited new ground disturbance, including areas where grading will be required atop channel levees and embankments, where soils are already well compacted. Disturbance within the channels will be limited and will occur in areas already regularly disturbed by nuisance and flood flows, as well as on-going channel maintenance activities. CV Link construction will occur incrementally and in measured stages, which will allow good control of soil moisture and stability. Standard mitigation measures are expected to reduce wind erosion potential to acceptable levels.

Soils in the project area are also susceptible to water erosion, and although rain events are very infrequent, when they occur they can be intense and generate high rates of runoff in a short period of time. Therefore, the potential always exists for disturbed or stockpiled soils associated with CV Link construction to be eroded by rainstorms or by the inadvertent or inappropriate application of water during construction. A variety of avoidance/minimization/mitigation measures are set forth in the hydrology analysis and water quality sections (see Sections 2-2.1 and 2-2.2) associated with water quality management, which directly address the potential for water erosion of soils. These and the avoidance/minimization/mitigation measures set forth below will ensure that the loss of soils from wind or water erosion will not be substantia . Neither will the CV Link Proposed Project Alternative expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from the creation of such conditions.

[47] Riverside County Safety Element Technical Report, prepared by Earth Consultants International. Riverside County General Plan, 2015.

Expansive and Collapsible Soils

Expansive soils have a tendency to increase volume with an increase in the moisture content. Expansive soils can heave and can cause lifting and even structural damage when their moisture content rises. Expansive soils are common in the lakebed soils in the eastern area of CV Link Proposed Project Alternative alignment, but most of the soils along the CV Link Route have a low shrink/swell potential.[48] [49] The potential impacts to the Proposed Project Alternative associated with expansive soils can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of expansive soils on the CV Link project will be very limited with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

CV Link travelways and structural foundations that are built upon collapsible soils are potentially subject to damage if such soils become saturated. In an unsaturated state, these soils exhibit a high strength when dry but experience a large and rapid volume reduction (collapsed) upon saturation, which can result in substantial structural damage. Alluvial and aeolian sediments in the planning area have the potential for settlement and collapse even under relatively low loads. Collapsible soils were primarily found in the near surface of wind and water-deposited soils, and have been noted in the mid and east valley areas (Palm Desert, Indian Wells, La Quinta, Indio, and Coachella). The potential impacts associated with collapsible soils can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of collapsible soils on the CV Link project will not be adverse with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Under the Alternative 1 project, all CV Link alignments could be constructed excepting those located within Rancho Mirage and Indian Wells. Therefore, no CV Link alignments in those cities would be subject to geotechnical hazards that may be experienced elsewhere along the CV Link Route.

Earthquake Fault Hazard

CV Link Alternative 1 planning area is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known active or potentially active faults in the planning area or within the immediate vicinity. The nearest major active fault is the San Andreas Fault, which is located approximately one mile to the northeastern near Indio and Coachella. This fault is capable of generating large earthquakes and, given its proximity to the subject site, moderate to severe ground shaking is considered the primary geologic hazard affecting the site. However, there will be no impact to the CV Link Alternative 1 Project from fault-related ground rupture.

Seismic Groundshaking

There is a high probability that all of the CV Link Alternative 1 alignments will be subject to strong groundshaking during the life of this facility. The nearest faults to the project area are part of the San Andreas Fault system located at its closest approach approximately one mile to the northeast. According to the CV Link geotechnical report, the planning area is subject to potential groundshaking ranging from 0.59 to 0.84 (g). Impacts from strong groundshaking include buckling of pavements and damage to shade structures, bridges and other vertical elements of the project. All elements of the CV Link Alternative 1 project will be constructed in compliance with applicable seismic safety codes, including the California Building Code and other relevant codes. Based upon the adherence of project structural design to applicable seismic and other codes, the effects of seismically induced groundshaking can be reduced to a level that it will have a very limited impact on CV Link Alternative 1 facilities and users.

48 Ibid.

49 Op. cit. Petra 2016.

Ground Failure

Alternative 1 impacts associated with ground failure, liquefaction, landslides, lateral spreading, subsidence and other ground failure potential are the same as those described for the Proposed Project Alternative. The eastern portions of the CV Link Route are located in a liquefaction hazard area with high groundwater, poorly consolidated and liquefiable soils, and the potential for strong groundshaking. Most of the CV Link Alternative 1 alignments will be located within areas of relatively flat terrain, including those portions within the liquefaction hazard area, and will be constructed on manufactured fill used to construct channel levees. Also, the slopes associated with the project stormwater channels will also be subject to lateral forces during a strong quake.

In the eastern most portions of the CV Link Alternative 1 Route the potential exists for lateral spreading to occur. Lateral displacement can occur on gently sloping ground that is underlain by loose sands and a shallow water table. The potential for lateral spreading along CV Link is generally from Indio to the CV Link terminus at Airport Boulevard. The potential impacts of liquefaction on CV Link Alternative 1 project improvements and users can be effectively mitigated through standard methods of soil engineering, including overexcavation and hydroconsolidation, spread footings and other means. Therefore, with the application of recommendations set forth in the CV Link geotechnical report and the mitigation measures set forth below, there will be no adverse impacts on CV Link Alternative 1 facilities and users.

Landslides

The potential for large-scale landslides or slope failures were assessed by the project geotechnical engineers. As noted, the large majority of CV Link Alternative 1 alignments will be located within areas of relatively flat terrain. However, there are extensive slope areas associated with the various drainage channels along and through which CV Link will run. The slope stability analysis conducted as a part of the geotechnical evaluation assumed a worst-case scenario, and indicates that minor surficial slope failures can be expected in areas of the project next to unlined portions of the channel. The potential for minor slope failures are on a nuisance rather than significant impact level; therefore, the Alternative 1 project will result in a limited or negligible landslide hazard.

Under the Alternative 1 project scenario, there is one location where a rockfall hazard potential exists along the east face of Point Happy at the Indian Wells /La Quinta city boundary west of Washington Street. At this location, the CV Link alignment ends and turns south along the Plaza La Quinta Drive and a steep rocky slope to Highway 111. The hazard involves the slope's stability; however, the type of conventional rock face stabilization recently carried out on the Highway 111 side of this spur of rock, potential rock fall impacts associated with the Alternative 1 project will be limited with mitigation.

Soils Erosion

Under the Alternative 1 project scenario, CV Link would extend through an area of the valley that is considered to have a wind erosion or erodability rating of "moderate" to "very high", with most of the Route occurring in the "high" rating. [50] The potential for wind-related soils erosion exists along the entire length of CV Link. However, construction of the CV Link alignments under the Alternative 1 scenario will result in less new ground disturbance when compared to the Proposed Project Alternative (Indian Wells excluded). Relevant Alternative 1 alignments include grading atop and adjacent to channel levees and embankments, where soils are already well compacted. Disturbance within the channels under Alternative 1 will be less than that associated with the Proposed Project Alternative and will occur in areas already regularly disturbed by nuisance and flood flows, and subject to on-going channel maintenance activities. CV Link construction will occur incrementally and in measured stages, which will facilitate effective control of soil moisture and stability, and erosion. Standard mitigation measures are expected to reduce wind erosion potential to acceptable levels.

[50] Riverside County Safety Element Technical Report, prepared by Earth Consultants International. Riverside County General Plan, 2015.

Soils in the CV Link Alternative 1 project area are also susceptible to water erosion, and the potential exists for disturbed or stockpiled soils to be eroded by rainstorms or an inadvertent or inappropriate application of water during construction. A variety of avoidance/minimization/mitigation measures are set forth in the hydrology analysis section associated with water quality management, which directly address the potential for water erosion of soils. These and the avoidance/minimization/mitigation measures set forth below (also see Sections 2-2.1 and 2-2.2 of this EA) will ensure that the loss of soils from wind or water erosion will be negligible. Neither will the CV Link Alternative 1 expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from the creation of such conditions.

Expansive and Collapsible Soils

Expansive soils have a tendency to increase volume with an increase in the moisture content. Expansive soils can heave and can cause lifting and even structural damage when their moisture content rises. Expansive soils are common in the lakebed soils in the eastern area of CV Link Alternative 1 alignment, but most of the soils along the CV Link Route have a low shrink/swell potential.[51] [52] The potential impacts to the Alternative 1 project associated with expansive soils can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of expansive soils on the CV Link project will be very limited with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

CV Link Alternative 1 travelways and structural foundations that are built upon collapsible soils are potentially subject to damage if such soils become saturated. Collapsible soils were primarily found in the near surface of wind and water-deposited soils, and have been noted in the mid and east valley areas (Palm Desert, Indian Wells, La Quinta, Indio, and Coachella). The potential Alternative 1 impacts associated with collapsible soils are somewhat less than those associated with the Proposed Project Alternative, this alternative not including Indian Wells. Collapsible soils can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of collapsible soils on the CV Link Alternative 1 project will be very limited with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

C. Alternative 2: Project with All Eight Cities

The Alternative 2 project would allow the construction of all CV Link alignments, including those in the cities of Rancho Mirage and Indian Wells.

Earthquake Fault Hazard

CV Link Alternative 2 planning area is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known active or potentially active faults in the planning area or within the immediate vicinity. The nearest major active fault is the San Andreas Fault, which is located approximately one mile to the northeastern near Indio and Coachella. This fault is capable of generating large earthquakes and, given its proximity to the subject site, moderate to severe ground shaking is considered the primary geologic hazard affecting the site. However, there will be no impact to the CV Link Alternative 2 Project from fault-related ground rupture. Impacts will be comparable to those associated with the Proposed Project Alternative.

Seismic Groundshaking

There is a high probability that all of the CV Link Alternative 2 alignments will be subject to strong groundshaking during the life of this facility, with potential groundshaking ranging from 0.59 to 0.84 (g). Impacts from strong groundshaking include buckling of pavements and damage to shade structures,

51 Ibid.

52 Op. cit. Petra 2016.

bridges and other vertical elements of the project. All elements of the CV Link Alternative 2 project will be constructed in compliance with applicable seismic safety codes, including the California Building Code and other relevant codes. Based upon the adherence of project structural design to applicable seismic and other codes, the effects of seismically induced groundshaking can be reduced to a level that it will have no adverse impact on CV Link Alternative 2 facilities and users.

Ground Failure

Alternative 2 impacts associated with ground failure, liquefaction, landslides, lateral spreading, subsidence and other ground failure potential are the same as those described for the Proposed Project Alternative and Alternative 1. The eastern portions of the CV Link Route are located in a liquefaction hazard area with high groundwater, poorly consolidated and liquefiable soils, and the potential for strong groundshaking. Most of the CV Link Alternative 2 alignments will be located within areas of relatively flat terrain, including those portions within the liquefaction hazard area, and will be constructed on manufactured fill used to construct channel levees. Also, the slopes associated with the project stormwater channels will also be subject to lateral forces during a strong quake.

In the eastern most portions of the CV Link Alternative 2 Route the potential exists for lateral spreading to occur. The potential for lateral spreading along CV Link is generally from Indio to the CV Link terminus at Airport Boulevard. The potential impacts of liquefaction on CV Link Alternative 2 project improvements and users can be effectively mitigated through standard methods of soil engineering, including overexcavation and hydroconsolidation, spread footings and other means. With the application of recommendations set forth in the CV Link geotechnical report and the mitigation measures set forth below, the potential impacts on CV Link Alternative 2 facilities and users will not be substantial.

Landslides

The potential for large-scale landslides or slope failures were assessed by the project geotechnical engineers for all CV Link alignments, including those planned for Rancho Mirage included in the Alternative 2 project. Most of CV Link Alternative 2 alignments will be located within areas of relatively flat terrain. However, as with the other project alternatives, there are extensive slope areas associated with the various drainage channels along and through which CV Link will run. The CV Link slope stability analysis assumed a worst-case scenario and indicates that minor surficial slope failures can be expected in areas of the project next to unlined portions of the channel. The potential for minor slope failures are on a nuisance rather than significant impact level; therefore, the Alternative 2 project will not result in a substantial landslide hazard.

Under the Alternative 2 project scenario, there are two locations where a rockfall hazard potential exists, one along the north tip of Point Happy at the Indian Wells /La Quinta city boundary west of Washington Street, where a suspended bridge is proposed under Alternative 2 and the Proposed Project Alternative. The hazard involves slope stability and rockfall hazards. Impacts can be effectively mitigated by application of the type of conventional rock face stabilization recently carried out on the Highway 111 side of this spur of rock.

The second location is at the corner of Highway 111 and Paxton Road in Rancho Mirage, where roadway widening in recent years has included cutting back and stabilizing the rocky slope to accommodate the eastbound sidewalk installed at this location. There is no substantial rockfall hazard associated with this location in Rancho Mirage. Therefore, potential rock fall hazard associated with the Alternative 2 project will be limited with mitigation.

Soil Erosion

Under the Alternative 2 project scenario, CV Link would extend through an area of the valley that is designated a wind erosion or erodability rating of “moderate” to “very high”, with most of the Route

occurring in the "high" rating. [53] The potential for wind-related soils erosion exists along the entire length of CV Link. However, construction of the CV Link alignments under the Alternative 2 scenario will result in the greatest new ground disturbance when compared to the Proposed Project Alternative with the inclusion of Rancho Mirage in this alternative. Relevant Alternative 2 alignments include grading atop and adjacent to channel levees and embankments, where soils are already well compacted. Disturbance within the channels will be less than that associated with the Proposed Project Alternative and will occur in areas already regularly disturbed by nuisance and flood flows, and subject to on-going channel maintenance activities. CV Link construction will occur incrementally and in measured stages, which will facilitate effective control of soil moisture and stability, and erosion. While potential impacts are greater than those associated with the Proposed Project Alternative with the inclusion of Rancho Mirage, standard mitigation measures will reduce wind erosion potential to acceptable levels.

Soils in the CV Link Alternative 2 project area are also susceptible to water erosion, and the potential exists for disturbed or stockpiled soils to be eroded by rainstorms or an inadvertent or inappropriate application of water during construction. Potential for water erosion associated with the Alternative 2 project is modestly greater than that associated with the Proposed Project Alternative. A variety of avoidance/minimization/mitigation measures are set forth in the hydrology analysis section associated with water quality management, which directly address the potential for water erosion of soils. These and the avoidance/minimization/mitigation measures set forth below will ensure that the loss of soils from wind or water erosion will be less than substantial. Neither will the CV Link Alternative 2 expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from the creation of such conditions.

Expansive and Collapsible Soils

Expansive soils have a tendency to increase volume with an increase in the moisture content. Expansive soils can heave and can cause lifting and even structural damage when their moisture content rises. Expansive soils are common in the lakebed soils in the eastern area of CV Link Alternative 2 alignment, but most of the soils along the CV Link Route have a low shrink/swell potential.[54] [55] The potential impacts to the Alternative 2 project are the same as the other build alternatives, and can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of expansive soils on the CV Link Alternative 2 project will be acceptable with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

CV Link Alternative 2 travelways and structural foundations that are built upon collapsible soils are potentially subject to damage if such soils become saturated. Collapsible soils were primarily found in the near surface of wind and water-deposited soils, and have been noted in the mid and east valley areas (Palm Desert, Indian Wells, La Quinta, Indio, and Coachella). The potential Alternative 2 impacts associated with collapsible soils are somewhat greater than or comparable to those associated with the Proposed Project Alternative, with the occurrence of collapsible soils being lower in Rancho Mirage. Collapsible soils can be effectively mitigated through prescribed soils engineering. Therefore, the impacts of collapsible soils on the CV Link Alternative 2 project will be negligible with the application of foundation and flatwork recommendation set forth below and in the CV Link geotechnical report.

D. Alternative 3: No Build/No Project Alternative

Under Alternative 3: No Build/No Project no CV Link improvements would be constructed. There would be no new exposure of transportation facilities to earthquake faults, groundshaking, ground failure,

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53 Riverside County Safety Element Technical Report, prepared by Earth Consultants International. Riverside County General Plan, 2015.

54 Ibid.

55 Op. cit. Petra 2016.

landslides unstable soils of other geotechnical constraints or hazards. Therefore, there would be no new impacts associated with the Alternative 3 project scenario.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CV Link improvements will be constructed on soils and in geologically active areas that require the application of specific geotechnical and soils engineering solutions. The constraints and potential impacts associated with geotechnical conditions along the CV Link Route can be reduced to acceptable levels by implementation of the following avoidance, minimization and by proper engineering design. The potential geotechnical impacts include construction that will disturb surficial geological formations, collapsible soils and other constraints, and could contribute to increased erosion. The following mitigation measures are applicable to all of the build alternatives and include implementation of standard erosion control methods, slope stabilization measures, removal and recompaction of loose surficial soils or soil reinforcement, and establishing procedures for controlling erosion and runoff and will ensure that impacts are negligible.

Mitigation Measures

GEO-1. CV Link final design and engineering shall conform to the prevailing California Building Code (CBC) for buildings and other structures, and Caltrans design standards for bridges where appropriate in order to mitigate the effects of groundshaking and earthquake damage.

GEO-2. Structural foundation designs and subsurface soil improvements shall be conducted based on the California Code of Regulations Volume 18, Title 14, Article 10, Section 3721[a]) to minimize liquefaction hazards. Such measures shall include but are not limited to overexcavation and hydrocompaction, other remedial grading, strengthening and deepening structural foundations.

GEO-3. Ground improvements consisting of removal and recompaction of loose, near surface sandy soils, is recommended to minimize dynamic settlement of dry soils. Other methods may include deep dynamic compaction, additives to the soils, such as cement or fiber (e.g., nylon) and flooding of in-place loose granular soils, to increase the density of the resultant compacted fill and thereby removing or reducing to acceptable levels the tendency to settle under dynamic shaking. Deep foundation elements should also be considered when effective at bypassing zones of loose sand subject to dynamic settlement.

GEO-4. All grading plans shall include a soil erosion prevention/dust control plan. Blowing dust and sand during grading operations shall be mitigated by adequate watering of soils prior to and during grading, and limiting the area of dry, exposed and disturbed materials and soils during these activities. To mitigate against the effects of wind erosion after site development, a variety of measure shall be provided including maintaining moist surface soils, planting stabilizing vegetation, establishing windbreaks with non-invasive vegetation or perimeter block walls, and using chemical soil stabilizers.

GEO-5. Unprotected, permanent graded slopes shall not be steeper than 3:1 (horizontal/vertical) to reduce wind and water erosion. Protected slopes with ground cover may be as steep as 2:1. However, maintenance with motorized equipment may not be possible at this inclination. Fill slopes shall be overfilled and trimmed back to competent material. Fill slope surfaces shall be compacted to 90% of the laboratory maximum density by either over-filling and cutting back to expose a compacted core or by approved mechanical methods.

GEO-6. Positive site drainage shall be established during finish grading. Finish grading shall include a minimum positive gradient of 2% away from structures for a minimum distance of 3 feet and a minimum gradient of 1% to the street, channel or other approved drainage course.

GEO-7. Utility trench excavations in slope areas or within the zone of influence of structures shall be properly backfilled in accordance with the recommendations of the project geotechnical consultant. Backfill of utilities within roads or public rights-of-way shall be placed in conformance with the requirements of the governing agency (water district, public works department, etc.). Utility trench backfill within the project area shall be placed in conformance with the provisions of the project geotechnical report. In general, service lines extending inside the project area may be backfilled with native soils compacted to a minimum of 90-percent relative compaction. Backfill operations shall be observed and tested to monitor compliance with these recommendations.

GEO-8. Installation of slope protection, cutoff walls, deepening of proposed foundations below the maximum depth of scour and comparable measures shall be applied as necessary to mitigate potential scour and any resulting instability.

GEO-9. In order to address the potential rockfall hazards at Point Happy, the adjoining rock face shall be thoroughly evaluated and scaling of loose rock from the surface of exposed slopes shall be conducted, as necessary. The installation of rock catchment devices, such as walls, steel mesh or other effective barrier, shall be installed where necessary to mitigate the rockfall hazard.

GEO-10. There shall be a cessation of grading activities during rainstorms or high wind events. The project contractor shall install flow barriers and soil catchments (such as straw bales, silt fences, and temporary detention basins) during construction to control soil erosion.

GEO-11. The project contractor shall ensure that the dust control measures set forth in Sections 4.3 and 4.9 are implemented to control wind-blown sand during construction. Project grading shall be conducted in strict compliance with the requirements of the SCAQMD and the Coachella Valley PM10 SIP.

GEO-12. Excavated soils may be used as fill material so long as they are free of organic or deleterious matter. Rocks or concrete larger than 6 inches in greatest dimension shall be removed from fill or backfill material. Prior to integrating reconditioned fill soil onto needed sites, receiving areas shall be scarified, brought to near optimum moisture conditions, and recompacted to at least 90% relative compaction (ASTM D1557).

GEO-13. Imported soils (if needed) shall be non-expansive, granular soils meeting the USCS classifications of SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and 5 to 35 percent passing the No. 200 sieve. Imported fill shall be placed in maximum 8-inch lifts (loose) and compacted to at least 90 percent relative compaction (ASTM D 1557) near optimum moisture content.

GEO-14. Excavations within sandy soil shall be kept moist, but not saturated, to reduce the potential of caving or sloughing. Where excavations over 4 feet deep are planned, lateral bracing or appropriate cut slopes of 1.5:1 (horizontal/vertical) shall be provided. No surcharge loads from stockpiled soils or construction materials shall be allowed within a horizontal distance measured from the top of the excavation slope and equal to the depth of the excavation.

GEO-15. Removal and recompaction of susceptible soils, flooding and surcharging, and/or other

ground densification techniques shall be implemented to mitigate hydro-collapse potential.

GEO-16 Standard geotechnical practices such as excavation of the expansive soils and replacement with non-expansive compacted fill (by using additional steel reinforcing in foundations, post-tensioned slabs, presoaking, and drainage control devices) shall be used as determined appropriate by the geotechnical and structural engineers.

CUMULATIVE IMPACTS

A consideration of cumulative effects associated with geotechnical conditions includes the degree to which a project may contribute to the cumulative impacts from seismic events, marginal soils, steep and unstable terrain and other conditions. The CV Link Proposed Project Alternative will not substantially increase the community impacts associated with prevailing geotechnical conditions in the Coachella Valley. To the extent the project may provide an alternative means of travel through the CV Link communities in the event streets are impacted by earthquakes or other geotechnical condition, CV Link can serve to offset these adverse impacts by providing alternative access, any contribution that would otherwise be cumulatively substantial.

2-2.4 PALEONTOLOGY

REGULATORY SETTING

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects. However, the CV Link project has no nexus with the following regulations:

- 16 United States Code (USC) 431-433 (the “Antiquities Act”) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

- 16 United States Code (USC) 461-467 (the National Registry of Natural Landmarks) establishes the National Natural Landmarks (NNL) program. Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated NNLs, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under NEPA.

- 16 United States Code (USC) 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

- 23 United States Code (USC) 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.

- 23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

AFFECTED ENVIRONMENT

In general, paleontological resources within the project planning area only occur in sedimentary rock such as sandstone, siltstone, mudstone, claystone, and shale. Specific rock and soil types of a locale are useful indicators in determining the likelihood for the presence of paleontological resources. Soils on the valley floor portion of the City are generally post-Pleistocene age alluvium from the surrounding mountains. Such soils are generally considered recent by paleontological standards and therefore have little potential to yield fossilized remains. The southeastern portions of the CV Link alignments are located within the boundary of the ancient Lake Cahuilla, an area where most paleontological resources in the valley have occurred.

Occasionally fossils may be exposed at the surface through the process of natural erosion or as a result of human disturbances; however, they generally lay buried beneath the surficial soils. Thus, the absence of surface fossils does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found in the subsurface.

CV Link would be constructed upon a variety of previously disturbed lands, or upon alluvial fan and aeolian (windblown) deposits that have been previously disturbed and built upon, including those excavated portions of the adjoining channels, the spoils of which were used to construct levees. By virtue of geological conditions in the CV Link planning area, previous channel cuts and levee files that comprise most sensitive portions of the project alignments, and the limited geographic distribution of these paleontological resources, no areas of sensitivity for these resources has been identified.

The proposed route is also well removed from intact bedrock or sedimentary rock that most typically harbors paleontological resources. Most of the Proposed Project Alternative would be constructed on the low-lying valley floor and on lands that have been previously disturbed and developed. Soils along the route are from the Holocene epoch, of relatively recent age, and are therefore not expected to contain paleontological resources. Therefore the planning area has a low potential to contain or for paleontological resources to be impacted by the CV Link project.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative includes all CV Link alignments excepting those in Rancho Mirage. As noted above, and relevant to this alternative, CV Link would be constructed upon various previously disturbed lands, or upon alluvial fan and aeolian (windblown) deposits that have been previously disturbed and built upon, including those excavated portions of the adjoining channels, the spoils of which were used to construct levees. By virtue of geological conditions in the CV Link planning area, previous channel cuts and levee files that comprise most sensitive portions of the project alignments, and the limited geographic distribution of these paleontological resources, no areas of sensitivity for these resources has been identified. To the extent the Proposed Project Alternative is located in the same geographic region analyzed for paleontological resources, and does not result in disturbance in Rancho Mirage, there is a low potential for paleontological resources to be impacted.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1 includes all CV Link alignments excepting those in Rancho Mirage and Indian Wells. As noted above, and relevant to this alternative, CV Link would be constructed upon various previously disturbed lands, or upon alluvial fan and aeolian (windblown) deposits that have been previously disturbed and built upon, including those excavated portions of the adjoining channels, the spoils of which were used to construct levees. By virtue of geological conditions in the CV Link planning area, previous

channel cuts and levee files that comprise most sensitive portions of the project alignments, and the limited geographic distribution of these paleontological resources, no areas of sensitivity for these resources has been identified. Alternative 1 results in less overall ground disturbance and in a low potential to contain or for paleontological resources to be impacted by the Alternative 1 project. The potential impacts to paleontological resources associated with Alternative 1 are comparable to those associated with all of the build alternatives. Alternative 1 would further reduce the extent of land disturbance with the exclusion of the Rancho Mirage and Indian Wells alignments from development. Alternative 1 is located in the same geographic region, and there is a low potential for paleontological resources to be impacted.

C. Alternative 2: Project with All Eight Cities

Alternative 2 includes all CV Link alignments. CV Link would be constructed atop stormwater channel embankments and levees, as well as other previously disturbed lands comprised of alluvial fan and aeolian (windblown) deposits that have been previously disturbed and built upon. These especially include those excavated portions of the adjoining channels, the spoils of which were used to construct levees. By virtue of geological conditions in the CV Link planning area, previous channel cuts and levee files that comprise most sensitive portions of the project alignments, and the limited geographic distribution of these paleontological resources, no areas of sensitivity for these resources has been identified. Alternative 2 results in the most overall ground disturbance of all project alternatives. Nonetheless, as is the case for all build alternatives, Alternative 2 has a low potential to impact paleontological resources due to the low potential of paleontological resources to occur in the project area. Alternative 2 would result in the greatest extent of land disturbance and is located in the same geographic region as the other build alternatives. There is a low potential for paleontological resources to be impacted by the Alternative 2 project.

D. Alternative 3: No Build/No Project Alternative

The No Build/No Project Alternative will not result in ground disturbing activities that would have the potential to impact paleontological resources. The project would not be built and there will be no impacts to such resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Mitigation Measures

P-1 In the unlikely event paleontological resources be discovered, the cultural monitor shall, upon discovery of any fossils, quickly salvage them as they are unearthed to avoid construction delays. The monitor shall remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall have the authority to temporarily halt or divert grading and excavation equipment to allow for removal of abundant or large specimens.

CUMULATIVE IMPACTS

As noted above, CV Link alignments do not occur in areas or on lands which have been identified as being sensitive for paleontological resources. The lacustrine (lakebed) deposits in the eastern portion of the project area are associated with ancient Lake Cahuilla, may make up portions of the stormwater levee and channel in these areas, and remains of bi-valves have been identified in these soils. However, the past excavation of fill for the channel and levees, as well as the periodic grading and other disturbance in the channel during maintenance operations, have further reduced the likelihood that the CV Link project will impact sensitive resources.

While other development may also impact paleontological resources, which occur throughout much of the southeastern portion of the valley, these resources have been well documented by past surveys and studies. The potential impacts of the Proposed Project Alternative on important paleontological resources has been assessed and all of the build alternatives will have a low potential to impact paleontological resources. In addition, avoidance and minimization measures have been set forth requiring that in the unlikely event paleontological resources are encountered during project construction, impacts to these resources will be mitigated to levels that are less than adequately mitigated. Therefore, the Proposed Project Alternative's incremental impacts to these resources, if any, will not be cumulatively considerable.

2-2.5 HAZARDOUS WASTE/MATERIALS

The following section describes the existing setting, and analyzes the potential impacts associated with hazardous waste/materials and the CV Link project. A variety of local and regional data and information, ranging from research and analysis conducted for the project site, to regional-scale planning and environmental documents, have been used in researching and analyzing the project and its potential effects in regards to hazardous waste and materials.

REGULATORY SETTING

Hazardous materials including hazardous substances and wastes are regulated by many federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and the investigation and mitigation of waste releases, air and water quality, human health, and land use.

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

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

Section 121(d) of CERCLA requires that remedial action plans include consideration of more stringent state environmental "Applicable or Relevant and Appropriate Requirements" (ARARs). The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP) also requires compliance with ARARs during remedial actions and during removal actions to the extent practicable. As a result state laws pertaining to hazardous waste management and clean up of contamination are also pertinent.

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

AFFECTED ENVIRONMENT

In August 2016, Terra Nova Planning & Research completed an Initial Site Assessment (ISA) and Aerially Deposited Lead Survey (ADL) for all of the alignments of the CV Link Project. The study area for hazardous materials includes investigation of possible contaminating activities (e.g., leaking underground storage tanks) within 0.25 miles of the Link alignments. The study area for the evaluation of airport and airstrip impacts is within two miles of the proposed alignment. The study area for the evaluation of wildfires and emergency access includes the proposed alignments and nearby areas surrounding them.

The evaluation of impacts associated with hazards and hazardous materials includes two components: the potential for hazards or hazardous materials to be used, transported or stored as part of the Proposed Project Alternative during construction and operation; and the potential impacts that existing hazards or hazardous materials could have on CV Link and its users.

The evaluation of the potential to encounter hazardous materials in soil and groundwater along the proposed alignment is based on federal, State, and local regulatory database reviews, which identified permitted hazardous materials uses, environmental cases, and spill sites within 1/8 miles of the proposed route. Additional information regarding identified cases was obtained from site investigation reports available from the State Water Resources Control Board (SWRCB) Geotracker database, solid waste disposal sites identified by SWRCB, active Cease and Desist Orders and Cleanup and Abatement Orders from SWRCB, and hazardous waste subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by the State Department of Toxic Substance Control (DTSC).

Permitted hazardous material uses, environmental cases and spill sites identified within 1/8 miles of the proposed route have been characterized as to their potential to affect subsurface conditions that might be encountered during project construction according to the following classification: Low Potential, Moderate Potential, and High Potential.

The entire length of the CV Link alignments, including all build alternatives, were surveyed as part of the Initial Site Assessment prepared for the Proposed Project Alternative. The results of the site survey indicate that potentially hazardous materials or releases were not identified on the project alignments.

There are five environmental cases and spill sites within 1/8 mile of the proposed route and build alternatives that have not been remediated to the satisfaction of regulatory agencies. Each of these properties is discussed individually below.

1. Meader's Cleaners, located immediately northwest of South Palm Canyon Drive and Tahquitz Creek, released tetrachloroethene (PCE; a common dry cleaning solvent) into the underlying soil and groundwater. The most recent groundwater monitoring report for this property shows that the PCE-impacted groundwater has migrated beneath the planned CV Link route. The depth to the PCE-impacted water was measured between 215 and 244 feet beneath the surface. Because of the depth of the groundwater, and the shallow depth of construction of the Proposed Project Alternative, there will be no impact from PCE underlying the route to onsite workers.
2. The second property involved the dumping of wastewater containing latex paint into a storm drain in 2006 near the intersection of Washington Street and Highway 111, in the City of La Quinta. Latex paint produced at that time would not have contained lead, and as a result this release is not considered a threat to the soil, groundwater, or health of onsite workers.

3. The third property is located at the corner of Shields Road and Avenue 46. Potentially hazardous materials were released from an underground tank on this property. The CV Link route is located up to 8 feet above and up-gradient of this potential release area. The materials released from the underground tank are not considered a potential threat to the soils underlying the route, and because of the shallow depth of project construction, would not impact onsite workers.
4. 81824 Trader Place, located in the City of Indio, is located up to 8 feet below and down-gradient of the CV Link route. Metal solutions were released from this property during a fire. Due to the location of this release down-gradient from the route, any residual contaminants are not considered a threat to the soils underlying the CV Link route on the adjoining levee.
5. A Shell service station located between 220 and 250 feet south of the travelway near the CV Link route at Monroe Street, is currently being remediated and monitored as a result of a gasoline spill. The fuel released at this facility had flowed away from the route. The remediation of soil and groundwater underlying this property appears to have been completed, and a request for closure submitted. Due to the down-gradient location of this property, any residual gasoline-related contaminants associated with this release are not considered a threat to the soil and groundwater underlying the planned alignment.

As described above, the un-remediated sites near or under the Proposed Project Alternative and all build alternatives will result in low or acceptable impacts to CV Link, during construction and over the lifetime of the project.

There are two electrical transformers located on or adjacent to the proposed alignment. Should removal of these or other transformers be required, the PCBs contained within them could be released if not properly handled. In order to assure that impacts associated with removal of the transformers, if necessary, are kept to acceptable levels, a mitigation measure has been added below.

In addition, the project-specific ISA recommended that an Environmental Contingency Plan, which addresses currently unknown below-ground spills found during construction, and provides a response plan for accidental spills directly related to construction activities. This recommendation has been provided as a mitigation measure below. Compliance with these regulations will ensure that the potential impacts associated with the construction of the proposed CV Link as they relate to the use of hazardous materials during construction will be acceptably low.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

According to the findings in the project-specific ISA, the project planning area, inclusive of all project alignments, is not included on any lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5. All the city, county and Tribal lands through which the project passes have adopted emergency response plans their own or that of another agency. The construction of the CV Link may create some temporary lane closures but these will be limited in scope and duration. Neither project construction nor operation are expected to conflict with established emergency response plans.

Over the life of the Proposed Project Alternative, maintenance activities could result in the use of chemicals and cleansers for cleaning and maintenance of the route, and pesticides, herbicides and fertilizers for landscape maintenance. The extent to which these materials may be introduced to the CV Link site is expected to be quite limited. These activities would be comparable to municipal maintenance activities conducted throughout the valley on roads, sidewalks and trails. Long-term Proposed Project Alternative impacts from the transport, use or disposal of hazardous materials will be low.

Aerially deposited lead (ADL) from the historical use of leaded gasoline, exists along roadways throughout California. If encountered, soil with elevated concentrations of lead as a result of ADL on the state highway system right of way within the limits of the project will be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

As with the Proposed Project Alternative, Alternative 1 will result in no or acceptably low impacts as they relate to hazardous materials or waste. Avoidance, minimization, and mitigation measures presented below ensure that potential impacts associated with such materials are avoided or minimized.

C. Alternative 2: Project with All Eight Cities

As with the Proposed Project Alternative, Alternative 2 will result in no or acceptably low impacts as they relate to hazardous materials or waste. Avoidance, minimization, and mitigation measures presented below ensure that potential impacts associated with such materials are avoided or minimized.

D. Alternative 3: No Build/No Project Alternative

The No Build/No Project Alternative will result in no impacts as they relate to hazardous waste or materials because the CV Link project will not be developed.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Mitigation Measures

HAZ-1. If the pad-mounted or pole-mounted transformers situated within or immediately adjacent to the CV Link routes must be removed during construction activities, they will be tested for PCBs prior to their removal and disposal. If PCBs are identified, the transformers and associated fluids shall be transported offsite and disposed of in accordance with Riverside County protocol.

HAZ-2. An Environmental Contingency Plan shall be prepared prior to any subsurface investigation or construction activities along the CV Link route. This plan will identify how project contractors and the project proponent respond to undocumented hazardous material release areas. This plan will also identify how project contractors and the project proponent are to respond to accidental hazardous material releases that occur during construction activities, such as an accidental fuel spill. The plan shall provide step-by-step responses for the field and office personnel to follow. In shall also include a detailed description of cleanup methodologies and hazardous material disposal sites.

CUMULATIVE IMPACTS

As analyzed above, none of the CV Link build alternatives would result in substantial impacts associated with hazards and hazardous materials during either construction or operations. Also as described above, the requirements and standards of local, regional and State regulations apply to all projects. Therefore, any project occurring in the vicinity of the CV Link would be required to construction and operate facilities consistent with applicable local, regional, state and federal requirements. Therefore, the Proposed Project Alternative will not substantially contribute to cumulative impacts associated with hazardous materials.

2-2.6 AIR QUALITY/GREENHOUSE GASES

REGULATORY SETTING

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act is its companion state law. These laws, and related regulations by the U.S. Environmental Protection Agency (U.S. EPA) and California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$), and sulfur dioxide (SO_2). In addition, national and state standard exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H2S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

Conformity

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional—or planning and programming—level and the project level. The Proposed Project Alternative must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide (SO_2). California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except

SO_2, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years for the RTP, and 4 years for the FTIP. RTP and FTIP conformity is uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA), make determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP (see Appendix G), then the Proposed Project Alternative meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope[56] that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

AFFECTED ENVIRONMENT

The following section describes the existing air quality in the Coachella Valley, and analyzes the potential impacts associated with the CV Link project. A variety of local and regional data and information, ranging from research and analysis conducted for the project site, to regional-scale planning and environmental documents, have been used in researching and analyzing the project and its potential effects on air quality.

[56] "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

Table 2-17
STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	Federal Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone (O_3)	1 hour	0.09 ppm	---	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.	Nonattainment	Severe 15-Nonattainment
	8 hours	0.070 ppm	0.070 ppm (4^{th} highest in 3 years)				
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	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.	Attainment	Attainment
	8 hours	9.0 ppm	9 ppm				
	8 hours (Lake Tahoe)	6 ppm	---				
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3 (expected number of days above standard < or equal to 1)	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 toxic & other aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved	Nonattainment	Serious-Nonattainment
	Annual	20 µg/m^3	--- [5]				

Table 2-17
STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	Federal Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
					road dust; natural sources.		
Fine Particulate Matter ($PM_{2.5}$)	24 hours	---	35 µg/m	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many toxic & other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NOx, sulfur oxides (SOx), ammonia, and ROG.	Nonattainment	Unclassified-Attainment
	Annual	12 µg/m^3	12.0 µg/m				
	24 hours (conformity process)	---	65 µg/m				
	Secondary Standard (annual; also for conformity process)	---	15 µg/m (98th percentile over 3 years)				
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain & nitrate contamination of stormwater. Part of the "NOx" group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Attainment	Attainment
	Annual	0.030 ppm	0.053 ppm				
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	0.075 ppm (99th percentile over 3 years)	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; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Attainment	Attainment
	3 hours	---	0.5 ppm				
	24 hours	0.04 ppm	0.14 ppm (for certain areas)				
	Annual	---	0.030 ppm (for certain areas)				

Table 2-17
STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	Federal Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Lead (Pb)	Monthly	1.5 µg/m	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.	Attainment	Unclassified-Attainment
	Calendar Quarter	---	1.5 µg/m (for certain areas)				
	Rolling 3-month average	---	0.15 µg/m				
Sulfate	24 hours	25 µg/m	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Attainment	N/A
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	Attainment	N/A

Table 2-17
STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	Federal Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Visibility Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	---	Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.	Attainment	N/A
Vinyl Chloride	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes	Attainment	N/A

[1] State standards are "not to exceed" or "not to be equaled or exceeded" unless stated otherwise.

[2] Federal standards are "not to exceed more than once a year" or as described above.

[1] ppm = parts per million

[1] Prior to 6/2005, the 1-hour ozone NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still be in use in some areas where 8-hour ozone emission budgets have not been developed, such as the S.F. Bay Area.

[1] Annual PM_{10} NAAQS revoked October 2006; was 50 $\mu g/m^3$. 24-hr. $PM_{2.5}$ NAAQS tightened October 2006; was 65 $\mu g/m^3$. Annual $PM_{2.5}$ NAAQS tightened from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ December 2012 and secondary annual standard set at 15 $\mu g/m^3$.

[1] $\mu g/m^3$ = micrograms per cubic meter

[1] The 65 $\mu g/m^3$ $PM_{2.5}$ (24-hr) NAAQS was not revoked when the 35 $\mu g/m^3$ NAAQS was promulgated in 2006. The 15 $\mu g/m^3$ annual $PM_{2.5}$ standard was not revoked when the 12 $\mu g/m^3$ standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (7/20/2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with a emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the "Interim" period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

[1] Final 1-hour NO_2 NAAQS published in the Federal Register on 2/9/2010, effective 3/9/2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause re-designation to nonattainment in some areas after 2016.

[1] EPA finalized a 1-hour SO_2 standard of 75 ppb (parts per billion [thousand million]) in June 2010. Nonattainment areas have not yet been designated as of 9/2012.

[1] Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

[1] The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, $PM_{2.5}$. Both the ARB and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and $PM_{2.5}$ as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

[1] Lead NAAQS are not considered in Transportation Conformity analysis.

An Air Quality and Greenhouse Gas Report was prepared for CV Link to assess potential air quality impacts associated with the construction and operation of the project (Terra Nova Planning & Research, Inc., September 2016). The report describes the current air quality regulations and provides historical air quality monitoring concentrations and minimization measures to further reduce projected emissions of criteria pollutants and greenhouse gases.

Climactic Conditions

The proposed CV Link project is located within the Coachella Valley portion of the SSAB immediately east of the San Jacinto Mountains. Meteorological conditions are largely attributable to the low desert geographic setting and the mountains surrounding the region that isolate the Coachella Valley from moderating coastal influences and create a hot and dry low-lying desert condition. As the desert heats up a large area of thermal low pressure develops, which draws dense, cooler coastal air through the narrow San Gorgonio Pass and into the valley, generating strong winds that cross the most active fluvial (water-related) erosion zones in the valley. These strong winds sweep up, suspend and transport large quantities of sand and dust, reducing visibility, damaging property, and constituting a substantial health threat. The region is also subject to seasonal northeasterly Santa Ana winds that are associated with high pressure parked over Nevada and the four corners region.

The Coachella Valley portion of the SSAB is typical of a low desert climate, with summer temperatures that frequently exceed 110°F and drop into the 20's during winter. The valley floor historically receives an average of four to six inches of rainfall per year with greater precipitation at higher elevations.
Air inversions, where a layer of stagnant air is trapped near the ground and is loaded with pollutants from motor vehicles and other sources, occasionally occur in the Coachella Valley due to local geological and climatic conditions. Inversions create conditions of haziness caused by suspended water vapor, dust, and a variety of chemical aerosols. Due to local climactic conditions, inversion layers generally form 6,000 to 8,000 feet above the desert floor.

Air Quality Standards
Federal and state air quality standards established for criteria pollutants are designed to protect the general population and especially that segment of the population that is most susceptible to respiratory distress or infection, including the elderly, children, asthmatics, or those who are weak from disease or illness. The following table shows state and federal standards and attainment statuses of criteria pollutants in the project area.

ENVIRONMENTAL CONSEQUENCES

Regional and Project-Level Conformity (All Build Alternatives)
The CV Link project is exempt from regional conformity per 40 CFR 93.126, Table 2 – Exempt Projects because the CV Link is considered a bicycle and pedestrian facility under the Air Quality category. In addition, the Proposed Project Alternative is listed in the Final 2017 Federal Transportation Improvement Plan (FTIP, September 2016) (Project ID: Riv131005) which was found to be consistent with Southern California Association of Governments (SCAG) approved 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Therefore, no additional conformity or "Hot Spot" analysis is required for this project.

Additional Environmental Studies (All Build Alternatives)
No additional environmental studies are required for air quality purposes.

Construction Conformity (All Build Alternatives)
Construction activities will not last for more than 5 years at one general location or jurisdiction, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

Construction (Short-Term) Impacts (All Build Alternatives)
During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include CO, nitrogen oxides (NOx), volatile organic compounds (VOCs), directly-emitted particulate matter (PM_{10} and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and pathway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing pathways, building bridges, and paving pathway surfaces. Construction-related effects on air quality would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM_{10}, $PM_{2.5}$, and small amounts of CO, SO_2, NOx, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the United States Environmental Protection Agency (U.S. EPA) to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. The Department's Standard Specifications (Section 14-9.03) on dust minimization requirements requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM_{10} emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, VOCs and some soot particulate (PM_{10} and $PM_{2.5}$) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and ARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur), so SO_2-related issues due to diesel exhaust will be minimal.

Some phases of construction, particularly paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site(s) increases.

Naturally Occurring Asbestos (All Build Alternatives)
The project is not located in a known or suspected asbestos area requiring additional documentation. According to the Initial Site Assessment prepared for the project, there are no asbestos concerns as they relate to building or structures associated with the CV Link project (see Hazardous Waste/Materials). No further action is required for asbestos.

Mobile Source Air Toxics (MSATs) (All Build Alternatives)
All build alternatives will result in the overall reduction of vehicle miles traveled, thus reduction mobile source air toxics. Therefore, there will be no adverse impacts associated with MSATs and no further action is required.

A. Proposed Project Alternative (Without Rancho Mirage)

The total length of the Proposed Project Alternative route is approximately 44± miles with alignments that total 57.62± miles in length. A pathway width assumption of 30 feet and buffer of 10 feet was assumed for analysis purposes. Actual path widths will vary, and will be much narrower in places, however the proposed width assumption demonstrates the worst-case scenario to ensure emissions from temporary and permanent ground disturbances are captured in the analysis. Therefore, it is assumed that the paved area for the Proposed Project Alternative is approximately 209.53 acres and total disturbed area of 279 acres.

Results of the Air Quality and Greenhouse Gas Report prepared for CV Link indicate that construction of the Proposed Project Alternative will not result in adverse impacts to air quality under mitigated conditions (see table below).

Table 2-18
Mitigated Construction Emissions Summary
Proposed Project Alternative Maximum Daily Emissions (lbs./day)

Year	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
2018	96.07	94.44	10.16	0.22	18.38	9.21
2019	92.40	86.61	9.52	0.22	15.89	8.34
2020	38.60	29.20	3.95	0.06	2.62	2.00
2021	38.33	26.75	3.64	0.06	2.41	1.80
SCAQMD Threshold*	**550.00**	**100.00**	**75.00**	**150.00**	**150.00**	**55.00**
Exceeds Threshold	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.2.
* Source: "SCAQMD Air Quality Significance Thresholds" prepared by South Coast Air Quality Management District.

Operational emissions associated with CV Link will be negligible and limited to area source emissions, such as pavement off-gassing, solid waste disposal, and landscape watering.

In addition, impacts associated with operation of the Proposed Project Alternative are expected to greatly improve existing air quality through the reduction of vehicle miles traveled. CV Link is expected to reduce overall vehicle miles traveled by promoting the use of alternative modes of transportation. The CV Link Traffic Report (2016) prepared by Urban Crossroads projects the Proposed Project Alternative, once constructed and in use, would result in a reduction of 7,410,993 annual vehicle miles. The following table summarizes the daily reduction in mobile source criteria pollutants that would result due to the reduction in vehicle miles. Overall, operation of the CV Link will result in a substantial net reduction of daily criteria pollutants.

The following tables provide operational emissions and overall reductions in criteria pollutants.

Table 2-19
Proposed Project Alternative
Operational Emission Reductions of Criteria Pollutants
(lbs./day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source Reductions	23,326.89	2,583.27	3,251.46	5.40	36.20	23.13
Operational Emissions	0.02	0.00	58.86	0.00	0.00	0.00
Net Operational Emissions	**-23,326.87**	**-2,583.27**	**-3,192.60**	**-5.40**	**-36.20**	**-23.13**

Source: CalEEMod Version 2013.2.2. Value shown represents average daily-unmitigated emission across summer and winter activities.

Operational GHG emissions associated with the Proposed Project Alternative will be limited to off-site energy production, solid waste disposal, and landscaping water demands. According to the project Master Plan, CV Link will require 819,527 kWh per year for various lighting needs and charging stations. The project proposes a 2kW solar energy production system to be mounted on shade structures that will offset demands by 735,840 kWh per year, resulting in a net demand of 83,687 kWh annually. Annual solid waste generated from CV Link is projected to be 2,875 tons per year. The water budget for landscaped areas is projected to be 5.6 million gallons per year.

The project will also result in substantial reductions due to the motor vehicle trips that may be avoided and the associated reduction in Valley-wide vehicle miles traveled. The following table shows the projected annual reduction in emissions of GHGs plus the amortized construction emissions. As shown below, it is expected that the CV Link will result in a net GHG reduction of 61,672.53 metric tons per year. Due to the project's substantial direct reduction in GHG emissions, the Proposed Project Alternative will not conflict with adopted GHG reduction plans, policies or regulations. Overall the project will have a positive impact on the environment by reducing Valley-wide GHG emissions.

Table 2-20
Proposed Project Alternative
Operational GHG Emission Reduction Summary
(Metric Tons/Year)

	CO_2	CH_4	N_2O	CO_2e
Energy Use	23.95	0.00	0.00	24.04
Water Use	17.96	0.00	0.00	18.03
Solid Waste	583.59	34.48	0.00	1,307.88
Annual Reductions	-63,024.77	-5.80	-0.00	-63,146.74
Buildout plus Amortized Construction Emissions[1]				**-61,672.53**

Source: CalEEMod Version 2013.2.2. Values shown represent the total unmitigated GHG emission projections for operation of the Proposed Project Alternative and assumes an annual avoidance of 7,410,993 vehicle miles in 2040.
1. Buildout construction GHG emissions were amortized over 30-years then added to buildout operational GHG emissions. 3,728.03/30 =124.26

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1, similar to the Proposed Project Alternative, will eliminate all Rancho Mirage segments in addition to all Indian Wells segments. Construction of Alternative 1 will include additional termini on the east and west sides of Indian Wells. The total length of the Alternative 1 alignment is approximately 48.2 miles when all alignment variations are considered. The same pathway width assumption of 30 feet and

buffer of 10 feet used for the Proposed Project Alternative was also assumed for Alternative 2. Therefore, it is assumed that the paved area for Alternative 1 is approximately 175 acres and total disturbed area of 233 acres.

Results of the Air Quality and Greenhouse Gas Report prepared for the CV Link indicate that construction of Alternative 1 will result in low impacts to air quality under mitigated conditions (see mitigation measures below). In addition, impacts associated with operation of Alternative 1 are expected to greatly improve existing air quality through the reduction of vehicle miles traveled. The CV Link Traffic Report (2016) prepared by Urban Crossroads projects that Alternative 1 would result in a reduction of 6,422,918 annual vehicle miles. Therefore, impacts associated with air quality are considered to be low. The following tables provide overall reductions in criteria pollutants and greenhouse gases.

Table 2-21
Mitigated Construction Emissions Summary
Alternative 1: Maximum Daily Emissions (lbs./day)

Year	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
2018	88.40	87.94	9.60	0.20	16.57	8.64
2019	85.01	80.63	8.98	0.20	14.43	7.86
2020	38.31	29.26	3.94	0.06	2.25	1.91
2021	38.06	26.81	3.62	0.06	2.04	1.71
SCAQMD Threshold*	**550.00**	**100.00**	**75.00**	**150.00**	**150.00**	**55.00**
Exceeds Threshold	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.2.
* Source: "SCAQMD Air Quality Significance Thresholds" prepared by South Coast Air Quality Management District.

Table 2-22
Alternative 1: Operational Emission Reductions of Criteria Pollutants (lbs./day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source Reductions	-21,494.72	-2,380.38	-2,996.30	-4.97	-33.35	-21.31
Operational Emissions	0.01	0.00	49.24	0.00	0.00	0.00
Net Operational Emissions	**-21,494.71**	**-2,380.38**	**-2,947.06**	**-4.97**	**-33.35**	**-21.31**

Source: CalEEMod Version 2013.2.2. Value shown represents average daily-unmitigated emission across summer and winter activities.

Operational GHG emissions associated with Alternative 1 will be limited to off-site energy production, solid waste disposal, and landscaping water demands. According to the project Master Plan, CV Link will require 819,527 kWh per year for various lighting needs and charging stations. The project proposes a 2kW solar energy production system to be mounted on shade structures that will offset demands by 735,840 kWh per year, resulting in a net demand of 83,687 kWh annually. Annual solid waste generated from CV Link is projected to be 2,875 tons per year. The water budget for landscaped areas is projected to be 5.3 million gallons per year.

Alternative 1 will also result in substantial GHG reductions due to the motor vehicle trips that may be avoided and the associated reduction in Valley-wide vehicle miles traveled. The following table shows the projected annual reduction in emissions of GHGs plus the amortized construction emissions. As shown below, it is expected that the CV Link will result in a net GHG reduction of 56,755.46 metric tons per year. Due to the project's direct substantial reduction in GHG emissions, the Proposed Project

Alternative will not conflict with adopted GHG reduction plans, policies or regulations. Overall the project will have a positive impact on the environment by reducing Valley-wide GHG emissions.

Table 2-23
Alternative 1
Operational GHG Emission Reduction Summary
(Metric Tons/Year)

	CO_2	CH_4	N_2O	CO_2e
Energy Use	23.95	0.00	0.00	24.04
Water Use	16.89	0.00	0.00	16.96
Solid Waste	583.59	34.48	0.00	1,307.88
Annual Reductions	-58,074.59	-5.35	-0.00	-58,186.98
Buildout plus Amortized Construction Emissions[1]				**-56,755.46**

Source: CalEEMod Version 2013.2.2. Values shown represent the total unmitigated GHG emission projections for operation of Alternative 1 and assumes an annual avoidance of 6,422,918 vehicle miles in 2040.
1. Buildout construction GHG emissions were amortized over 30-years then added to buildout operational GHG emissions. 3,469.39/30 =115.64

C. Alternative 2: Project with All Eight Cities

Alternative 2 proposes to include all cities listed in the Proposed Project Alternative, and also includes connectivity through the Rancho Mirage. The total length of the Alternative 2 alignment is approximately 64.3 miles. The same pathway width assumption of 30 feet and buffer of 10 feet used for the Proposed Project Alternative was also assumed for Alternative 2. Therefore, it is assumed that the paved area for Alternative 2 is approximately 233 acres and total disturbed area of 311 acres

Results of the Air Quality and Greenhouse Gas Report prepared for CV Link indicate that construction of the Alternative 2 will result in low impacts to air quality under mitigated conditions (see mitigation measures below). In addition, impacts associated with operation of Alternative 2 are expected to greatly improve existing air quality through the reduction of vehicle miles traveled. The CV Link Traffic Report (2016) prepared by Urban Crossroads projects that Alternative 2 would result in a reduction of 9,071,027 annual vehicle miles. Therefore, impacts associated with air quality are considered low. The following tables provide overall reductions in criteria pollutants and greenhouse gases.

Table 2-24
Mitigated Construction Emissions Summary
Alternative 2
Maximum Daily Emissions (Lbs per Day**)**

Year	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
2018	98.91	94.68	10.37	0.24	19.20	4.53
2019	95.24	86.85	9.72	0.24	16.47	4.17
2020	38.31	27.75	3.94	0.06	2.25	1.84
2021	38.06	25.43	3.62	0.06	2.04	1.65
SCAQMD Threshold*	**550.00**	**100.00**	**75.00**	**150.00**	**150.00**	**55.00**
Exceeds Threshold	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.2.
* Source: "SCAQMD Air Quality Significance Thresholds" prepared by South Coast Air Quality Management District.

Table 2-25
Alternative 2
Operational Emission Reductions of Criteria Pollutants
(Lbs per Day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source Reductions	-26,464.31	-2,931.70	-3,687.63	-6.16	-43.51	-26.93
Operational Emissions	0.02	0.00	65.72	0.00	0.00	0.00
Net Operational Emissions	**-26,464.29**	**-2,931.70**	**-3,621.91**	**-6.16**	**-43.51**	**-26.93**

Source: CalEEMod Version 2013.2.2. Value shown represents average daily-unmitigated emission across summer and winter activities.

Operational GHG emissions associated with Alternative 2 will be limited to off-site energy production, solid waste disposal, and landscaping water demands. According to the project Master Plan, CV Link will require 819,527 kWh per year for various lighting needs and charging stations. The project proposes a 2kW solar energy production system to be mounted on shade structures that will offset demands by 735,840 kWh per year, resulting in a net demand of 83,687 kWh annually. Annual solid waste generated from CV Link is projected to be 2,875 tons per year. The water budget for landscaped areas is projected to be 6.1 million gallons per year.

Table 2-26
Alternative 2
Operational GHG Emission Reduction Summary
(Metric Tons/Year)

	CO_2	CH_4	N_2O	CO_2e
Energy Use	23.95	0.00	0.00	24.04
Water Use	19.45	0.00	0.00	19.53
Solid Waste	583.59	34.48	0.00	1,307.88
Annual Reductions	-71,898.24	-6.60	0.00	-72,036.86
Buildout plus Amortized Construction Emissions[1]				**-70,557.20**
Source: CalEEMod Version 2013.2.2. Values shown represent the total unmitigated GHG emission projections for operation of Alternative 1 and assumes an annual avoidance of 6,422,918 vehicle miles in 2040. 1. Buildout construction GHG emissions were amortized over 30-years then added to buildout operational GHG emissions. 3,846.39/30 =128.21				

Alternative 2 will also result in substantial GHG reductions due to the motor vehicle trips that may be avoided and the associated reduction in Valley-wide vehicle miles traveled. The following table shows the projected annual reduction in emissions of GHGs plus the amortized construction emissions. As shown below, it is expected that the CV Link will result in a net GHG reduction of 70,557.20 metric tons per year. Due to the project's direct substantial reduction in GHG emissions, the Proposed Project Alternative will not conflict with adopted GHG reduction plans, policies or regulations. Overall the project will have a positive impact on the environment by reducing Valley-wide GHG emissions.

D. Alternative 3: No Build/No Project Alternative

Alternative 3 will not result in any construction or operational impacts to air quality because the project would not be developed. Therefore there are no impacts. However, Alternative 3 will not result in the reduction of GHGs or pollutants, and air quality benefits identified for the Proposed Project Alternative and other project alternatives will not be realized.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. However, mitigation measures are required to ensure potential impacts during construction are reduced to the greatest extent practicable. The following provides mitigation measures required to reduce impacts to air quality to acceptable levels.

Mitigation Measures

AQ-1 To reduce particulate matter and NOx emissions construction equipment shall utilize aqueous diesel fuels, diesel particulate filters and diesel oxidation catalyst with a minimum 30% reduction rating during all construction activities for the Proposed and Alternative 1 projects, and minimum of 35% reduction rating during all construction activities for Alternative 2.

AQ-2 SCAQMD Rule 403 (403.1 specific to the Coachella Valley): A dust control Plan shall be prepared and implemented during all construction activities, include ground disturbance, grubbing, grading, and soil export. Said plan shall include but not be limited to the following best management practices:

- Chemically treat soil where activity will cease for at least four consecutive days;
- All construction grading operations and earth moving operations shall cease when winds exceed 25 miles per hour;
- Water site and equipment morning and evening and during all earth-moving operations;
- Operate street-sweepers on paved roads adjacent to site;
- Establish and strictly enforce limits of grading for each phase of development; and/or
- Stabilize and re-vegetate areas of temporary disturbance needed to accomplish each phase of development.
- Wash off trucks as they leave the project site as necessary to control fugitive dust emissions.
- Cover all transported loads of soils, wet materials prior to transport, provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM_{10} and deposition of particulate matter during transportation.
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic

CUMULATIVE IMPACTS

Cumulative air quality impacts were assessed on a regional scale given the dispersing nature of pollutant emissions and aggregate impacts from surrounding jurisdictions and air management districts. Any activity resulting in emissions of PM_{10}, ozone, or ozone precursors will unavoidably contribute, at some level, to regional non-attainment designations of ozone and PM_{10}. However, the level of impact a single project may have on regional air quality is difficult to measure.

The Coachella Valley enforces the SCAQMD 2012 Air Quality Management Plan, soon to be superseded by the 2016 Air Quality Management Plan, and 2002 PM_{10} Coachella Valley State Implementation Plan (CVSIP) to ensure levels of criteria pollutants are regulated and minimized to the best of the region's ability, particularly through the enforcement of SCAQMD daily thresholds.

The SSAB is designated as nonattainment under both the CAAQS and the NAAQS for ozone and PM_{10}. Emissions of CO, NOX and ROG that exceed the SCAQMD operational thresholds would contribute to the ozone nonattainment designation, while emissions of PM_{10} that exceed the SCAQMD thresholds would contribute to the PM_{10} nonattainment designation of the SSAB.

Construction activities associated with development of the CV Link will not exceed SCAQMD daily thresholds for criteria pollutants under mitigated conditions. In addition, air quality impacts associated with CV Link will be more than offset by the substantial reduction in motor vehicle miles traveled. However, emission of CO, NOx, ROG, and PM_{10} during construction of the project are unavoidable and will marginally contribute to regional ozone and PM_{10} non-attainment designations. The following discussions address cumulative impacts related to ozone and PM_{10}.

Regulation of Ozone

As previously discussed, SCAQMD studies indicate that most ozone is transported to the Salton Sea Air Basin from the upwind sources in the South Coast Air Basin. The amount of ozone contributed from other air basins is difficult to quantify; however, improved air quality in the project area depends upon reduced ozone emissions in the South Coast Air Basin. Therefore, cumulative impacts to ozone are better managed on a multi-regional scale as opposed to single projects. The SCAQMD 2012 AQMP and Draft 2016 AQMP provide current and future measures to reduce both stationary and mobile source ozone emissions. Proposed measures to reduce ozone include emission reductions from coatings and solvents,

RECLAIM facilities, early transitions to cleaner mobile technologies, and incentives to adopt net zero and near zero technologies[57].

CalEEMod does not calculate ozone emissions directly and therefore emissions of ozone precursors (CO, NOx, and ROG) were evaluated to determine project-related impacts to ozone. Ozone precursors are the primary pollutants involved in the chemical reaction process that forms ozone. The Proposed Project Alternative will not exceed local construction or operational thresholds for ozone precursors under required mitigated conditions. In addition, the reduction of criteria pollutants associated with reduced vehicle miles traveled substantially outweighs new emissions created during project construction.

Development of CV Link will adhere to ozone reduction measures set forth in the SCAQMD AQMP. In addition, the project will result in substantial reductions of future ozone precursors related to mobile source emissions. Therefore, CV Link's contribution to cumulative air impacts related to ozone is considered low and not cumulatively substantial.

Regulation of PM_{10}

Similar to ozone, PM_{10} is regulated through the SCAQMD 2012 and Draft 2016 Air Quality Management Plan and 2002 PM_{10} Coachella Valley State Implementation Plan (CVSIP). Additional PM_{10} reduction measures include applicable state code and AQMD Rules, such as Rule 403 (Fugitive Dust), which enforces fugitive dust compliance for all activities within the SSAB. As shown in the analysis above, the proposed project will not exceed local daily thresholds for PM_{10}. Therefore, cumulative impacts to PM_{10} are considered low.

In conclusion, cumulative air quality impacts related to construction and operation of the CV Link project are considered less than substantial. Development and operation of the Proposed Project Alternative will not exceed air quality maximum daily thresholds for CO, NOx and PM_{10}, which are cumulative thresholds by their nature. In addition, the Proposed Project Alternative is consistent with regulation requirements of ozone and PM_{10} in the Salton Sea Air Basin. Therefore impacts related to project ozone and PM_{10} emissions will be low. The CV Link project will not result in a cumulatively considerable contribution to GHG emissions, but will result in a substantial avoidance of long-term GHG emissions.

2-2.7 NOISE

REGULATORY SETTING

The National Environmental Policy Act (NEPA) of 1969 provides the broad basis for analyzing and abating highway traffic noise effects. The intent of this law is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement under NEPA are described below.

National Environmental Policy Act and 23 CFR 772

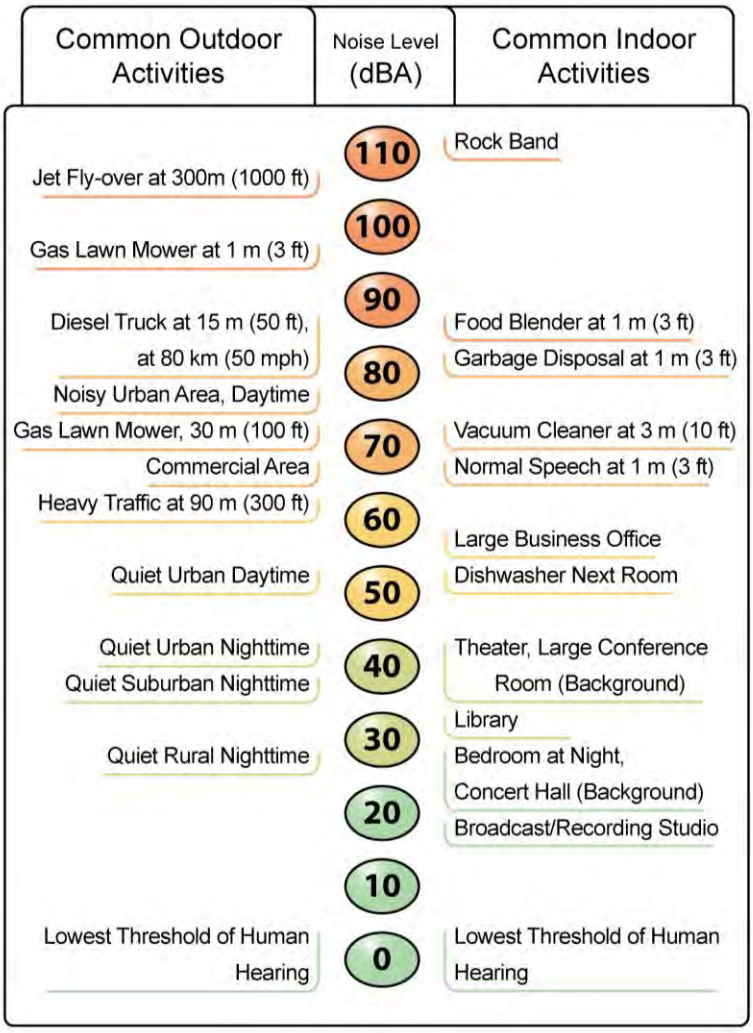
For highway transportation projects with FHWA involvement (and the Department, as assigned), the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations [CFR] 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA 23 CFR 772 analysis.

[57] Final 2012 Air Quality Management Plan, South Coast Air Quality Management District, February 2013.

Table 2-27 Noise Abatement Criteria (2011 Noise Protocol)		
Activity Category	**NAC, Hourly A-Weighted Noise Level, Leq(h)**	**Description of activity category**
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[1]	67 (Exterior)	Residential.
C[1]	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.
Includes undeveloped lands permitted for this activity category.		

The following figure lists the noise levels of common activities to enable readers to compare the actual and predicted construction and roadway traffic noise levels discussed in this section with common activities.

Figure 1
Noise Levels of Common Activities



According to the Department's 2011 Noise Protocol *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing 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'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 or 7 dBA 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 and the cost per benefited residence.

AFFECTED ENVIRONMENT

The CV Link project is expected to generate both operational and construction noise level impacts on the land uses located near this multi-modal transportation facility including established noise sensitive residential communities. In August 2016, a Noise Study was prepared by Urban Crossroad to analyze the potential operational and construction noise level impacts. The Project related operational noise levels will include a variety of activities associated with: bicycles, pedestrians and low-speed electric vehicles. While these activities on their own may not represent substantial noise generators, along some alignments the CV Link alternatives would be located adjacent to noise-sensitive land uses, such as the outdoor living areas of single-family and multi-family residences, and therefore, must be evaluated to assess the potential noise impacts. In addition, in some instances construction of the CV Link alignments will take place adjacent to noise-sensitive land uses and, therefore, represents a temporary, short-term noise level increase on the existing ambient noise environment.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Construction Impacts

Construction noise levels would vary at any given receptor depending on construction timing, equipment type and duration of use, distance between the noise source and receptor, and the presence or absence of barriers between the noise source and the receptor. The perception of construction noise by a given sensitive receptor also varies depending on the existing noise levels and shielding.

Daily construction hours would be limited to permitted hours of each local jurisdiction's Municipal Code, and will typically limit construction to between 7:00 a.m. and 5:00 p.m. Monday through Friday, except for holidays. Typical construction equipment generates maximum (worst-case) noise levels ranging from about 70 to 90 dBA Lmax at a distance of 50 feet from the source (FHWA 2006).

Even so, all the jurisdictions allow noise levels to reach above 65 dBA if it the source is construction-related and between the permitted timeframe. Construction noise is temporary and sporadic creating a lesser effect to the nearest sensitive receptors.

Table 2-28
Construction Equipment Noise Level Summary

Construction phase	Construction Noise Levels at 50 Feet (dBA Lmax)	Distance to 86 dBA Lmax Noise Level Contour (Feet)[2]	Nighttime Threshold Exceeded?[3]
Site Preparation	84.2	41'	No
Grading	89.7	76'	Yes
Paving (Mobile Equipment)	82.8	35'	No
Paving (Stationary Equipment)	80.0	25'	No

[2] Estimated distance to the 86 dBA Lmax noise level contour for each phase of construction activity.
[3] Does the construction noise level, by phase, exceed the Caltrans 86 dBA Lmax at 50 feet night time criteria?

Pile Driving Impacts

The CV Link project includes the construction of several bridges, with which pile driving may be associated, although drilled piles are also under consideration. A vibratory impact analysis was prepared to supplement the project noise impact study and evaluate potential impacts from this construction technique. To control vibration impacts associated with the construction of the CV Link project, some jurisdictions in the project study area have identified specific vibration level standards. The CV Link noise analysis identifies the vibration standards for each jurisdiction, including the Caltrans vibration level standards for building damage and human annoyance, in compliance with the Federal funding requirements of the project.

Based on the noise study comparison of the vibration standards of each local jurisdiction, the most conservative (worst-case) regulations are established by Caltrans, which also include a significance threshold for building damage of 0.12 in/sec peak-particle-velocity (PPV), and a *barely perceptible* human annoyance significance threshold of 0.01 in/sec PPV. Therefore, the more conservative Caltrans vibration level thresholds are used in this analysis to evaluate the potential impacts due to Project pile driving activities at the planned 13 bridge locations.

For purposes of analysis it is assumed that the pile driving methods will be used at all bridge locations. The noise levels used in the pile driving noise analysis are in Lmax based on the impulsive nature of pile driver activities, and the Caltrans Lmax noise level standards for construction noise during the nighttime hours of 9:00 p.m. and 6:00 a.m. The pile driving noise analysis relies on the Roadway Construction Noise Model (RCNM) published by the Federal Highway Administration (FHWA) that includes a national database of construction equipment reference noise emission levels. The noise model provides a spatially accurate three-dimensional representation of the Project study area using a variety key data inputs The RCNM reference noise level for an impact pile driver is used to assess the potential noise impacts from the pile driving methods planned at each bridge location. Table 2-31 shows the RCNM dBA Lmax reference noise level for an impact pile driver at 50 feet, and the sound power level (PWL) calibrated in a CadnaA (Computer Aided Noise Abatement) noise prediction model used in this analysis.

Table 2-29
Reference Pile Driving Equipment Noise Levels

Reference Noise Source for the Planned Pile Driving Methods[1]	Dist. From Source (Feet)	Noise Source Height (Feet)	Reference Noise Level @ 50 Feet (dBA Lmax)	Calibrated Sound Power Level (PWL)[2]
Impact Pile Driver	50'	6'	101.0	132.7

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Calculated using the CadnaA noise model at the reference distance to the noise source. Hard site conditions are used in the CadnaA noise prediction model which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation used to calculate the resulting noise level (SPL2) at a given distance (D1) distance attenuation based on a reference noise level (SPL1) at the reference distance (D2) is as follows: SPL2 = SPL1 - 20log(D2/D1).

Noise generating construction activities shall be restricted to each jurisdictions' established limits to the hours of operation. In effect, if the construction activities comply with the permitted hours of each jurisdiction and the nighttime noise level standards identified by Caltrans of 86 dBA Lmax at 50 feet, the construction noise levels associated with CV Link are considered exempt from the noise standards of the ordinance. Based on the reference noise level for an impact pile driver 101.0 dBA Lmax at 50 feet, the construction of CV Link bridges will exceed the 86 dBA Lmax threshold at 50 feet identified by Caltrans

during the nighttime hours of 9:00 p.m. to 6:00 a.m. However, no nighttime construction is planned, which would require compliance with the Caltrans 86 dBA Lmax at 50 feet nighttime noise level threshold.

The pile driving noise prediction model indicates that the noise levels at nearby sensitive receiver locations will approach up to 90 dBA Lmax. It is important to note that the pile driving noise level contour boundaries represent worst-case conditions since they are based on the simultaneous operation of an impact pile driver at each pile location. In reality, the impact activities at each pile location are not anticipated to occur at the same time. Therefore, since the construction activities will be limited to the permitted hours and will not operate at night or generate noise levels above the nighttime 86 dBA Lmax Caltrans threshold at 50 feet, this demonstrates that the construction of all 13 bridges will be compliant with the Caltrans noise standards for construction.

Tolerance of construction noise levels by nearby homeowners has been shown to greatly increase when informed that construction noise is temporary and that the contractor is taking steps to reduce the construction noise levels. Furthermore, periodic exposure to high noise levels in short duration, such as project-related construction noise, is typically considered an annoyance and not impactful to human health.

The results of this impact pile driving vibration analysis indicate that the vibration levels due to pile driving will exceed the Caltrans 0.12 in/sec PPV building damage threshold at up to two locations, at the Deep Canyon bridge in Indian Wells and the Thunderbird Channel bridge on Highway 111 in Rancho Mirage, and represent potentially substantial vibration impacts. Additionally, vibration levels exceeding the Caltrans *barely perceptible* human annoyance threshold of 0.01 in/sec PPV will occur at sensitive receiver locations within a 400-foot radius of the pile locations, and result in potentially substantial vibration levels at up to 55 receiver locations along the CV Link Route. Therefore, if pile driving is selected as the means of constructing bridge piles, mitigation measures are required to reduce the vibration levels at nearby sensitive receiver locations.

Table 2-30
Impact and CIDH Piling Equipment Vibration Levels

Distance to Construction Activity (Feet)	Vibration Levels (in/sec)[1]		Threshold Exceeded?[2]			
			Building Damage Threshold (0.12 in/sec)		Barely Perceptible Human Annoyance Threshold (0.01 in/sec)	
	Pile Driver (Impact)	CIDH Pile Auger Drill	Pile Driver (Impact)	CIDH Pile Auger Drill	Pile Driver (Impact)	CIDH Pile Auger Drill
25'	0.640	0.089	Yes	No	Yes	Yes
50'	0.226	0.031	Yes	No	Yes	Yes
76'	**0.121**	0.017	**Yes**	No	Yes	Yes
100'	0.080	**0.010**	No	No	Yes	**Yes**
125'	0.057	0.008	No	No	Yes	No
400'	**0.010**	0.001	No	No	**Yes**	No

[1] Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.
[2] Does the peak vibration exceed the building damage vibration threshold of 0.12 in/sec PPV or the barely perceptible human annoyance vibration threshold of 0.01 in/sec PPV at the given distance?
"CIDH" = Cast-In-Drilled-Hole
Bold text indicates distances to the extent of the significance thresholds using impact pile driving methods.

Operational Impacts

To appropriately determine the project's impacts on noise levels, short-term noise level measurements of similar activities were collected at comparable recreational facilities. These included bicycling, hiking and dog walking, and golf cart operations. The reference measurements included Coachella Valley locations and other areas in southern California, in order to analyze the most comprehensive range of noise levels that could be experienced at the Proposed Project Alternative. Noise level thresholds were derived from each jurisdiction's Municipal Code for "Daytime," "Evening," and "Nighttime" hours and are also adjusted for location in relation to potentially sensitive receptors. As shown in the following table, operational noise levels will not exceed established thresholds, and therefore there will be no adverse impacts.

Table 2-31
Project-Related Operational Noise Level Compliance

Meas. Location[1]	Jurisdiction[9]	Land Use[2]	Energy Average Hourly Noise Level (dBA Leq)[3]			Base Exterior Noise Level Limits (dBA Leq)[4]			Ambient Exceeds Standards?[5]			Exterior Noise Level Limits After Ambient Adjustment (dBA Leq)[6]		
			Day	Eve.	Night	Day	Eve.	Night	Day	Eve.	Night	Day	Eve.	Night
L1	Palm Springs	Low Dens. Res.	67.4	66.0	65.7	50	45	40	**Yes**	**Yes**	**Yes**	67	66	66
L2	Palm Springs	CV Link	52.9	51.7	48.9	60	55	50	No	No	No	60	55	50
L3	Palm Springs	Low Dens. Res.	67.9	66.9	63.8	50	45	40	**Yes**	**Yes**	**Yes**	68	67	64
L4	Cathedral City	Residential	55.0	-[7]	49.8	55	55	55	No	-[7]	No	55	-[7]	55
L5	Palm Springs	CV Link	61.1	59.4	55.4	-[8]	-[8]	-[8]	No	No	No	-[8]	-[8]	-[8]
L6	Palm Springs	CV Link	55.4	55.3	49.3	-[8]	-[8]	-[8]	No	No	No	-[8]	-[8]	-[8]
L7	Palm Springs	CV Link	55.6	52.6	49.5	-[8]	-[8]	-[8]	No	No	No	-[8]	-[8]	-[8]
L8	Cathedral City	CV Link	60.5	-[7]	56.6	-[8]	-[8]	-[8]	No	-[7]	No	-[8]	-[8]	-[8]
L13	Palm Desert	Residential	65.2	-[7]	58.6	55	-[7]	45	**Yes**	-[7]	**Yes**	65	-[7]	59
L14	Palm Desert	Park	53.2	-[7]	49.3	55	-[7]	45	No	-[7]	**Yes**	55	-[7]	49
L15	Palm Desert	School	55.5	-[7]	49.2	55	-[7]	45	**Yes**	-[7]	**Yes**	56	-[7]	49
L16	Palm Desert	CV Link	48.4	-[7]	46.8	-[8]	-[8]	-[8]	No	-[7]	No	-[8]	-[8]	-[8]
L17	Indian Wells	CV Link	52.3	-[7]	50.6	-[8]	-[8]	-[8]	No	-[7]	No	-[8]	-[8]	-[8]
L18	Indian Wells	CV Link	62.1	-[7]	56.3	-[8]	-[8]	-[8]	No	-[7]	No	-[8]	-[8]	-[8]
L19	Indian Wells	Residential	60.9	-[7]	56.8	55	-[7]	50	**Yes**	-[7]	**Yes**	65	-[7]	60
L20	Indio	Residential	53.5	-[7]	50.1	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L21	Indio	Residential	55.9	-[7]	51.2	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L22	Indio	Residential	61.3	-[7]	59.1	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L23	Indio	Residential	62.0	-[7]	61.4	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L24	Indio	School	59.3	-[7]	56.7	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L25	Indio	School	57.1	-[7]	56.1	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L26	Indio	Commercial	62.3	-[7]	60.6	65	-[7]	45	No	-[7]	**Yes**	65	-[7]	45
L27	Coachella	Open Space	67.8	-[7]	63.2	55	-[7]	45	**Yes**	-[7]	**Yes**	68	-[7]	63
L28	Coachella	Park	63.0	-[7]	58.9	55	-[7]	45	**Yes**	-[7]	**Yes**	63	-[7]	59
L29	Coachella	Residential	70.1	-[7]	65.2	55	-[7]	45	**Yes**	-[7]	**Yes**	70	-[7]	65
L30	Coachella	Residential	58.3	-[7]	54.4	55	-[7]	45	**Yes**	-[7]	**Yes**	58	-[7]	54

[1] See Exhibit 5-A and Appendices 5.1 and 7.1 for the noise level measurement locations.
[2] Based on the General Plan land use maps of each jurisdiction.
[3] Existing ambient noise levels as shown on Table 5-1.
[4] As previously shown on Table 3-1 for each jurisdiction. For the purposes of this analysis, the L_{50} noise level standards of the Cities of Rancho Mirage and La Quinta are evaluated based on the Leq hourly noise levels to evaluate the potential worst-case hourly noise levels due to the operation of the Project.
[5] The base exterior noise level limits are adjusted based on each jurisdictions' criteria.
[6] The jurisdiction's Municipal Code does not include evening hours.
[7] The measurement location represents the future CV Link alignment, and therefore, no exterior noise standards are identified since the land use is not noise-sensitive.
"Day" = Daytime; "Eve." = Evening; "Night" = Nighttime hours based on the municipal code of each jurisdiction (generally 10 PM to 7 AM)
[8] The table does not include measurements for Rancho Mirage because it is not part of the Proposed Project Alternative
[9] The table does not include measurements for La Quinta or the County of Riverside because the Route does not traverse through sensitive receptors in these jurisdictions.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Under Alternative 1, CV Link will not be built in the cities of Rancho Mirage or Indian Wells. For the cities containing CV Link, the environmental consequences pertaining to noise of Alternative 1 will be the same as those described above for the Proposed Alternative. Although the project will not extend through Rancho Mirage or Indian Wells, some of their residents may experience residual but not extensive noise by the project due to proximity to it. If pile driving is used to construct bridge piles, nearby sensitive receptors could be impacted by this noise source. Adherence to the below mitigation, avoidance and minimization measures set forth below will ensure noise impacts associated with Alternative 1 are low.

C. Alternative 2: Project with All Eight Cities

Under Alternative 2, CV Link will be built within all eight cities of the central Coachella Valley, including Rancho Mirage and Indian Wells, and on County and Native American lands. The environmental consequences of Alternative 2 will be the same as those described above for the Proposed Alternative, and will affect residents, businesses, and properties in all jurisdictions. As with the Proposed Project Alternative and Alternative 1, if pile driving is used to construct bridge piles, nearby sensitive receptors could be impacted by this noise source. Adherence to the mitigation, avoidance, minimization measures set forth below will ensure noise impacts associated with Alternative 2 are kept to acceptable levels.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build Alternative, no CV Link project will be built. Noise to occur at current levels. No new project-related jobs or municipal revenues will be generated, and no improvements to regional accessibility will occur.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CV Link could have substantial construction-related noise and vibration impacts, which require mitigation. The Noise Impact Analysis included the following mitigation measures.

Mitigation Measures

N-1. Project construction activities shall only occur between the permitted hours of each local jurisdiction's Municipal Code or in compliance with Caltrans Standard Specification (Noise Control) Section 14-8.02, whichever is more stringent. The project construction supervisor shall ensure compliance.

N-2. During all project site construction, all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction supervisor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receivers nearest the Project site.

N-3. The construction supervisor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site (i.e., at the planned staging areas or further from nearby sensitive receiver locations if possible) during all construction. The closest distance between a sensitive receptor to a staging area will be 30 feet.

N-4. The use of large bulldozers within 100 feet of nearby sensitive land uses (e.g. residential, school, etc.) shall be minimized and avoided if possible.

N-5. The construction supervisor shall limit haul truck deliveries to the same hours specified for construction equipment by each local jurisdiction's Municipal Code.

N-6. Alternative piling methods shall be used to reduce the potential impacts at nearby sensitive receiver locations as follows:

a. No impact pile driving devices and CIDH piling methods shall be used within 76 feet of sensitive receiver locations near the Thunderbird Channel and Deep Canyon Channel Bridge (as indicated on Table 4). Alternative piling methods are required to reduce the vibration levels at these locations. Based on an evaluation by Caltrans an alternative method, such as Tubex piles, which can produce lower vibration levels of 0.05 in/sec PPV at 25 feet during installation shall be used. Other pile driving alternatives capable of producing equal or lower vibration levels are acceptable.

b. Cast-In-Drilled-Hole (CIDH) piling methods, or alternatives capable of producing equal or lower vibration levels, shall be used for the following bridge locations as an alternative to impact pile driving activities planned within 400 feet of sensitive receiver locations (as indicated on Table 2-34, below):

- Highway 111 Overcrossing
- West Magnesia Canyon Channel Bridge at Highway 111
- West Magnesia Canyon Channel Bridge at Library
- Cook Street Overcrossing
- La Quinta Channel Bridge

N-7. Residences and other sensitive land uses within 400 feet of the planned pile locations shall be notified of the construction in writing. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a noise and vibration complaint and response procedure.

Table 2-32
Pile Driving Vibration Mitigation Measures

Bridge Name	Threshold Exceeded?		Mitigation to Satisfy Threshold	
	Vibration Level Threshold (PPV)			
	Building Damage (0.12 in/sec)	Human Annoyance (0.01 in/sec)	Building Damage (0.12 in/sec)	Human Annoyance (0.01 in/sec)
Highway 111 Overcrossing	No	Yes	n/a	CIDH Piling
Boardwalk Over Lake Bridge	No	No	n/a	n/a
Cathedral Canyon Channel West Bridge	No	No	n/a	n/a
Cathedral Canyon Channel East Bridge	No	No	n/a	n/a
Thunderbird Channel Bridge	Yes	Yes	CIDH Piling	Alternative
West Magnesia Canyon Channel Bridge at Hwy 111	No	Yes	n/a	CIDH Piling
West Magnesia Canyon Channel Bridge at Library	No	Yes	n/a	CIDH Piling
Cook Street Overcrossing	No	Yes	n/a	CIDH Piling
Hyatt Regency Bridge	No	No	n/a	n/a
Deep Canyon Channel Bridge	Yes	Yes	CIDH Piling	Alternative
Point Happy Bridge	No	No	n/a	n/a
Washington Street Cross Channel Bridge	No	No	n/a	n/a
La Quinta Channel Bridge	No	Yes	n/a	CIDH Piling

"CIDH" = Cast-In-Drilled-Hole; "n/a" = No mitigation required to satisfy the threshold; "Alternative" = An alternative mitigation measure for pile driving capable of lower vibration levels than those generated by impact devices or CIDH drilling methods.

Mitigation Summary

With the mitigation measures set forth above, construction-related project vibration and other noise generated at nearby sensitive receiver locations represent acceptable impacts during the worst-case pile driving activities at 13 bridge locations. Further, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but rather will occur only during the times that pile driving activities are scheduled. CV Link construction will be restricted to daytime hours consistent with local jurisdiction and Caltrans requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours. With the implementation of these mitigation and minimization measures, construction and operational noise impacts will be reduced to acceptable levels.

CUMULATIVE IMPACTS

Cumulative noise impacts occur when multiple sources of noise, though individually not substantial, combine to result in excessive, cumulative noise exposure at noise sensitive areas. The ambient noise environment various substantially along different portions of the CV Link alignments. In some locations, such as along stormwater channels and away from roadway traffic, noise levels are relatively low. Elsewhere, CV Link alignments run parallel to and cross busy streets and associated higher ambient noise levels. Changes in land use along the CV Link alignments will be very limited and major sources of new noise from future development will be very limited. However, continued growth in traffic volumes on streets along and in proximity to CV Link alignments will contribute to a deterioration of noise levels in these areas. Beyond the short-term contribution that the construction of CV Link will have on local ambient noise levels, its operation will have a negligible impact on these levels. To the extent CV Link use will reduce on-street traffic volumes, there could be a resulting (if unmeasurable) reduction in long-term noise levels due to the avoidance of motor vehicle trips.

All CV Link build alternatives are expected to operate at noise levels that are essentially the same as current conditions. Unmitigated noise levels will not exceed 65 dBA Leq at 25 feet from the project planning area for any sensitive receptor except within the allowable hours of 7 a.m. and 5 p.m. for construction-related noise, which would be within the site boundaries of project planning area. Operational noise levels resulting from the Proposed Project Alternative, or any of the alternatives, would not exceed city or county standards for sensitive receptors, nor would they result in substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the project. Noise generated from use of CV Link will be low and transient in nature, and will not expose sensitive receptors to a new, substantial source of noise. Therefore, noise impacts associated with the Proposed Project Alternative and build alternatives would not be cumulatively considerable.

2-3 BIOLOGICAL ENVIRONMENT

2-3.1 NATURAL COMMUNITIES

REGULATORY SETTING

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 2-3.5. Wetlands and Other Waters are also discussed below in the following section 2-3.2.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) was completed for the CV Link project on July 19, 2016 (Amec Foster Wheeler).

The CV Link project is also located within the planning area of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), a comprehensive regional plan encompassing a planning area of approximately 1.1 million acres and conserving approximately 240,000 acres of open space. The Plan addresses the conservation needs of a variety of plant and animal species and plant communities that occur in the Coachella Valley region. The Plan streamlines development permit processing by providing the Plan's "Permittees" "incidental take permits" under state and federal endangered species acts. The CV Link project is located within the CVMSHCP planning area, and in a few locations is located near or adjacent to CVMSHPC-designated Conservation Areas (CAs). The potential impacts of the proposed CV Link project on CVMSHCP Conservation Areas and sensitive plant and wildlife species are discussed in detail in this and subsequent sections of the EAs.

Whitewater Floodplain Conservation Area

The majority of the existing and Proposed Project Alternative route is located outside of designated CVMSHCP conservation areas. A portion of the northern part of the alignment (Segment 1) however, is within or immediately adjacent to the CVMSHCP Whitewater Floodplain Conservation Area, which encompasses 7,400 acres and occurs south of Interstate 10 to the Whitewater Floodplain Preserve, established by the Coachella Valley Fringe-toed Lizard HCP, and beyond it to Gene Autry Trail. The Conservation Area connects to other Plan Conservation Areas, forming a web of preservation areas for sand-dependent species. This conservation area provides core habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. The area also provides conserved habitat for the triple-ribbed milkvetch, desert tortoise, flat-tailed horned lizard, burrowing owl and Le Conte's thrasher.

Santa Rosa and San Jacinto Mountains Conservation Area

The CV Link alignment closely approaches, but does not encroach on the Santa Rosa and San Jacinto Mountains Conservation Area at two locations: between Paxton Drive and Mirage Road on the south side of Highway 111, and in the Parkview Drive/Highway 111 area. The Santa Rosa and San Jacinto Mountains Conservation Area contains suitable migration and breeding habitat for CVMSHCP-covered riparian obligate species. All riparian habitats within the CVMSHCP coverage area are considered

important for these species. Desert fan palm oasis woodlands within the Conservation Area also provide habitat for the southern yellow bat. Habitat is also provided for triple-ribbed milkvetch, Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse.

Riparian Habitat

Riparian habitats in the Coachella Valley are located within the Santa Rosa and San Jacinto Mountains Conservation Area. The proposed CV Link alignment closely approaches, but does not encroach on the Santa Rosa and San Jacinto Mountains Conservation Area in two relatively small areas: between Paxton Drive and Mirage Road on the south side of Highway 111, and in the Parkview Drive/Highway 111 area. Because the Proposed Project Alternative will not encroach on riparian habitat, the Proposed Project Alternative is not anticipated to have adverse impacts on such resources.

Migratory Corridors

The proposed CV Link route is not located within a mapped migratory corridor or native wildlife nursery site. The majority of the proposed CV Link route has been previously cleared of vegetation (dirt levee roads maintained by CVWD), or is located with paved roads and/or golf cart paths completely devoid of vegetation suitable for migratory movement. In addition, buildout of the CV Link will not result in habitable structures or fencing that would potentially restrict wildlife movement from occurring.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

Construction associated with CV Link will be largely within either existing paved surfaces and/or within the graded/cleared dirt roads (where present), and therefore Proposed Project Alternative-related impacts to natural vegetation communities and habitats within Conservation Areas are expected to be largely avoided. Limited impacts could result from construction of the in-channel CV Link alignment east of Sunrise Way (extended) in Palm Springs, where the alignment would be in the channel bottom and abutting the side slope levee concrete lining. Construction of this alignment would reduce the habitat within the 7,400-acre CVMSHCP Whitewater Floodplain Conservation Area by approximately 2.15 acres or 0.0029% of the CA (assumes 4,700 linear alignment with 20 feet of permanent impacts).

As Permittees under the CVMSHCP, CVAG and its members must comply with all applicable terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), which are summarized in the Avoidance, Minimization and Mitigation Measures, below. This includes, but are not limited to, use of permitted take and implementation of the CVMSHCP "Land Use Adjacency Guidelines."

Compliance with the mitigation measures presented below will ensure impacts to natural communities are not substantial.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Similar to the Proposed Project Alternative, construction associated with Alternative 1 will be largely within either existing paved surfaces and/or within the graded/cleared dirt roads, and therefore Project-related impacts to natural vegetation communities and habitats within Conservation Areas are expected to be largely avoided. As a Permittee under the CVMSHCP, CVAG and its members must comply with all applicable terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), which are summarized in the Mitigation Measures, below. This

includes, but not limited to, payment of a land development/mitigation fee or other mitigation, and implementation of "Land Use Adjacency Guidelines."

Compliance with the mitigation measures presented below will ensure impacts to natural communities are not substantial.

C. Alternative 2: Project with All Eight Cities

Similar to the Proposed Project Alternative, construction associated with Alternative 2 will be largely within either existing paved surfaces and/or within the graded/cleared dirt roads, and therefore Project-related impacts to natural vegetation communities and habitats within Conservation Areas are expected to be largely avoided. As a Permittee under the CVMSHCP, CVAG must comply with all applicable terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), which are summarized in the Mitigation Measures, below. This includes, but not limited to, payment of a land development/mitigation fee and implementation of "Land Use Adjacency Guidelines."

Compliance with the mitigation measures presented below will ensure impacts to natural communities are not substantial.

D. Alternative 3: No Build/No Project Alternative

Under the No-Build Alternative, no CV Link project will be built. There would be no CV Link impacts to natural communities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The CVMSHCP provides full coverage for plan participants (Permittees) and/or projects that are covered by the CVMSHC. As a Permittee under the CVMSHCP, CVAG and participating jurisdictions must also comply with all other applicable terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), which are summarized below and include but are not limited to:

<u>Mitigation Measures</u>

NC-1. CVAG may choose to pay the local development mitigation fee to mitigate for impacts, or use take permitted under the CVMSHCP for this purpose, to covered species and natural communities within the plan area, inside or outside of Conservation Areas. Project activities inside Conservation Areas are subject to the Joint Project Review process to determine consistency with plan goals and objectives.

NC-2. CVAG shall comply with all terms and conditions of the CVMSHCP and Implementing Agreement including, but not limited to: 1) participation in the Joint Project Review Process with the Coachella Valley Conservation Commission for projects within conservation areas as described in Section 6.6.1.1 of the CVMSHCP, and 2) Implementation of the "Land Use Adjacency Guidelines" as described in Section 4.5 of the CVMSHCP for any portion of the Proposed Project Alternative that impact or are adjacent to the Whitewater Floodplain and Santa Rosa and San Jacinto Mountains Conservation Areas.

Avoidance, Minimization and Mitigation Measures of the CVMSHCP "Land Use Adjacency Guidelines" include the following:

a. Drainage: Development of the Proposed Project Alternative adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

b. Toxics: Development of the Proposed Project Alternative adjacent to or within a conservation area shall be required to incorporate measures to ensure that application of fertilizers, pesticides, herbicides or similar chemicals does not result in any discharge to the adjacent conservation area.

c. Lighting: Lighting in areas adjacent to or located within conservation areas shall be shielded and directed away from the conservation area, toward developed areas. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent conservation area in accordance with the guidelines included in the Implementation Manual.

d. Noise: Noise generated by construction adjacent to or within a conservation area in excess of 75 dBA shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent conservation area according to Implementation Manual guidelines.

e. Invasives: Landscape plans shall be prepared for the Proposed Project Alternative. Landscape plans for areas that are located adjacent to or within a conservation area are prohibited from using invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. The Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP shall be incorporated into landscape design within or adjacent to conservation areas.

NC-3. Fencing/Signage – As a means to protect the adjacent lands of the Whitewater Floodplain Conservation Area present on Segment 1 of the CV Link alignment, fencing and/or regularly placed signage shall be employed near the “top-of-slope” of the levee to prevent people and their pets (particularly dogs being walked by their owners) from straying off the designated CV Link path and into the adjacent natural habitat. Signage shall be placed intermittently along the entire CV Link alignment.

NC-4. Pet Control – Additional signage shall be placed intermittently along the entire CV Link alignment indicating that all dogs shall be required to be on a leash while traversing CV Link. Aside from preventing individual animals from entering native habitat, the benefits of such a mandate are numerous including facilitating personal safety for other users of the Link, preventing altercations with other dogs present on the path, and increased safety for the individual pet in question (i.e. preventing collisions with bicyclists and LSEV users). In addition, disposal bins for pet waste shall also be provided throughout CV Link.

NC-5. Interpretive Signage – Interpretive signs adjacent to areas of native habitat (such as the Whitewater Floodplain Preserve) shall illustrate and educate the public on some of the native wildlife, plant, or vegetation communities present adjacent to CV Link.

CUMULATIVE IMPACTS

The project has been designed to adhere to local, state, and federal regulations related to the protection of biological resources; therefore, the project would not make a considerable contribution to cumulative impacts to biological resources. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity around each of the path segments. Using the summary of projections method to analyze cumulative impacts have been assessed on both a regional and local level.

Potential impacts to biological resources in and outside of CVMSHCP Conservation Areas will be largely avoided or mitigated to acceptable levels with implementation of the mitigation program provided above. CVAG shall also comply with all terms and conditions of the CVMSHCP and its Implementing Agreement including, but not limited to: 1) participation in the Joint Project Review Process and implementation of the "Land Use Adjacency Guidelines", which are set forth in the above mitigation measures. Therefore, with implementation of the avoidance, minimization and mitigation measures set forth above, the project's impacts to biological resources will be low and the project's contribution to cumulative impacts will not be cumulatively considerable.

2-3.2 WETLANDS AND OTHER WATERS

REGULATORY SETTING

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot 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 (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which

would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, 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. A Wetlands Only Practicable Finding must be made.

The Regional Water Quality Control Boards (RWQCBs) were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) and Jurisdictional Delineation Report (JD) was prepared for the CV Link project in July and August 2016 (Amec Foster Wheeler).

Waters of the US and the State of California

The CV Link alignment generally occurs adjacent to the Whitewater River and Tahquitz Creek along the levee access road. The dirt levee access road is generally adjacent to residential housing, commercial facilities, agricultural land, and undeveloped land. The study area also occurs along city streets and through golf courses. Both the Whitewater River and Tahquitz Creek are intermittent drainages that flow for less than 3 months per year. Therefore, the USACE will likely classify them as "non-Relatively Permanent Waterways."

The entire length of the route was surveyed to identify the potential for jurisdictional water features. Following field observations, regulated waters of the US and waters of the State were delineated as prescribed by the USACOE's *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Waters of the US were determined by identifying the indicators for the Ordinary High Water Mark (OHWM).

The USACE has identified three criteria necessary to determine an area a federal wetland:

- **Hydrophytic Vegetation.** More than 50% of all the dominant vegetation species present must have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (USACE, 2008b). An OBL indicator refers to plants that almost always occur in wetlands. A FACW indicator refers to plants that usually occur in wetlands, but may occur in non-wetlands. A FAC indicator refers to plants that occur in wetlands and non-wetlands.

- **Hydric Soils**. Soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions are most easily assessed using soil color.

- **Wetland Hydrology.** Field observations must indicate that an area has a high probability of being inundated or saturated long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone.

The United States Fish and Wildlife Service (USFWS) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. The USFWS has developed a series of maps, known as the National Wetlands Inventory (NWI) to show wetlands and deepwater habitat. NWI wetlands occurring along Tahquitz Creek at the north end of the CV Link alignment are characterized as riverine (R4USJx) and freshwater pond (PUSKx, PUBHx) based on Cowardin Classification. Three freshwater pond wetlands (PUBHx) are located along the alignment adjacent to Calle Tecuala, approximately 2 miles southeast of where Tahquitz Creek flows into the Whitewater River and 1,500 feet west of the closest reach of the Whitewater River.

NWI wetlands occurring along the Whitewater River, throughout the alignment, are characterized as riverine (R4SBJ, R4SBJx), freshwater pond (PUBHx, PUSCh, PUSJ), freshwater emergent wetland (PEMC, PEMFx), and freshwater forested/ shrub wetland (PSSC).

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative

The following discussion summarizes the findings of the Jurisdictional Delineation prepared for the Proposed Project Alternative (the report addresses all alignments and all of the build alternatives).

The entire length of the route was surveyed to identify the potential for jurisdictional water features. Following field observations, regulated waters of the US and waters of the State were delineated as prescribed by the USACOE's *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Waters of the US were determined by identifying the indicators for the Ordinary High Water Mark (OHWM).

Potential federally regulated wetlands were determined using the USACE's *Wetlands Delineation Manual* and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*.

The Coachella Valley Water District completed a jurisdictional delineation for the Whitewater River and Coachella Valley Stormwater Channel, which included a wetlands designation. That document was used to determine wetlands in that channel.

Waters of the State were identified by measuring the areas that confine streams when waters rise to their highest level. The drainages were walked and recorded using global positioning systems. The width of the drainage was determined by the OHWM and bankfull width at locations where transitions were apparent. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed.

Of the 19 soil types occurring along the CV Link alignment the following are listed on the National List of Hydric Soils: Carsitas gravelly sand (CdC), Carsitas cobbly sand (ChC), Fluvents (Fe), Myoma fine sand (MaB), Myoma fine sand (MaD), Riverwash (RA), and Rock outcrop (RO). These soils have been mapped as part of the Jurisdictional Delineation, and are provided in Appendix A of that report.

The location of the NWI wetlands are mapped in Appendix B of the Jurisdictional Delineation Report. National Wetland Inventory wetlands occurring along Tahquitz Creek at the north end of the CV Link alignment are characterized as riverine (R4USJx) and freshwater pond (PUSKx, PUBHx). They occur

between South Palm Canyon Drive and Sunrise Way; north of the Palm Canyon Wash on both sides of Gene Autry Trail; and west of Cathedral Canyon Drive. NWI wetlands occurring along the Whitewater River, throughout the alignment, are characterized as riverine (R4SBJ, R4SBJx), freshwater pond (PUBHx, PUSCh, PUSJ), freshwater emergent wetland (PEMC, PEMFx), and freshwater forested/ shrub wetland (PSSC). They occur west of Frank Sinatra Drive, east and west of Peterson Road, east of Paxton Road, between Cabazon Avenue and Dillon Road, east of Harrison Street, and north and east of Polk Street.

All the data was mapped using geographic information system software. A total of 97.89 acres of non-wetland waters of the United States (WUS) and waters of the State (WSC), 13.09 acres of wetlands, and 433.27 acres of CDFW jurisdictional streambeds were found to occur along the CV Link route. The alignment of CV Link was then overlain on the jurisdictional delineation boundary to determine what portions of the path would impact wetlands, waters of the US or waters of the State. The resulting analysis concluded that along the Proposed Project Alternative (and not including waters occurring in the City of Rancho Mirage), CV Link will have the following impacts:

Table 2-33
Proposed Project Alternative: Impacts to Jurisdictional Waters

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
4.78	1.85	0.06	0.03	26.72	13.44

These impacts will require permits from the USACE, CDFW, and RWQCB. Completion and approval of the appropriate permits issued by the USACE, CDFW, and RWQCB (See Mitigation Measures below) will ensure impacts to federally protected wetlands will be less than significant. Project impacts to wetlands and other jurisdictional waters will be addressed through the project's participation in the CVCC/USACE In-Lieu Fee Program currently in effect.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Similar to the Proposed Project Alternative, Alternative 1 will be required to obtain permits issued by the USACE, CDFW, and RWQCB. Completion and approval of the appropriate permits issued by the USACE, CDFW, and RWQCB will ensure impacts to federally protected wetlands will avoided or minimized.

The following table summarizes Alternative 1 impacts to jurisdictional areas.

Table 2-34
Alternative 1: Impacts to Jurisdictional Waters
(All Alignments Excepting Rancho Mirage or Indian Wells)

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
4.45	1.65	0.06	0.03	16.81	7.99

C. Alternative 2: Project with All Eight Cities

Alternative 2 will be required to obtain permits issued by the USACE, CDFW, and RWQCB. Completion and approval of the appropriate permits issued by the USACE, CDFW, and RWQCB will ensure impacts to federally protected wetlands will be avoided or minimized.

The following table summarizes Alternative 2 impacts to jurisdictional areas.

Table 2-35
Alternative 2: Impacts to Jurisdictional Waters
(All Alignments)

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
5.83	2.34	0.06	0.03	28.95	14.68

D. Alternative 3: No Build/No Project Alternative

Under Alternative 3 the CV Link would not be built and there would be no impacts (no effect) to wetlands or other waters.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Mitigation Measures

W-1. Prior to the initiation of any construction within areas determined by the Jurisdictional Delineation to be waters of the US, a permit or permits shall be approved and issued by the USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into waters of the US.

W-2. Prior to the initiation of any construction within areas determined by the Jurisdictional Delineation to be waters of the US or the State, a Water Quality Certification(s) shall be approved and issued by the CRWQCB (Region 7) under Section 401 of the CWA.

W-3. Prior to the initiation of any construction within areas determined by the Jurisdictional Delineation to be waters of the State, a permit or permits shall be approved and issued by the CRWQCB (Region 7) under the Porter Cologne Water Quality Control Act. The permit could be a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

W-4. Prior to the initiation of any construction within areas determined by the Jurisdictional Delineation to be waters of the State, a 1602 Streambed Alteration Agreement shall be approved and issued by the California Department of Fish and Wildlife.

Restoration and/or enhancements of wetlands would occur based on conditions set forth in resource agency permits.

CUMULATIVE IMPACTS

The project has been designed to adhere to local, state, and federal regulations related to the protection of wetlands. Project impacts under the most intense project alternative is 0.04± acres, which will be replaced through the payment of impacts fees and the restoration of wetlands elsewhere in the Coachella Valley in accordance with the CVCC/USACE In-Lieu Fee Program currently in effect. Impacts to wetlands will also be mitigated through adherence to appropriate permits issued by the USACE, CDFW, and CRWQCB. It should also be noted that on-going channel lining and other on-going channel improvements, as well as periodic channel maintenance results in the alteration (not elimination) of wetlands in these drainages as a function of channel maintenance. Therefore, the CV Link project would contribute to a minimal one-time impact to wetlands and a modest one-time impact to other jurisdictional waters. The impacts to wetlands and other jurisdictional waters will be fully mitigated by restoration and enhancement of equivalent habitat and will therefore not make a considerable contribution to cumulative impacts to wetlands. Therefore, the project's impacts to wetlands and other waters will low and will be fully mitigated, and the project's contribution to cumulative impacts will not be cumulatively considerable.

2-3.3 PLANT SPECIES

REGULATORY SETTING

The U.S. Fish and Wildlife Service (USFWS) is responsible for the protection of federally listed 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 provided varying levels of regulatory protection. The highest level of protection is given to species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA). Please see the Threatened and Endangered Species section 2-3.5 in this document for detailed information about these species.

This section of the document discusses all federally protected special-status plant species, including USFWS candidate species.

The regulatory requirements for FESA can be found at United States Code 16 United States Code (USC), Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) was prepared for the CV Link project on July 19, 2016 (Amec Foster Wheeler).

The following section describes the natural communities associated with the CV Link project area, including vegetation and plant species.

<u>Vegetation Communities</u>
Native vegetation, where present adjacent to the alignment, is mostly dominated by a mixture of the following vegetation communities:

- *Larrea tridentata/Ambrosia dumosa* shrubland alliance Sawyer et. al (2009) (Sonoran creosote bush/mixed woody and succulent scrub in the CVMSCHP);
- Creosote bush – white bursage scrub [Sandy association]/*Ambrosia salsola* alliance (Ephemeral and Stabilized shielded sand fields in the CVMSHCP); and
- *Atriplex canescens* alliance (Desert saltbush scrub in the CVMSHCP).

Dominant native perennial plant species representative of the Sonoran creosote bush/mixed succulent scrub communities observed during the biological field survey included creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), brittle bush (*Encelia farinosa*), California indigo-bush (*Psorothamnus arborescens* var. *simplicifolius*), Schott's indigo-bush (*Psorothamnus schottii*), and golden cholla (*Cylindropuntia echinocarpa*).

Species representative of Ephemeral and Stabilized shielded sand fields include Emory dalea (*Psorothamnus emoryi*), California croton (*Croton californicus*), sand verbena (*Abronia villosa* var. *villosa*), and dune sunflower (*Helianthus petiolaris* ssp. *canescens*). Plants representative of Desert saltbush scrub included four-wing saltbush (*Atriplex canescens*), allscale (*Atriplex polycarpa*), cheesebush (*Ambrosia salsola*), and salt grass (*Distichlis spicata*).

The northern end of the alignment, adjacent to the CVMSHCP Whitewater Floodplain Conservation area, is mapped in the CVMSHCP as passing through/adjacent to a large area of mixed Ephemeral, Stabilized, and Stabilized shielded sand fields. That portion of the alignment that runs along North Palm Canyon Drive/Highway 111 from Tramway Road north to the alignment's intersection with the Whitewater Floodplain Conservation area is mapped in the CVMSHCP as Sonoran mixed woody and succulent scrub. Areas of Sonoran creosote bush scrub along or close to the alignment are present along Highway 111 between Sungate Way and Frank Sinatra Drive; between Paxton Drive and Mirage Road; and between Rio del Sol Road and Parkview Drive.

The only area of CVMSHCP-mapped Desert saltbush scrub habitat on the alignment is between Avenue 48 and Avenue 50. Lastly, there are some limited areas in the Whitewater River channel on the southern end of the alignment (adjacent to the alignment, not on the alignment) that support small stands of willows and cottonwoods. These fragmented and highly restricted stands are not truly representative of a natural willow woodland (such as Black willow thickets) but are remnant "pockets" of riparian vegetation resulting from groundwater recharge, agricultural runoff and municipal wastewater treatment facility discharges into the channel. They also result from ongoing Coachella Valley Water District/Riverside County Flood Control and Water Conservation District channel maintenance activities.

Plants that were observed in the urban and residential portions of the CV Link corridor include a mixture of nonnative and native landscaped trees and shrubs, including gum trees (*Eucalyptus spp.*), Mexican bird-of-paradise (*Caesalpinia pulcherrima*), ocotillo (*Fourquieria splendens* ssp. *splendens*), Texas sage (*Leucophyllum frutescens*), various acacia (*Acacia sp.*), oleander (*Nerium oleander*), and bougainvillea (*Bougainvillea* sp.).

Special Status Plants

Potentially-occurring special-status plant species that are not covered by the CVMSHCP include: chaparral sand-verbena, singlewhorl burrobush, gravel milk-vetch, glandular ditaxis, and slender cottonheads.

Potential impacts to chaparral sand-verbena may be considered significant if a substantial population were to be lost or impacted, as this species is designated as a CNPS List 1B.1 species, meaning that it is considered to be "seriously threatened in California and elsewhere," has a "high degree (and/or) immediacy of threat" and is considered to be "seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)." However, due to the extremely disturbed and/or developed condition of the majority of the proposed alignment, this plant is not expected to occur on the CV Link route, and the Project is not expected to impact a substantial population of this species.

The remaining plant species are considered to be CNPS List 2 species or higher. Impacts to those species, if any, would fall below the threshold of significance because of their status as “more common elsewhere” or “more information is needed.”

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative will have no impact any special status plant species, including those not covered by the CVMSHCP due to the extremely disturbed and/or developed condition of the majority of the proposed alignment. The project will not have an adverse impact on any special status plant species.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1 will have no impact on any special status plant species not covered by the CVMSHCP due to the extremely disturbed and/or developed condition of the majority of the proposed alignment. The project will not have an adverse impact on any special status plant species.

C. Alternative 2: Project with All Eight Cities

Alternative 2 will have no impact on any special status plant species not covered by the CVMSHCP due to the extremely disturbed and/or developed condition of the majority of the proposed alignment. The project will not have an adverse impact on any special status plant species.

D. Alternative 3: No Build/No Project Alternative

Under Alternative 3 the CV Link would not be built and there would be no impacts (no effect) to plant species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following minimization measures will further assure that none of the CV Link build alternatives results in unmitigated significant impacts.

Avoidance and Mitigation Measures

PS-A. CVAG will be required to pay the land development/mitigation fee to offset potential impacts to covered plant species within the plan area for all areas outside of Conservation Areas.

PS-B. Development of the Proposed Project Alternative adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

PS-C. Development of the Proposed Project Alternative adjacent to or within a conservation area shall be required to incorporate measures to ensure that application of fertilizers, pesticides, herbicides or similar chemicals does not result in any discharge to the adjacent conservation area.

PS-D. Landscape plans for areas that are located adjacent to or within a conservation area are prohibited from using invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. To the maximum extent feasible, Coachella

Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into landscape design within or adjacent to conservation areas.

Additional measures/conditions may be required once resource agency permits are approved.

CUMULATIVE IMPACTS

The project has been designed to adhere to local, state, and federal regulations related to the protection of biological resources. No sensitive plant species have been identified along the CV Link alignments and the potential for impacts to sensitive plant species is low. Other activities in the planning area that could affect sensitive plant species are limited by the establishment of the Conservation Areas in the CVMSHCP, which provides for the long-term protection for a number of plant species. Minimization measures provided above will further reduce the potential for plant species to be impacted by the project. Therefore, the project would not make a considerable. contribution to cumulative impacts to plant species.

2-3.4 ANIMAL SPECIES

REGULATORY SETTING

Many federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal Endangered Species Act. Species listed or proposed for listing are discussed in the Threatened or Endangered Species section 2-3.5 below. All other federally protected special-status animal species are discussed here, including USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

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

Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)

The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) is a comprehensive regional plan that addresses the conservation needs of 26 species of native flora and fauna (5 plants, 2 insects, 3 reptiles, 11 birds, and 5 mammals) and 24 natural vegetation communities occurring throughout the Coachella Valley region of western Riverside County, California. These include federal and state-listed species, federal and California Species of Concern (CSCs), and species on the California Native Plant Society (CNPS) sensitive species lists. Also included are species that are designated as sensitive by the Bureau of Land Management (BLM) regardless of their other federal, state, or regional conservation status. Conservation for the federally-listed as threatened and state-listed as endangered Coachella Valley Fringe-toed Lizard (*Uma inornata*), was formerly covered by the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan finalized in 1985 but is now covered under the CVMSHCP. Importantly, the CVMSHCP does not provide mitigation for impacts to waters of the US or the State.

Permits for the CVMSHCP were issued by the California Department of Fish and Wildlife (CDFW) on September 9, 2008 and the United States Fish and Wildlife Service (USFWS) on October 1, 2008 (TE104604-0). The CVMSHCP serves two primary purposes: balancing environmental protection and economic development objectives in the CVMSHCP area, and simplifying compliance with endangered

species related laws. The CVMSHCP accomplishes this by conserving unfragmented habitat to permanently protect and secure viable populations of the covered species. The covered species include those plants and animals that are either currently listed as threatened or endangered, are proposed for listing, or are believed by an appointed Scientific Advisory Committee, USFWS and CDFW to have a high probability of being proposed for listing in the future if not provided protection by the CVMSHCP. The goal of the CVMSHCP is to meet the requirements of the state and federal endangered species acts, while at the same time allowing for the economic growth (land development) within the plan area without significant delay or hidden costs. Under the CVMSHCP, land development/mitigation fees are collected from all new development projects occurring in the plan area. The purpose of this fee is to support the assembly of a preserve system for the covered species and natural vegetation communities within areas identified as having high conservation value.

The CVMSHCP recently completed a major amendment to add lands in the City of Desert Hot Springs to the Plan. With this amendment, the CVMSHCP now covers all incorporated cities in the Valley, as well as unincorporated County lands.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) was prepared for the CV Link project on July 19, 2016 (Amec Foster Wheeler). The following discussion provides findings of the Report as they relate to wildlife communities in the project area, including special status animal species such as invertebrates, birds, and mammals.

Wildlife Communities

Vertebrate wildlife directly observed and/or otherwise detected through presence of sign (e.g., scat, bones, prints, feathers, burrows, etc.) during the assessments was not exceptionally diverse or abundant. Vertebrates that have been recorded along the alignment by Amec Foster Wheeler biologists during the current and previous surveys include: one (1) fish, three (3) amphibians, nine (9) reptiles, thirty-three (33) birds, and eight (8) mammals.

Reptiles detected included side-blotched lizard (*Uta stansburiana*), northern desert iguana (*Dipsosaurus dorsalis dorsalis*), common chuckwalla (*Sauromalus ater*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert spiny lizard (*Sceloporus magister*), long-tailed brush lizard (*Urosaurus graciosus*), western whiptail (*Aspidoscelis tigris tigris*), Mohave shovel-nosed snake (*Chionactis occipitalis occipitalis*), and Colorado Desert sidewinder (*Crotalus cerastes laterorepens*). Other common species such as, but not limited to, southern desert horned lizard (*Phrynosoma platyrhinos calidiarum*), red coachwhip (*Masticophis flagellum piceus*), desert glossy snake (*Arizona elegans eburnata*) and desert banded gecko (*Coleonyx variegatus variegatus)* are also expected to occur.

Representative birds observed onsite included Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), great-tailed grackle (*Quiscalus mexicanus*) and verdin (*Auriparus flaviceps*). Other common desert and migrant bird species are also expected to occur.

Common mammals detected onsite (or immediately adjacent) included black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), Calfornia ground squirrel (*Spermophilus beecheyi*) white-tailed antelope squirrel (*Ammospermophilus leucurus*), desert wood rat (middens) (*Neotoma lepida*), northern raccoon (tracks) (*Procyon lotor*), and coyote (*Canis latrans*). Other small mammals, particularly rodents, occur near the project corridor as burrows were observed; however the species that are present cannot be conclusively determined without a more intensive trapping effort.

Invertebrates

Special status invertebrates not covered by the CVMSHCP include Casey's June beetle and cheeseweed owlfly. The Casey's June beetle has been observed along the portion of the route occurring between El Cielo Road and Jenkins Trail, in Demuth Park and the Tahquitz Creek Golf Course in the City of Palm Springs. The Casey's June beetle is federally listed as endangered, and is fully protected by the ESA. The CV Link occurs in the Survey Area for the species, and not in critical habitat. Further discussion of the Casey's June Beetle can be found below in the Threatened and Endangered Species section 2-3.5.

The cheeseweed owlfly is not a covered species under the CVMSHCP, and is not listed as an endangered or threatened species by the CDFW or USFWS. The species has been observed in Palm Canyon Wash less than one mile south of the Tahquitz Creek segment of the project. Undeveloped areas of Tahquitz Creek adjacent to the alignment support habitat that is similar to that found in Palm Canyon Wash, and there is a low probability that cheeseweed owlfly could occur in this area. Currently, this species has a CDFW CNDDB sensitivity ranking of S2. However, the species is not expected to occur on the CV Link alignment, because this section of the alignment occurs on compacted dirt, asphalt or concrete paths that are not suitable habitat for the species.

Birds

Although covered by the CVMSHCP, burrowing owl requires special consideration under the Plan. Surveys conducted for this project identified burrows with burrowing owl sign and one live burrowing owl were identified on the CV Link alignment on 29 Palms Tribal lands between Dillon Road and Golf Center Parkway. In addition, although no sign or individuals were observed elsewhere on the alignment, several burrows that would be capable of occupation by the species were observed at several locations on the route. Finally, the Whitewater Floodplain Conservation Area of the CVMSHCP provides "Other Conserved Habitat" for the burrowing owl. The portion of the CV Link route that passes through this area has suitable habitat for burrowing owl, although none were observed during field surveys. Construction of the path could impact the species, either at its known location or other locations on the route. This would represent a potentially substantial impact that will require mitigation. Well established protocols exist for pre-construction surveys for the species, and the avoidance of identified individuals during the nesting season. Mitigation measures have been provided below that require that pre-construction surveys be conducted for the species, as required by CDFW protocols.

Loggerhead shrike was observed at several locations along the alignment. There is a moderate to high potential for loggerhead shrike to nest at various locations along or immediately adjacent to the Proposed Project Alternative route. This species is considered a CDFW "Species of Special Concern" (CSC).

There is a moderate potential for black-tailed gnatcatcher to occur and nest along portions of the CV Link alignment, especially adjacent to the Whitewater Floodplain Conservation Area. Black-tailed gnatcatchers are not listed as threatened, endangered, or as a CDFW CSC, and are not a "covered" species under the CVMSHCP. This species has a CDFW CNDDB ranking of S3S4.

A juvenile vermilion flycatcher was observed near the alignment north of Ramon Road. Vermilion flycatcher has a moderate potential to nest along the route in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas adjacent to the CV Link alignment. This species is considered a CDFW CSC when nesting.

Impacts to nesting loggerhead shrike, black-tailed gnatcatcher and vermillion flycatcher would be avoided through the mitigation measures provided in compliance with the MBTA and described below.

Mammals

There is a low to moderate potential for the spotted bat, western mastiff bat and pocketed free-tailed bat to forage over portions of the alignment. No roosting habitat occurs for these species on or adjacent to

the route. None of these bats are State or Federal listed as threatened or endangered, and all have a CDFW CNDDB ranking of S3 or S3S4, with the spotted bat also considered a CDFW CSC.

Townsend's big-eared bat is a candidate for listing as threatened by the State of California. There is a low potential for this bat to occur along the project route, both for foraging and roosting.

The American badger is highly unlikely to utilize the project alignment due to its proximity to development and ongoing human disturbance.

Woodrat middens were observed adjacent to the alignment. They are believed to harbor San Diego desert woodrat than Colorado Valley woodrat due to lack of habitat for the Colorado Valley woodrat.

There is a low potential for pallid San Diego pocket mouse to occur along the CV Link alignment since the Project area is on the edge of the species known range.

The likelihood of Project-related impacts to the potentially occurring mammals are considered to be negligible for several reasons. First and foremost, the proposed alignment occurs primarily on developed or impacted land, which does not contain native habitat. The species described above have a large distribution and are more common elsewhere.

The location of the alignment is at the extreme edge of the range for pallid San Diego pocket mouse. The Townsend's big-eared bat, spotted bat, western mastiff bat and pocketed free-tailed bat have no roosting habitat available on the alignment, and their ability to forage will only be marginally affected by activity on the route. The Proposed Project Alternative could have limited indirect impacts on the species related to increased noise, activity and lighting. However, the route occurs in areas that are already available and frequented by hikers, runners and bicyclists, and has been impacted by these users.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative

The Proposed Project Alternative would not include the Rancho Mirage alignments. The Proposed Project Alternative nonetheless has the potential to impact animal species elsewhere, both directly through habitat removal or modification and indirectly with the introduction of pathway facilities and the generation of new sources of noise or light, which may generate edge effects. As previously discussed in the analysis above, impacts to animal species will be mitigated through participation in the CVMSHCP and adherence to its Land Use Adjacency Guidelines. Mitigation may also include payment of the land development fee, and adherence to pre-construction survey requirements set forth in the avoidance, minimization, and mitigation discussion below.

Potential impacts to animal species are limited and include burrowing owl, bats and nesting birds (discussed above). Only one burrowing owl/owl sign were found on the CV Link alignments. While bats and nesting birds were not observed during field surveys, their possible nesting on project-related bridges and nearby vegetation will require preconstruction surveys for these species depending on the time of year and other parameters. As discussed below in AS-1, mitigation will include pre-construction surveys and impact avoidance. Therefore, impacts to animal species from construction and operation of CV Link will be negligible with mitigation.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

Alternative 1 involves all CV Link alignments except those in Rancho Mirage and Indian Wells. Nonetheless, this alternative has the potential to impact animal species both directly through habitat removal or modification, and indirectly with the introduction of pathway facilities and the generation of new sources of noise or light, which may generate edge effects. As previously discussed in the analysis above, impacts to animal species will be mitigated through participation in the CVMSHCP and adherence to its Land Use Adjacency Guidelines, including payment of the land development fee, and adherence to protocol surveys set forth in the avoidance, minimization, and mitigation discussion below. Impacts to animal species will be negligible with mitigation.

C. Alternative 2: Project with All Eight Cities

Alternative 2 has the potential to impact animal species both directly through habitat removal or modification, and indirectly with the introduction of pathway facilities and the generation of new sources of noise or light, which may generate edge effects. As previously discussed in the analysis above, impacts to animal species will be mitigated through participation in the CVMSHCP, including payment of the land development fee, and adherence to protocol surveys set forth in the avoidance, minimization, and mitigation discussion below. Impacts to animal species will be negligible with mitigation.

D. Alternative 3: No Build/No Project Alternative

Under Alternative 3 the CV Link would not be built and there would be no impacts (no effect) to animal species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Mitigation Measures

AS-1. If ground disturbance, tree or plant removal is proposed between February 1st and August 31st, a qualified biologist shall conduct a nesting bird survey within 14 days of initiation of grading onsite focusing on MBTA covered species. If active nests are reported, then species-specific measures shall be prepared. At a minimum, grading in the vicinity of a nest shall be postponed till the young birds have fledged. For construction between September 1st and January 31th, no pre-removal nesting bird survey is required.

a. In the event active nests are found, exclusionary fencing shall be placed 200 feet around the nest until such time as nestlings have fledged. Nests of raptors and burrowing owls shall be provided a 500-foot buffer.

AS-2. A “take avoidance survey” for the burrowing owl no less than 14 days (in accordance with the Staff Report on Burrowing Owl Mitigation [CDFW 2012]) and no more than 30 days (in accordance with CVWD’s Operations and Maintenance Manual) prior to ground breaking activities may also be required within and outside of conservation areas that contain suitable habitat for this species. Additionally, a final survey must be conducted within 24 hours of the initiation of ground disturbance activities in accordance with the CDFW 2012 protocol.

a. If no burrowing owls are detected during those surveys, implementation of ground disturbance activities could proceed without further consideration of this species assuming there is no lapse between the surveys and construction as the protocol states “time lapses between Project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance."

b. If burrowing owls are detected during the take avoidance surveys, avoidance and minimization measures would then be required and the need for mitigation for otherwise unavoidable impacts triggered.

AS-3. CVAG will be required to pay the local development mitigation fee to mitigate for impacts to covered species and natural communities within the plan area, inside or outside of Conservation Areas. Project activities inside Conservation Areas are subject to the Joint Project Review process to determine consistency with plan goals and objectives.

AS-4. CVAG shall comply with all terms and conditions of the CVMSHCP and Implementing Agreement including, but not limited to: 1) participation in the Joint Project Review Process with the Coachella Valley Conservation Commission for projects within conservation areas as described in Section 6.6.1.1 of the CVMSHCP, and 2) Implementation of the "Land Use Adjacency Guidelines" as described in Section 4.5 of the CVMSHCP for any portion of the Proposed Project Alternative that impact or are adjacent to the Whitewater Floodplain and Santa Rosa and San Jacinto Mountains Conservation Areas.

Measures for the "Land Use Adjacency Guidelines" include:

a. Drainage: Development of the Proposed Project Alternative adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

b. Toxics: Development of the Proposed Project Alternative adjacent to or within a conservation area shall be required to incorporate measures to ensure that application of fertilizers, pesticides, herbicides or similar chemicals does not result in any discharge to the adjacent conservation area.

c. Lighting: Lighting in areas adjacent to or located within conservation areas shall be shielded and directed away from the conservation area, toward developed areas. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent conservation area in accordance with the guidelines included in the Implementation Manual.

d. Noise: Noise generated by construction adjacent to or within a conservation area in excess of 75 dBA shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent conservation area according to Implementation Manual guidelines.

e. Invasives: Landscape plans shall be prepared for the Proposed Project Alternative. Landscape plans for areas that are located adjacent to or within a conservation area are prohibited from using invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. The Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP shall be incorporated into landscape design within or adjacent to conservation areas.

AS-5. Fencing/Signage – As a means to protect the adjacent lands of the Whitewater Floodplain Conservation Area present on Segment 1 of the CV Link alignment, fencing and/or regularly

placed signage shall be employed near the "top-of-slope" of the levee to prevent people and their pets (particularly dogs being walked by their owners) from straying off the designated CV Link path and into the adjacent natural habitat. Signage shall be placed intermittently along the entire CV Link alignment.

AS-6. Pet Control – Additional signage shall be placed intermittently along the entire CV Link alignment indicating that all dogs shall be required to be on a leash while traversing CV Link. Aside from preventing individual animals from entering native habitat, the benefits of such a mandate are numerous including facilitating personal safety for other users of the Link, preventing altercations with other dogs present on the path, and increased safety for the individual pet in question (i.e. preventing collisions with bicyclists and LSEV users). In addition, disposal bins for pet waste shall also be provided throughout CV Link.

AS-7. Interpretive Signage – Interpretive signs adjacent to areas of native habitat (such as the Whitewater Floodplain Preserve) shall illustrate and educate the public on some of the native wildlife, plant, or vegetation communities present adjacent to CV Link.

Additional measures/conditions may be required once resource agency permits are approved.

CUMULATIVE IMPACTS

Burrowing owl was the only sensitive species identified along the CV Link alignments; the owl is not a federally protected species but is state protected and is a covered species under the CVMSHCP. Other potential impacts to animal species, including birds and bats, will be reduced to acceptable levels through adherence to the cited avoidance, minimization and mitigation measures. The project has been designed to adhere to local, state, and federal regulations related to the protection of animal species; therefore, the project would not make a considerable contribution to cumulative impacts to animal species. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity around each of the path segments.

Other activities in the planning area that could affect sensitive animal species are limited by the largely developed nature of the planning area and the establishment of the Conservation Areas in the CVMSHCP, which provide for the long-term protection for a number of animal species, include burrowing owl and bats. Minimization measures provided above will further reduce the potential for animal species to be impacted by the project. Therefore, the project would not make a considerable contribution to cumulative impacts to animal species.

2-3.5 THREATENED AND ENDANGERED SPECIES

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 Code of Federal Regulations (CFR) Part 402. This act and later 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 Department, as assigned by the Federal Highway Administration (FHWA), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) 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 may include a Biological Opinion with an Incidental Take

statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) was prepared for the CV Link project on July 19, 2016 (Amec Foster Wheeler). The revised USFWS list of threatened and endangered species is provided in Appendix I, dated December 19, 2017. The CV Link project has the potential to impact endangered species both directly through habitat removal or modification, and indirectly with the introduction of pathway facilities and the generation of new sources of noise or light, which may generate edge effects. The following endangered species were identified as occurring within the project area:

- Casey's June Beetle
  Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel. This portion of the alignment consists of the widening of an existing path and the addition of two access points, which will include wayfinding signage, benches and similar project features. Take of the species during construction or long term operation of the path would represent a potentially substantial impact to the species, which requires mitigation. CVAG has initiated work on a Habitat Conservation Plan (HCP) for this portion of the alignment, and has consulted extensively with the USFWS. The total area covered by the path within the affected area totals 5.97 acres. The area of temporary impact during construction has been determined to be 3.16 acres, while the area of permanent impact, not currently covered by existing facilities, is 1.16 acres. The USFWS will require mitigation for these impacts, in the form of habitat acquisition, restoration or creation, as part of the HCP for the project. Upon completion of the HCP to the satisfaction of the USFWS, a 10.a) permit would be issued. No CV Link construction could or would occur until issuance of the permit. This proposed mitigation would mitigate impacts to the species to acceptable levels.

- Coachella Valley Milk-vetch
  Coachella Valley milk-vetch is a federal-listed endangered species, but is also a "covered" species under the CVMSHCP. Coachella Valley milk-vetch is considered to have a moderate potential of occurrence on sandy habitats adjacent to the CV Link corridor as this species is known to occur in the vicinity and is known to occur in either dynamic or highly disturbed, roadside areas and graded vacant lots which are present throughout portions of the CV Link alignments. Much of Segment 1 of the proposed CV Link route is located within the boundaries and/or along the very edge of the Whitewater Floodplain Conservation Area as depicted by the CVMSHCP. This area has mapped core habitat for Coachella Valley milk-vetch. CVAG and its members are permittees under the CVMSHCP, which allows take of covered species and provides mitigation through the payment of the land development fee.

Federal Consultation (Section 7)
As previously discussed, the CVAG has prepared a draft Habitat Conservation Plan (HCP) for the Casey's June Beetle, a Federally listed endangered species that may be impacted by the CV Link project.

CVAG is in negotiations with USFWS on the level of impacts and appropriate mitigation. CVAG will be required to adhere to conditions set forth in the final HCP.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

The Proposed Project Alternative would not include the Rancho Mirage alignments. The Proposed Project Alternative has the potential to affect, but not adversely affect Casey's June Beetle and Coachella Valley Milk-vetch with the provision of adequate mitigation. The Project proponent has prepared a draft HCP for Casey's June Beetle and the USFWS and CVAG have agreed upon an appropriate mitigation plan. CVAG will adhere to mitigation formulas and other conditions set forth in the final HCP, which will reduce impacts to Casey's June Beetle to acceptable levels. In addition, payment of the CVMSHCP land development fee will offset potential impacts the Proposed Project Alternative may have on the Coachella Valley Milk-vetch, although field surveys did not detect milkvetch anywhere along the various project alignments. Adherence to the mitigation measures provided below will ensure the Proposed Project Alternative has no adverse impact on endangered species.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

The Alternative 1 project would not include the Rancho Mirage or Indian Wells alignments. Similar to the Proposed Project Alternative, Alternative 1 has the potential to affect, but not adversely affect Casey's June Beetle and Coachella Valley Milk-vetch. The Project proponent is currently developing an HCP for Casey's June Beetle and is in negotiations with the USFWS. CVAG will be required to adhere to conditions set forth in the final HCP, which will reduce impacts to Casey's June Beetle to negligible levels. In addition, payment of the CVMSHCP land development fee will offset potential impacts the Proposed Project Alternative may have on the Coachella Valley Milk-vetch. Adherence to the mitigation measures provided below will ensure Alternative 1 has a less than significant impacts on endangered species.

C. Alternative 2: Project with All Eight Cities

Alternative 2 would include all CV Link alignments, including those in Rancho Mirage and Indian Wells. Alternative 2 has the potential to affect, but not adversely affect Casey's June Beetle and Coachella Valley Milk-vetch. CVAG has drafted an HCP for Casey's June Beetle and is in negotiations with the USFWS. CVAG will be required to adhere to conditions set forth in the final HCP, which will reduce impacts to Casey's June Beetle to negligible levels. In addition, payment of the CVMSHCP land development fee will offset potential impacts Alternative 2 may have on the Coachella Valley Milk-vetch. Adherence to the mitigation measures provided below will ensure Alternative 2 has no adverse impact on endangered species.

D. Alternative 3: No Build/No Project Alternative

Under Alternative 3 the CV Link would not be built and there would be no impacts (no effect) to threatened or endangered species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

<u>Mitigation Measures</u>

TE-1. CVAG will be required to pay the local development mitigation fee to mitigate for impacts to covered species and natural communities within the plan area, inside or outside of Conservation Areas. Project activities inside Conservation Areas are subject to the Joint Project Review process to determine consistency with plan goals and objectives.

TE-2. CVAG shall comply with all terms and conditions of the CVMSHCP and Implementing Agreement including, but not limited to: 1) participation in the Joint Project Review Process with the Coachella Valley Conservation Commission for projects within conservation areas as described in Section 6.6.1.1 of the CVMSHCP, and 2) Implementation of the "Land Use Adjacency Guidelines" as described in Section 4.5 of the CVMSHCP for any portion of the Proposed Project Alternative that impact or are adjacent to the Whitewater Floodplain and Santa Rosa and San Jacinto Mountains Conservation Areas.

Measures for the "Land Use Adjacency Guidelines" include:

a. Drainage: Development of the Proposed Project Alternative adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

b. Toxics: Development of the Proposed Project Alternative adjacent to or within a conservation area shall be required to incorporate measures to ensure that application of fertilizers, pesticides, herbicides or similar chemicals does not result in any discharge to the adjacent conservation area.

c. Lighting: Lighting in areas adjacent to or located within conservation areas shall be shielded and directed away from the conservation area, toward developed areas. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent conservation area in accordance with the guidelines included in the Implementation Manual.

d. Noise: Noise generated by construction adjacent to or within a conservation area in excess of 75 dBA shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent conservation area according to Implementation Manual guidelines.

e. Invasives: Landscape plans shall be prepared for the Proposed Project Alternative. Landscape plans for areas that are located adjacent to or within a conservation area are prohibited from using invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. The Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP shall be incorporated into landscape design within or adjacent to conservation areas.

TE-3. Prior to any construction in that portion of the Proposed Project Alternative occurring within the Survey Area for Casey's June Beetle, the project proponent shall complete, and the USFWS approve a Habitat Conservation Plan for the species, and issue an incidental take permit. The HCP shall include:

a. The restoration of 7.0 acres of land within the Tahquitz Creek Golf Course.
b. The establishment of conservation easements over the 7.0 acres to be restored.
c. The establishment of a monitoring and management plan with the CVCC for the ongoing management of the conservation easements.
d. The establishment of a self-perpetuating endowment to cover the costs of the monitoring and management program.

Additional measures/conditions may be required once resource agency permits are approved.

CUMULATIVE IMPACTS

The project has been designed to adhere to local, state, and federal regulations related to the protection of threatened and endangered species; therefore, the project would not make a considerable contribution to cumulative impacts to such species. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity around each of the path segments.

Other activities in the planning area that could affect threatened or endangered species are limited by the largely developed nature of the planning area and the establishment of the Conservation Areas in the CVMSHCP, which provide for the long-term protection both threatened and endangered species, include milkvetch. While not covered by the CVMSHCP, impacts to Casey's June beetle will be reduced to negligible levels through mitigation set forth in the HCP prepared for this project. Minimization measures provided above will further reduce the potential for animal species to be impacted by the project. Therefore, the project would not make a considerable contribution to cumulative impacts to threatened or endangered species.

Other projects that could have an adverse cumulative impact on Coachella Valley milkvetch include channel maintenance in the Whitewater Floodplain and upper reaches of the Whitewater Stormwater Channel. However, the milkvetch is an annual, which flowers and disburses seeds during the late winter and spring. Channel maintenance activities are infrequent and would have a limited adverse (and possible beneficial – disbursal) effect on this species.

Other impacts Casey's June beetle may occur with on-going channel improvements and maintenance in south Palm Springs where this species occurs. The USFWS has been working with the RCFCWCD to ensure that these activities do not have a substantial impact on the beetle. The CV Link HCP prepared to address impacts to this species will fully mitigate impacts with the provision of replacement habitat. No other land conversion or development projects are known that could also impact this species.

Therefore, CV Link's potential impacts to threatened and endangered species in and outside of CVMSHCP Conservation Areas will be largely avoided or mitigated to negligible levels with implementation of the mitigation program provided above. Therefore, the project's impacts will not make a substantial or considerable contribution to cumulative impacts to threatened or endangered species.

2-3.6 INVASIVE SPECIES

REGULATORY SETTING

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

AFFECTED ENVIRONMENT

A Biological Assessment Report (Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis) was completed for the CV Link project on July 19, 2016 (Amec Foster Wheeler). Results of the Study indicate that there are no invasive plant or animal species observed within the CV Link project area.

Landscape plans for development projects and land uses that are located adjacent to or within a conservation area are required to not use invasive, non-native plant species in their design. To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into the project landscape design.

ENVIRONMENTAL CONSEQUENCES

A. Proposed Project Alternative (Without Rancho Mirage)

There are no invasive plant or animal species located within the project area. The Proposed Project Alternative will not be allowed to use invasive, non-native plant species in the design per the CVMSHCP. Activities associated with CV Link will not include routine transport, or use of invasive species, including planting seeds. There will be no impacts associated with invasive species.

B. Alternative 1: Project without Rancho Mirage and Indian Wells

There are no invasive plant or animal species located within the project area. Alternative 1 will not be allowed to use invasive, non-native plant species in the design per the CVMSHCP. Activities associated with CV Link will not include routine transport, or use of invasive species. There will be no impacts associated with invasive species.

C. Alternative 2: Project with All Eight Cities

There are no invasive plant or animal species located within the project area. Alternative 2 will not be allowed to use invasive, non-native plant species in the design per the CVMSHCP. Activities associated with CV Link will not include routine transport, or use of invasive species. There will be no impacts associated with invasive species.

D. Alternative 3: No Build/No Project Alternative

Alternative 3 will result in a no project build, therefore there will be no impacts associated with invasive species.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into the project landscape design.

CUMULATIVE IMPACTS

The analysis above indicates there will be no impacts to invasive species. Therefore there will be no cumulative impacts.

CHAPTER 3 – COMMENTS AND COORDINATION

Introduction

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or 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 (PDT) meetings, interagency coordination meetings, community workshops and presentations, and information booths at community events. This chapter summarizes the results of CVAG's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Public Outreach

A multi-year public outreach effort was conducted concurrent with the development of the CV Link Master Plan. CVAG staff and consultants, in partnership with non-profits and advocates, have implemented an extensive outreach program in the community with a special focus on environmental justice communities. This outreach was supported by a Caltrans planning grant.

In addition to the environmental process for a federal (NEPA) document, a separate environmental process for a state (CEQA) document was completed. A Draft Environmental Impact Report (DEIR) was prepared for the project. A public scoping meeting was held on December 3, 2013 to obtain input on the project which was used as the basis to determine impacts to be evaluated during the CEQA process. A Notice of Preparation (NOP) was issued on November 12, 2012 and sent by registered mail to 126 entities, including responsible agencies, government officials, interest groups and the largest property owners. The comment period closed on December 13, 2013. The Draft EIR was released for public comment on January 3, 2017 with a closing comment period date of February 21, 2017. In summary, the Draft EIR found no known areas of controversy in the project's physical characteristics that are not resolved by project design, development management and operation, mitigation measures or standard on-going monitoring. A Final EIR was prepared and certified on May 15, 2017.

As for the NEPA document, a similar process will take place. A Notice of Availability will be sent out in December 2017 and the Draft Environmental Assessment will be released for public comment for a 30 day-period. Once the 30-day comment period has lapsed, a Final Environmental Assessment will be prepared addressing the comments on the project.

Meetings and Workshops

Outreach activities have been conducted in both the general communities and the Environmental Justice communities throughout the Coachella Valley. While applying for funds from the South Coast Air Quality Management District (SCAQMD) for the project, CVAG staff presented at meetings of key stakeholders across the region, including chambers of commerce, real estate trade groups, developers, homeowner associations, hospitality and tourism associations, community leaders and city, Riverside County and State of California elected officials and tribal leaders.

Since starting the planning and design process, the CV Link project team along with CVAG staff has conducted public workshops in Palm Springs, Rancho Mirage, Indio, and Coachella. These workshops were well advertised and attracted over 100 attendees each. The workshops received prominent stories in the local newspapers. A database has been developed of attendees at all of the outreach events and presentations that will be used for future communication and outreach. Meeting and workshops were held with the following agencies and organizations:

Public Agencies
- Coachella Valley Water District (CVWD)
- Riverside County Flood Control and Water Conservation District (RCFCWCD)
- Riverside County Parks
- Coachella Valley Cities: At least one meeting (and often many more) was held with staff and elected representatives of all nine cities
- California Department of Transportation (Caltrans) Staff
- Agua Caliente Band of Cahuilla Indians Staff

General Public
- 6/4/13 Palm Springs (West Valley)
- 7/25/13 Indio (East Valley)
- 10/15/13 Rancho Mirage (Central Valley)
- 12/3/13 Notice of Preparation Public Scoping Meeting
- 12/5/13 Coachella (East Valley)

School Districts
- 11/20/13 Desert Sands Unified School District (DSUSD)
- 11/22/13 Palm Springs Unified School District (PSUSD)
- 11/22/13 Coachella Valley Unified School District (CVUSD)

A sixteen-member Citizens Advisory Group (CAG) was formed by the consulting team to obtain input at key stages convened seven times with the following topics:
- 3/4/13 Introduction
- 4/17/13 Opportunities and Constraints
- 6/12/13 Design Concept
- 9/18/13 Design Elements
- 12/10/13 Alignment
- 2/19/14 Alignment and NEV Plan
- 5/6/14 Alignment and Phasing

Media and Events

Television, radio, print and social media have played an important role in facilitating pubic exposure to the CV Link project and getting input. A CV Link web site has been developed and used throughout the assessment and design development phase of the project. Going to project website[58] allows interactive communication in both English and Spanish between the public and the CV Link team. Updates are posted to Facebook and Twitter social media sites an average of three times per week. The project has over 2,950 Facebook likes as of October 2016. CV Link has been the main topic of media articles since December 2011. CVAG staff and the project team are in continual communication with the local media and have received significant coverage.

The CV Link development team has had a presence at more than seventy-five (75) individual special events and meetings, which have been a significant part of CVAG outreach, particularly in the east Coachella valley with a larger segment of socio-economically disadvantaged. Informational materials have been developed in both English and Spanish, and an outreach video, which was cut into a public service announcement, was produced and aired on local television stations.

Other outreach efforts included a trade show display, branded tablecloths, and branded giveaways for use at events. Representatives of the project have staffed a booth at such events as the annual Tamale

[58] www.CoachellaValleyLink.com

Festival; Humana Healthy Fun Fair; Tour De Palm Springs; Indio Senior Health Fair; Relay for Life Cathedral City; 7th Annual Picnic Community Expo; Salsa and 5K Festival; and City of Palm Springs Mayors Race and Wellness Festival among many others. Many attendees have expressed great support for the project by signing up for our database so that they can receive updates as the project as it moves forward.

Community Input and Responses

Based on the variety of public input provided, several themes of interest and concern have been raised by the community. The following summary of each is accompanied by a reference to where these are addressed in the CV Link Master Plan. The primary issues and concerns identified in the public outreach program include the following and in no particular order.

Privacy concerns for residents who live immediately adjacent to the proposed route: Site specific measures will include plantings—such as small trees, cacti, and foliage—interwoven in fencing, and benching the path partway down the slope. See Aesthetics section for further discussion.

Link Usage will be lower than predicted due to heat and wind: Although conditions during certain time periods on some summer days will reduce usage, there will be time periods of most days which are suitable for the average user. Referred to CV Link Master Plan Section 3.2 Environmental Conditions for more information.

Equitable Distribution of investment and benefits: An analysis of benefits shows that CV Link serves each socio-economic group and that 61% of the route traverses low-income census tracts. Refer to CV Link Master Plan Sections 1.3 Benefits and Volume 2: Appendix 8, Section 3 (pg. 48) Cost Tables for more information.

Safe Access to CV Link: Improvements to city facilities will be identified and prioritized through the CVAG Active Transportation Plan update, the CVAG NEV Plan, and other planning and policy initiatives currently underway. Referred to CV Link Master Plan Section 1.1 Vision, Section 1.3 Benefits, and Section 6.4 Community Connectors for more information.

User Conflicts may arise between user groups: CV Link will be designed to provide sufficient space to minimize conflicts between users. CV Link will have separate paths for pedestrians where user volumes are anticipated to be high. Referred to Section 4.4 of Master Plan Providing for Shared Use.

Bicycle ride quality will be poor if concrete is used: A life cycle cost analysis indicates that concrete is the most economical material for the bicycle/LSEV path. Special pavement joints will provide a smooth ride in comparison to standard concrete sidewalks. Referred to CV Link Master Plan Section 5.12 Materials and Volume 2: Appendix 12, Section 9 (pg. 113) Path Surface Materials for information on the development of the pavement specification.

Maintenance will be costly and insufficient: A unified approach to maintenance will be sought to maintain a high standard, and funding sources have been identified to avoid additional burdens on residents. Referred to CV Link Master Plan Section 8 Operations and Maintenance for more information.

Outreach Summary

The following table lists 155 of the outreach activities that CVAG conducted between March 2013 and October 2016 to support development of the CV Link Conceptual Master Plan, the environmental compliance process, and design refinement. These activities include 25 workshop events, information booths at 39 community events, and 91 presentations to interested parties. In addition to the activities

below, CVAG has met many times with City staffs, Water District staffs, and elected officials to collaborate on project planning. Project update presentations have been given regularly to the CVAG Executive Committee and various CVAG subcommittees, which include representatives of all Coachella Valley cities, Riverside County, and the Aqua Caliente and Cabazon Tribes. CVAG also gave numerous presentations in 2011 and 2012 at the inception of the project.

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
10/2/2016	Info Booth	Y Be Fit Palm Desert Challenge	General Public	Civic Center Park, Palm Desert
9/22/2016	Presentation	Indio Town Hall Series	General Public	Shadow Hills High School Indio
9/19,20/2016	Info Booth	Intelligent Transportation Systems Conference	General Public	Hyatt Regency Indian Wells
9/18/2016	Info Booth	Fiestas Patrias El Grito	General Public	Rancho Las Flores Park, Coachella
8/25/2016	Presentation	Indio Town Hall Series	General Public	Amistad High School
7/21/2016	Presentation	Indio Town Hall Series	General Public	Indio Senior Center
6/30/2016	Presentation	Indio Town Hall Series	General Public	Boys and Girls Club, Indio
6/16/2016	Presentation	La Quinta Chamber of Commerce	General Public	City of La Quinta
6/16/2016	Presentation	Monterey Country Club HOA	Stakeholders	Monterey County Club Palm Desert
6/6/2016	Presentation	South Coast Air Quality Management District	Stakeholders	SCAQMD Diamond Bar
5/26/2016	Presentation	Indio Town Hall Series	General Public	Terra Lago Pavilion, Indio
5/7/2016	Info Booth	City of Palm Desert: "Vision San Pablo"	General Public	San Pablo Avenue, Palm Desert
5/7/2016	Info Booth	Health Fair & 5K Glow Run	General Public	Downtown Cathedral City
5/6/2016	Info Booth	CSUSB PD Environmental & Sustainability Expo	General Public	Palm Desert Campus of CSUSB
5/5/2016	Presentation	Friends of CV Link	General Public	Palm Desert Library
4/28/2016	Presentation	Indio Town Hall Series	General Public	Sun City Shadow Hills
4/2/2016	Info Booth	Coachella Valley Walk Out of the Darkness	General Public	Palm Desert Civic Center Amphitheater
3/31/2016	Presentation	What's Transportation's Future Conference	General Public	Monterey
3/22/2016	Presentation	Palm Springs CV Link Subcommittee	Stakeholders	Palm Springs City Hall
3/19/2016	Info Booth	Palm Springs 9th Annual Picnic & Community Expo.	General Public	Ruth Hardy Park, Palm Springs
3/12/2016	Info Booth	The Day of the "Young Child"	Youth	City of Coachella
3/11/2016	Presentation	Shadow Hills HS Advanced Class	Youth	Shadow Hills High School Indio
3/7/2016	Presentation	Palm Desert Youth Committee	Youth	Palm Desert City Hall
3/6/2016	Info Booth	Hike for Hope 2016	General Public	Indian Canyons of Palm Springs
3/3/2016	Presentation	Indio Town Hall Series	General Public	Heritage Palm Country Club, Indio
2/27/2016	Info Booth	Walk to End Alzheimer's	Stakeholders	Palm Desert Civic Center Amphitheater
2/17/2016	Info Booth	Indio Senior Center Health Fair	Seniors	Indio Senior Center

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
2/17/2016	Presentation	Escena Palm Springs HOA	Stakeholders	Escena Palm Springs
2/15/2016	Presentation	Board Men's Club	Stakeholders	Classic Club Palm Desert
1/30/2016	Info Booth	4th Annual Disability Festival Coachella Valley	Stakeholders	Palm Desert Civic Center Park
1/26/2016	Presentation	Desert Healthcare Board of Directors	Stakeholders	Desert Health Care District, Palm Springs
1/22,23/2016	Info Booth	Tour of Palm Springs	General Public	Downtown Palm Springs
1/20/2016	Presentation	Indio City Council	Stakeholders	City of Indio
1/12/2016	Presentation	Sky Valley Community Council	Stakeholders	Sky Valley Community Center
1/11/2016	Presentation	New Palm Springs Council - Mayor Moon	Stakeholders	City of Palm Springs
1/9/2016	Info Booth	The Galen New Year's Resolution 5K	General Public	Palm Springs Art Museum, Palm Desert
12/5,6/2015	Info Booth	23rd Annual Tamale Festival	General Public	Old Town Indio
11/17/2015	Presentation	Mission Hills Residents	General Public	509 Desert West Dr., Rancho Mirage
11/16/2015	Presentation	La Quinta HS Public Service Academy - Freshman Class	Youth	La Quinta High School
11/16/2015	Presentation	La Quinta HS Public Service Academy - Sophomore Class	Youth	La Quinta High School
11/16/2015	Presentation	La Quinta HS Public Service Academy - Junior Class	Youth	La Quinta High School
11/16/2015	Presentation	La Quinta HS Public Service Academy - Senior Class	Youth	La Quinta High School
11/13/2015	Presentation	Palm Springs High School Associated Student Body	Youth	Palm Springs High School
11/13/2015	Presentation	Cathedral City DATA/Digital Class	Youth	Cathedral City High School
11/4/2015	Presentation	Palms to Pines Rotary	General Public	Desert Willow Golf Resort, Palm Desert
10/30/2015	Info Booth	2nd Annual Dia De Los Muertos 5K	General Public	City of Coachella
10/27/2015	Info Booth	HARC Air Quality Expo	General Public	UC - Riverside, Palm Desert Campus
10/24/2015	Info Booth	3rd Annual Patriot Ride	General Public	City of Indio
10/22/2015	Presentation	California Desert Association of Realtors Subcommittee	Stakeholders	Desert Falls Country Club, Palm Desert
10/17/2015	Info Booth	Desert Aids Walk	General Public	Ruth Hardy Park, Palm Springs
10/16/2015	Presentation	Leadership Coachella Valley	General Public	City of Palm Desert

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
10/6/2015	Presentation	Desert Sun Editorial Board	General Public	750 Gene Autry Trail, Palm Springs
10/4/2015	Info Booth	Y Be Fit Palm Desert Challenge	General Public	Civic Center Park, Palm Desert
10/2/2015	Presentation	League of California Cities	General Public	San Jose, California
10/1,2/2015	Info Booth	Energy & Water Summit	General Public	Palm Springs Convention Center
9/26/2015	Presentation	Democrats of the Desert	General Public	Date Palm County Club, Cathedral City
9/17/2015	Presentation	Indian Wells City Council	Stakeholders	Indian Wells City Hall
9/13/2015	Info Booth	Fiestas Patrias El Grito	General Public	Rancho Las Flores Park, Coachella
9/9/2015	Presentation	Coachella City Council	Stakeholders	Coachella City Hall
8/31/2015	Workshop	Operations and Maintenance Workshop 2	Stakeholders	Cal State University Riverside, PD Campus
8/27/2015	Presentation	Palm Desert City Council	Stakeholders	Palm Desert City Hall
8/26/2015	Presentation	Palm Springs Rotary	General Public	Palm Springs Hilton
8/21/2015	Workshop	Operations and Maintenance Workshop 1	Stakeholders	Palm Desert Community Center
8/12/2015	Presentation	Chairman Frazier Tour	Stakeholders	Embassy Suites LQ
8/4/2015	Presentation	La Quinta City Council	Stakeholders	La Quinta City Hall
7/15/2015	Presentation	Indio City Council	Stakeholders	Indio City Hall
7/6/2015	Presentation	Trilogy Speaker Series	General Public	Santa Rosa C, Desert Vista Ballroom
6/25/2015	Presentation	Coachella Valley APA-AEP Meeting	General Public	CVAG - Palm Desert
6/16/2015	Presentation	City of Palm Springs Parks Commission	Stakeholders	Palm Springs City Hall
6/9/2015	Presentation	Cathedral City Rotary	General Public	Sunshine Café, Cathedral City
5/27/2015	Presentation	CA Land Surveyors Association, Desert Chapter	General Public	La Casuelas Restaurant, La Quinta
5/20/2015	Presentation	Optimists Club	General Public	Rancho Mirage Country Club
5/19/2015	Presentation	PS Chamber of Commerce - Business Advocacy Comm.	General Public	Palm Springs Hyatt
5/18/2015	Presentation	Indian Wells Rotary Club	General Public	The Vue Restaurant, Indian Wells
5/14/2015	Presentation	NOVA Academy LUPA Youth Council	Youth	NOVA Academy, Coachella
5/8/2015	Info Booth	CSUSB PD Environmental & Sustainability Expo	General Public	Palm Desert Campus of CSUSB
5/5/2015	Presentation	Cathedral City Rotary	General Public	La Casita Restaurant, Cathedral City
5/2/2015	Info Booth	Health Fair & 5K Glow Run	General Public	Downtown Cathedral City

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
4/30/2015	Info Booth	Palm Springs Cycledelic	General Public	Downtown Palm Springs
4/30/2015	Presentation	Rancho Mirage Rotary	General Public	Mission Hills County Club, Rancho Mirage
4/28/2015	Presentation	Safe Routes to Schools Coachella Valley	General Public	Indio Boys & Girls Club
4/22/2015	Presentation	Greater Palm Springs Convention and Visitors Bureau	Stakeholders	CVB Offices, Rancho Mirage
4/16/2015	Presentation	American Council of Engineering Companies	General Public	Mission Inn - Riverside
4/15/2015	Presentation	29 Palms BOMI Tribal Council	Stakeholders	46-200 Harrison Place, Coachella
4/14/2015	Presentation	Coachella Valley Water District Board	Stakeholders	Palm Desert
4/14/2015	Presentation	Palm Desert Chamber of Commerce	Stakeholders	Desert Willow Golf Resort, Palm Desert
4/7/2015	Presentation	City of Palm Desert Parks Commission	Stakeholders	Palm Desert City Hall
4/6/2015	Workshop	CV Link Master Plan Workshop	General Public	Rancho Mirage Public Library
4/1/2015	Presentation	Riverside County Active Transportation Network	General Public	Riverside
4/1/2015	Workshop	Central Valley Active Transportation Workshop	General Public	CVAG - Palm Desert
3/31/2015	Workshop	West Valley Active Transportation Workshop	General Public	Palm Springs City Hall
3/30/2015	Workshop	East Valley Active Transportation Workshop	General Public	Indio Senior Center
3/28/2015	Info Booth	8th Annual Picnic Community Expo. (PSNIC)	General Public	Ruth Hardy Park
3/19/2015	Workshop	Health Impact Assessment (HIA) Workshop Palm Desert	General Public	Jocelyn Center
3/19/2015	Workshop	HIA Workshop Coachella	Disadvantaged Communities	Valle del Sol School, Coachella
3/14/2015	Info Booth	Annual Walk to End Alzheimer's & Health Fair	Stakeholders	Palm Desert Civic Center Park
3/5/2015	Presentation	Friends of CV Link	Stakeholders	Palm Desert Library
3/3/2015	Workshop	Desert Hot Springs CV Link Workshop #2	General Public	DHS Community Center
2/26/2015	Workshop	Desert Hot Springs CV Link Workshop #1	General Public	DHS Community Center
2/25/2015	Presentation	Palm Springs Realtors Association	Stakeholders	Saguaro Hotel, Palm Springs
2/24/2015	Presentation	Coachella Valley Hiking Clubs	General Public	Palm Desert Library
2/24/2015	Presentation	Desert HealthCare District Board	Stakeholders	Palm Springs
2/14/2015	Info Booth	Tour of Palm Springs	General Public	Downtown Palm Springs

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
2/11/2015	Presentation	Sun City Palm Desert Cyclists Club	General Public	Sun City Palm Desert Clubhouse
2/6/2015	Info Booth	Color in Motion 5K	General Public	Empire Polo Club, Indio
2/2/2015	Presentation	APWA	General Public	Mission Hills Country Club, Rancho Mirage
1/24/2015	Info Booth	Coachella Valley Disability Sports Festival	Stakeholders	Palm Desert Civic Center Park
1/22-25/2015	Info Booth	Humana Challenge	General Public	La Quinta
1/17/2015	Info Booth	Palm Springs Mayor's Wellness Festival	General Public	Ruth Hardy Park, Palm Springs
1/15/2015	Presentation	CV Link Bicycle Event	General Public	Palm Desert Cyclery
1/7/2015	Presentation	Rotary Club of Coachella Valley	General Public	Sloan's Restaurant, Indio
12/18/2014	Presentation	California Desert Association of Realtors (CDAR)	Stakeholders	Desert Falls Country Club
12/5/2014	Workshop	Coachella CV Link Master Plan Workshop	Disadvantaged Communities	Coachella City Hall
11/13/2014	Workshop	HIA Workshop Cathedral City	Disadvantaged Communities	Cathedral City Hall
11/12/2014	Workshop	HIA Workshop Coachella	Disadvantaged Communities	Coachella City Hall
11/6/2014	Presentation	Friends of CV Link Presentation	General Public	Palm Desert Library
10/28/2014	Workshop	HIA Workshop Palm Desert	General Public	Jocelyn Center, Palm Desert
10/26/2014	Info Booth	Palm Desert Golf Cart Parade	General Public	El Paseo, Palm Desert
10/17/2014	Presentation	Leadership Coachella Valley	General Public	City of Palm Desert
10/16/2014	Info Booth	Palm Springs Cycledelic	General Public	Downtown Palm Springs
10/10/2014	Info Booth	SoCal Energy Summit	General Public	Palm Springs Convention Center
10/2/2014	Info Booth	Business to Consumer Showcase	Stakeholders	Fantasy Springs Resort Casino, Indio
9/24/2014	Info Booth	Youth Resource Fair / 5K	General Public	County Fair Grounds, Indio
8/27/2014	Presentation	WTS (Advancing Women in Transportation)	General Public	Riverside Convention Center
7/10/2014	Presentation	Goldenvoice	Stakeholders	CVAG - Palm Desert
5/28/2014	Presentation	Coachella Valley Disabilities Collaborative	General Public	Braille Institute, Rancho Mirage
5/15/2014	Presentation	SCAQMD Governing Board	Stakeholders	Marriott Desert Springs, Palm Desert
5/14/2014	Presentation	Palm Springs Planning Commission	Stakeholders	City of Palm Springs
5/6/2014	Info Booth	Salsa and 5K Festival	General Public	Coachella

Table 3-1
Public Outreach

Date	Type of Outreach	Organization or Event	Audience	Location
5/6/2014	Workshop	CV Link Citizens Advisory Group - 7	Stakeholders	CVAG - Palm Desert
4/16/2014	Presentation	Green Lecture Series	General Public	Univ. of California Riverside, Palm Desert
4/9/2014	Presentation	California Trails Conference	General Public	Riviera Hotel, Palm Springs
3/31/2014	Presentation	U.S. EPA, Region 9	Stakeholders	San Francisco
3/25/2014	Presentation	Community Associates Institute -Coachella Valley	General Public	Marriott Desert Springs, Palm Desert
2/19/2014	Workshop	CV Link Citizens Advisory Group - 6	Stakeholders	CVAG - Palm Desert
2/18/2014	Presentation	Desert Sands Unified School District	Stakeholders	La Quinta
2/13/2014	Presentation	Desert Valley Builders Association	General Public	Agua Caliente Resort
1/14/2014	Presentation	Coachella Valley Water District Board	Stakeholders	CVWD Board Room
12/10/2013	Presentation	Palm Desert Rotary Club	General Public	Desert Fall Country Club, Palm Desert
12/10/2013	Workshop	CV Link Citizens Advisory Group - 5	Stakeholders	CVAG - Palm Desert
12/6/2013	Presentation	California Transportation Commission	Stakeholders	Sacramento
12/3/2013	Workshop	CEQA Scoping Meeting NOP	Stakeholders	CVAG - Palm Desert
10/30/2013	Presentation	Southern CA Association of Governments (SCAG)	Stakeholders	SCAG Riverside Office
10/18/2013	Presentation	Leadership Coachella Valley	General Public	City of Palm Desert Council Chambers
10/17/2013	Presentation	Rancho Mirage Rotary Club	General Public	Mission Hills Country Club, Rancho Mirage
10/15/2013	Workshop	Central Valley CV Link Master Plan Workshop	General Public	Rancho Mirage Public Library
9/20/2013	Presentation	Caltrans District	Stakeholders	Caltrans - Sacramento
9/18/2013	Workshop	CV Link Citizens Advisory Group - 4	Stakeholders	CVAG - Palm Desert
7/25/2013	Workshop	East Valley CV Link Master Plan Workshop	General Public	Indio Senior Center
7/18/2013	Presentation	College of the Desert (COD) Board of Trustees	Stakeholders	COD Palm Desert
6/21/2013	Presentation	Greater Palm Springs Convention and Visitors Bureau	Stakeholders	Rancho Mirage
6/12/2013	Workshop	CV Link Citizens Advisory Group - 3	Stakeholders	CVAG - Palm Desert
6/4/2013	Workshop	West Valley CV Link Master Plan Workshop	General Public	CVEP Palm Springs
4/17/2013	Workshop	CV Link Citizens Advisory Group - 2	Stakeholders	CVAG - Palm Desert

Table 3-1 Public Outreach				
Date	**Type of Outreach**	**Organization or Event**	**Audience**	**Location**
3/4/2013	Workshop	CV Link Citizens Advisory Group -1	Stakeholders	CVAG - Palm Desert

CHAPTER 4 – LIST OF PREPARERS

The following Terra Nova Planning & Research, Inc. staff and consultants contributed to the preparation of this EA.

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List of Technical Studies

CV Link Air Quality and Greenhouse Gas Report, prepared by Terra Nova Planning & Research, Inc. October 2016.

CV Link Biological Resource Assessment Report, prepared by Amec Foster Wheeler, August 2016.

CV Link Corridor Transportation Analysis, prepared by Urban Crossroads, Inc. August 2016.

CV Link Hydrology and Hydraulic Report, prepared by Stantec Consulting Services, Inc. July 2016.

Location Hydraulic Study” Prepared by Stantec Consulting, Inc., July 2016

CV Link Jurisdictional Delineation Report, prepared by Amec Foster Wheeler, August 2016.

CV Link Stormwater Design Report, prepared by Stantec Consulting Services, Inc. August 2016.

Summary Floodplain Encroachment Report prepared by Stantec Consulting, Inc., July, 2016

Draft Water Quality Assessment Report, Prepared by Stantec Consulting Services, Inc. September 2016.

Visual Impact Assessment”, prepared by Terra Nova Planning & Research, Inc. September 14, 2016

Historical Property Survey Report/Archaeological Survey Report, CV Link Project, prepared by CRM Tech, Inc., September 2017.

Preliminary Subsurface Investigation and Geotechnical Background Report, CV Link Project, CVAG, Coachella Valley, Riverside County, California, December 30, 2016

Initial Site Assessment, prepared by Terra Nova Planning & Research, Inc. August, 2016

Natural Environment Study, prepared by Coachella Valley Association of Governments, Revised October 6, 2016

Water Quality Assessment Report, prepared by Stantec Consulting, Inc. September, 2016

Noise Impact Analysis", prepared by Urban Crossroads, Inc. September 23, 2016. Supplemental Letter

Community Impact Assessment", prepared by Terra Nova Planning & Research, Inc. August, 2016.

CV Link Corridor Transportation Analysis", prepared by Urban Crossroads, October 13, 2016

CHAPTER 5 – DISTRIBUTION LIST

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