

08 - RIV - MCP - PM 0.0/16.3 08 - RIV - 215 - PM 28.0/34.3 EA 08-0F3200 - PN 0800000125 Program Code 800.100 / HE14 April/2015

# **Final Project Report**

# For Project Approval

On Route	Mid County Parkway (Construct New Freeway)
Between	I-215
And	SR-79

I have reviewed the right of way information contained in this report and the R/W Data Sheet attached hereto, and find the data to be complete, current and accurate:

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APPROVED:

DATE

JOHN BULINSKI Interim District 8 Director



# Vicinity Map

MID COUNTY PARKWAY BETWEEN I-215 AND SR-79 IN THE VICINITY OF RAMONA EXPRESSWAY This Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

MERIDETH C. CANN, P.E. Registered Civil Engineer

4/16/15

DATE



Concurred by

JON BUMPS, P.E. Design Oversight Senior, Caltrans

2015

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# 1. INTRODUCTION

This Final Project Report was prepared for the modified 16-mile Mid County Parkway (MCP) project in support of the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS). This report is the final version of the Revised Draft Project Report signed in January 2013.

Engineering and environmental studies were initiated in 2004 for the Mid County Parkway project, a proposed 32-mile facility between Interstate 15 (I-15) and State Route 79 (SR-79). In October 2008, the California Department of Transportation (Caltrans) approved the Draft Project Report (DPR), and the Draft EIR/EIS for the Mid County Parkway project was circulated for a 90-day public review period. In June 2009, in response to the concerns expressed during public review of the Draft EIR/EIS, the Riverside County Transportation Commission (RCTC) took action to modify Alternatives 4, 5, and 9 focusing on a 16-mile MCP project from Interstate 215 (I-215) to SR-79. RCTC, the Federal Highway Administration (FHWA), and Caltrans developed an approach for completing the EIR/EIS process for the project. This approach included preparation of a Recirculated Draft EIR/Supplemental Draft EIS and Revised Draft Project Report that would refine the project purpose statement and modify the project alternatives to focus on the transportation needs from I-215 to SR-79.

RCTC, in cooperation with Caltrans District 8, the County of Riverside (County), the City of San Jacinto, and the City of Perris, proposes construction of a new west-east transportation corridor in western Riverside County. The purpose of the proposed Mid County Parkway is to serve as a transportation facility to effectively and efficiently accommodate regional west-east movement of people and goods between and through San Jacinto and Perris. The new corridor, named Mid County Parkway or MCP, is a transportation facility designed to meet current and projected travel demand for year 2040 for the 16 miles between I-215 to the west and SR-79 to the east (see Attachment A-1, Vicinity Map). RCTC proposes to recommend this freeway for adoption as a new State Route alignment on or near Ramona Expressway. The MCP is recognized by Caltrans as a possible future State Highway and will be considered for adoption as such. This proposal is a Category 1 project (see Attachment AA-2, Project Category Assignment Memorandum) as defined in the Project Development Procedures Manual (7<sup>th</sup> Edition, Chapter 8, and Section 5) requiring access control, new alignment, new right of way, and adoption of a new route by the California Transportation Commission (CTC).

The estimated cost of this project is \$1.73 billion for the ultimate build, including right of way acquisition, construction, support, and environmental mitigation. The Project Approval/Environmental Document (PA/ED) phase of the project will be completed upon approval of this report.

The project is programmed in both the Regional Transportation Plan (RTP) and the Federal Transportation Improvement Program (FTIP).

The title of the new corridor is Mid County Parkway. For purposes of this report, a Mid County Parkway "facility" is defined as follows: a divided highway with full or partial access control and with grade separations at local interchanges with major local arterials; and designed to freeway/expressway standards as defined in Caltrans Highway Design Manual (HDM).

Two no-build alternatives, three build alternatives, and two design variations are considered in this report and are described below.

Alternatives 1A and 1B are the no-build alternatives: Alternative 1A – No Project/No Action—Existing Ground Conditions and Alternative 1B – No Project/No Action—General Plan Circulation Element Conditions. Alternative 1B represents 2040 traffic levels on the planned street network, according to the Circulation Element of the Riverside County General Plan.

Alternative 4 Modified proposes to construct a six-lane controlled-access freeway with eight local interchanges with MCP 1) Perris Blvd, 2) Evans Ave, 3) Ramona Exp/Antelope Rd, 4) Bernasconi Rd, 5) Reservoir Ave, 6) Town Center Blvd, 7) Park Center Blvd, 8) Warren Ave, one new interchange at I-215 9) I-215 /Placentia Ave, one modified interchange at I-215 10) I-215/Cajalco Rd/Ramona Exp, one new interchange at SR-79 11) SR-79/Ramona Exp/Sanderson Ave and two freeway to freeway interchanges 12) MCP/I-215 and 13) MCP/SR-79. Additional lanes for I-215 are also proposed. Alternative 4 Modified follows a northern alignment through the City of Perris. The cost for Alternative 4 Modified ranges from \$2.02 to \$2.10 billion (in 2012), including \$197 million for right of way and utility relocation costs.

Alternative 5 Modified proposes to construct a six-lane controlled-access freeway with eight local interchanges with MCP 1) Perris Blvd, 2) Evans Ave, 3) Ramona Exp/Antelope Rd, 4) Bernasconi Rd, 5) Reservoir Ave, 6) Town Center Blvd, 7) Park Center Blvd, 8) Warren Ave, one new interchange at I-215 9) I-215 /Placentia Ave, one modified interchange at I-215 10) I-215/Cajalco Rd/Ramona Exp, one new interchange at SR-79 11) SR-79/Ramona Exp/Sanderson Ave and two freeway to freeway interchanges 12) MCP/I-215 and 13) MCP/SR-79. Additional lanes for I-215 are also proposed. Alternative 5 Modified follows a southern alignment through the City of Perris along Rider Street. The cost for Alternative 5 Modified ranges from \$1.64 to \$1.72 billion (in 2012), including \$209 million for R/W and utility relocation costs.

Alternative 9 Modified proposes to construct a six-lane controlled-access freeway with eight local interchanges with MCP 1) Redlands Ave, 2) Evans Ave, 3) Ramona Exp/Antelope Rd, 4) Bernasconi Rd, 5) Reservoir Ave, 6) Town Center Blvd, 7) Park Center Blvd, 8) Warren Ave, one new interchange at I-215 9) I-215 /Placentia Ave, one modified interchange at I-215 10) I-215/Cajalco Rd/Ramona Exp, one new interchange at SR-79 11) SR-79/Ramona Exp/Sanderson Ave and two freeway to freeway interchanges 12) MCP/I-215 and 13) MCP/SR-79. Additional lanes for I-215 are also

proposed. Alternative 9 Modified follows Placentia Avenue through the City of Perris. The cost for Alternative 9 Modified ranges from \$1.53 to \$1.95 billion (in 2012), including \$188 million for R/W and utility relocation costs.

The San Jacinto North Design Variation terminates MCP on the east end slightly different from the base case. The design variation extends MCP parallel in the north side of Ramona Expressway between Warren Rd and SR-79. Under the San Jacinto River Bridge Design Variation, the MCP would construct two bridges in the Lakeview Nuevo area, for a total of 2,472 feet of bridge. The base case proposes one 4,321-foot long bridge to span the floodplain and Martin Street.

Several alternatives were evaluated and eliminated from further study during the alternative refinement and EIR/EIS process. Alternatives 2 and 3 were considered but eliminated from further analysis prior to the release of the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the 32-mile MCP facility. The No Project/No Action General Plan Circulation Element Conditions Alternative, originally identified as Alternative 8, was renumbered Alternative 1B.

To address the concerns in response to comments on the Draft EIR/EIS for a 32-mile MCP facility, RCTC, FHWA, and Caltrans developed an approach for completing the EIR/EIS process for the project that would refine the project purpose statement and modify project alternatives to focus on the transportation needs from I-215 to SR-79. Therefore, the Build Alternatives 4, 5, 6, 7, and 9 analyzed in the 32-mile Draft EIR/EIS for the MCP project were eliminated from further consideration and in June 2009, RCTC took action to modify Alternatives 4, 5, and 9, focusing on a 16-mile MCP project from I-215 to SR-79. These alternatives are now known as Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified. The preferred alternative described within this Final Project Report is Alternative 9 Modified with the San Jacinto River Bridge Design Variation, herein referred to as the MCP or the project. The table below includes some general information of the preferred alternative.

	08 - RIV - MCP - PM 0.0/16.3
Project Limits	08 - RIV - 215 - PM 28.0/34.3
Current Capital Outlay Support Estimate <sup>1</sup>	\$382 M
Current Capital Outlay Construction Estimate <sup>1</sup>	\$1,113 M
Current Capital Outlay Right-of-Way Estimate <sup>1</sup>	\$237 M
Funding Source	CAX66
Funding Year	2020
Type of Facility	6-lane controlled-access freeway
Number of Structures	37
	2 No-Builds
	3 Builds
Number of Alternatives	2 Design Variations
Environmental Document	EIR/EIS

Legal Description	New MCP Freeway: I-215 to SR-79		
Project Development Category	Category 1		

<sup>1</sup> Cost per 2014 cost estimate

## 2. RECOMMENDATION

It is recommended that this Project Report, supporting the Preferred Alternative, be approved and that authorization be granted to proceed to the final design phase, also known as the Plans, Specifications, and Estimates (PS&E) phase. Local agencies have been consulted and their views considered with respect to the recommended plan. They are in accord with the plan as presented.

# 3. BACKGROUND

#### A. Project History

The MCP, formerly known as the Cajalco-Ramona Corridor, was identified as a key west-east regional transportation corridor as a result of several years of comprehensive land use and transportation planning in Riverside County through the Riverside County Integrated Project (RCIP). Initiated in 1999, the RCIP was an unprecedented, multiyear planning effort to simultaneously prepare environmental, transportation, housing, and development guidelines for Riverside County for the first half of the 21st century. The RCIP included three components: (1) a new General Plan for Riverside County, adopted in October 2003; (2) a Multiple Species Habitat Conservation Plan (MSHCP) for western Riverside County (approved in June 2004); and (3) the Community and Environmental Transportation Acceptability Process (CETAP).

CETAP study efforts were jointly undertaken by the RCTC and the County of Riverside as part of the RCIP. CETAP included the study of two intercounty corridors (Riverside County to Orange County and Riverside County to San Bernardino County) and two intracounty transportation corridors (a north-south and a west-east corridor in western Riverside County). Tier 1 analyses and environmental documents were initiated for the two intracounty corridors in fall 2000: a north-south corridor referred to as Winchester to Temecula, and a west-east corridor referred to as the Hemet to Corona/Lake Elsinore (HCLE) Corridor. The purpose of the Tier 1 efforts was to select preferred alternatives in order to preserve needed right of way.

The agencies that participated in the HCLE Corridor study process developed the following purpose of the proposed action in the Hemet to Corona/Lake Elsinore Corridor: "... to provide multimodal transportation improvements that will help alleviate future traffic demands and congestion and improve the east-west movement of people and goods across western Riverside County." After a Draft Tier 1 Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was completed for the Hemet to Corona/Lake Elsinore Corridor and circulated for public review in 2002 with a suite of 14 "build" alternatives, the RCTC Board accepted a staff recommendation in June 2003 to proceed with the accelerated preparation of a project-level environmental document for a

west-east alternative that would follow the existing alignment of Cajalco Road and Ramona Expressway, known as the MCP project. Engineering and environmental studies were initiated in 2004 for the MCP project, a proposed 32-mi facility between I-15 and SR-79, and in September 2007 the RCTC Board selected a Locally Preferred Alternative (Alternative 9 Temescal Wash Design Variation) for the MCP project. In October 2008, the Draft EIR/EIS for the MCP project was circulated for a 90-day public review period. During this time, six public meetings/hearings were held and RCTC accepted public comments for the record at all of these meetings, along with comments via the MCP project website and email. Over 3,100 comments were received from 50 public agencies and organizations, 10 large property owners, 240 individuals, and a form letter (opposing the project because of the environmental effects of the project including loss of open space, wildlife habitat, streams and riparian resources; residential sprawl; and automobile air emissions) from over 1,100 individuals nationwide.

The following two key themes emerged in the public review comments:

- 1. Concern about the cost and timing of available funds for the project. Many comments noted that, given the current economy and difficulty in securing funding for the entire project, limited financial resources should be focused on areas of greatest need.
- 2. Although the public comments raised concerns about many aspects of the project throughout its entire length, many comments suggested that making improvements to existing facilities rather than building the MCP facility would be a better expenditure of public funding in the western portion of the project area between I-15 and I-215. In this area, improving existing facilities, such as Cajalco Road, instead of building the MCP facility would minimize impacts to the rural communities of Gavilan Hills and Lake Mathews Estates as well as existing habitat reserves. Impacts to rural communities and existing habitat reserves were two major concerns raised in the public comments.

To address the concerns, in spring 2009, RCTC as the lead agency under California Environmental Quality Act (CEQA), FHWA as the lead agency under National Environmental Policy Act (NEPA), in cooperation with Caltrans, developed an approach for completing the EIR/EIS process for the project. This approach also included preparation of a Recirculated Draft EIR/Supplemental Draft EIS that would revise the project purpose statement and modify the project alternatives. RCTC recognizes that while the need for transportation improvements still exists between I-15 and I-215, the Riverside County Transportation Department's proposed widening improvements to Cajalco Road will alleviate a portion of that need. The greatest near-term need for westeast transportation improvements is east of I 215, even with the planned improvements along existing Ramona Expressway. Therefore, the project purpose for the modified MCP project focuses on the need for transportation improvements between I-215 and SR-79. I-215 and SR-79 provide logical termini for the MCP project, and the project has independent utility even if no additional transportation improvements are made in the area. This approach for completing the EIR/EIS process for the modified MCP project was reviewed with the federal and State resource and regulatory agencies involved in the project (United States Army Corps of Engineers [USACE], United States Environmental Protection Agency [EPA], United States Fish and Wildlife Service [USFWS], and California Department Fish and Wildlife [CDFW]).

Fundamental to the modification of the MCP project purpose statement and alternatives is the tenet that no improvements between I-15 and I-215 are planned, designed, or intended to be implemented as part of the MCP project. The distinct transportation needs between I-15 and I-215 will be addressed by the Riverside County Transportation Department's General Plan roadway improvements for Cajalco Road. The Cajalco Road improvement project is undergoing a separate environmental review process with the Riverside County Transportation Department acting as the lead agency. The Cajalco Road improvements are analyzed in the MCP cumulative impacts assessment using the most current information available from the County (see Section 3.25, Cumulative Impacts, of the Final EIR/EIS for additional detail). A CETAP corridor between I-15 and I-215 (Project ID 3C01MA01) remains in the financially constrained part of the SCAG 2012 Regional Transportation Plan (RTP) so as to not preclude consideration of transportation improvements.

On July 8, 2009, the RCTC Board formally took action to refocus the MCP project between I-215 and SR-79. As a result of the RCTC's Board action, a Recirculated Draft EIR/Supplemental Draft EIS was prepared and circulated for public review in January 2013. The public and agency comments previously submitted for the October 2008 Draft EIR/EIS will be included in the MCP Administrative Record, but no formal responses to those comments were prepared consistent with Section 15088.5(f)(2) of the CEQA Guidelines. However, any comments on the October 2008 Draft EIR/EIS applicable to the modified MCP project were considered in the preparation of the Recirculated Draft EIR/Supplemental Draft EIS.

RCTC and the MCP project team worked closely with FHWA and Caltrans to develop the modified alternatives that were evaluated in the Recirculated Draft EIR/Supplemental Draft EIS in response to RCTC's Board action in July 2009. The following summarizes the main changes from the Build Alternatives evaluated in the Draft EIR/EIS and the modified Build Alternatives evaluated in the Recirculated Draft EIR/Supplemental Draft EIS:

- The project limits for the Build Alternatives were changed to I-215 in the west and SR-79 in the east. The segment of the original Build Alternatives west of I-215 to I-15 is no longer under consideration as part of the MCP project.
- The horizontal alignment for Alternative 9 Modified between Perris Boulevard in the west and the Perris Valley Storm Drain in the east through the City of Perris was shifted approximately 1,000 feet north to avoid Paragon Park.

- Alternative 9 Modified includes a local interchange at Redlands Avenue to replace the local interchange previously proposed at Perris Boulevard.
- The following improvements to I-215 are included: (1) the addition of one auxiliary lane between the MCP/I-215 systems interchange and the adjacent service interchanges to the north and south to facilitate movement to/from the MCP and I-215; (2) the addition of an operational/mixed-flow lane from the MCP to the Van Buren Boulevard interchange to accommodate additional traffic on I-215 as a result of the MCP; (3) the addition of an operational/mixed-flow lane from Nuevo Road to the Cajalco-Ramona Expressway to facilitate weaving on I-215 (the previous Build Alternatives included collector-distributor roads and realignment of I-215 to accommodate weaving movements in this segment of I-215); (4) the addition of a new interchange at Placentia Avenue; and (5) modification of the existing interchange at the Cajalco Road/Ramona Expressway.

# B. Agency and Community Interaction

Between 2004 and 2014, RCTC participated in significant outreach with agencies and the community in and around the MCP study area. In this period, 8 newsletters were sent with mailings going to thousands of recipients in each notification. When public meetings were held, notices were published in multiple newspapers, including one Spanish newspaper to reach Spanish-speaking people. Also in this time period, 11 public meetings and 3 hearings took place. All public meetings were held in public schools or community locations to facilitate ease of attendance by groups such as pedestrians, non-drivers, and transit-dependent persons. Bilingual staff was available at each meeting to assist attendees who were more comfortable communicating in Spanish. A summary of key Agency and Community interaction to date is provided below:

## 2003:

 Participating agencies (RCTC, Caltrans, FHWA, USFWS, USACE, EPA, the CDFW [formerly CDFG (California Department of Fish and Game)], and the County of Riverside) met and signed a Partnership Agreement committing to a streamlined completion of the MCP project environmental review process.

## 2004:

A Statement of Purpose and Need was prepared and submitted to participating agencies for review. FHWA requested agency concurrence on the Purpose and Need statement. On January 29, 2004, and January 30, 2004, FHWA received concurrence from the USACE and EPA, respectively. The Native American Heritage Commission (NAHC) was contacted on August 9, 2004 and the NAHC responded on August 19, 2004, with a list of 29 Native American tribes and contacts representing the Luiseño, Gabrielino, Cahuilla, and Serrano Tribes. A second list was received from the NAHC in December of 2004 in response to the Notice of Preparation of an EIR/EIS. This list included 14 additional Native

American tribes and contacts. In total, the NAHC listed 43 Native American tribes and contacts. The NAHC Sacred Lands File was inspected for the MCP project; however, no Native American cultural resources were identified. As such, the NAHC recommended that the 43 Native American tribes and contacts be contacted and provided a list of these contacts.

- Preliminary meeting with the Pechanga Band of Luiseño Indians and RCTC to discuss the MCP alignment in relation to cultural resources.
- RCTC sent letters to the USFWS, USACE, and EPA requesting preliminary concurrence on Alternatives to be carried forward in the environmental scoping process.
- As agreed upon at the August 20, 2004, meeting, the Pechanga Band of Luiseño Indians met with the project consultant team to tour the project area and discuss impacts to cultural resources.
- FHWA received preliminary concurrence on alternatives from the USACE and EPA.
- RCTC distributed two newsletters to provide the public with information regarding the project purpose and need and identifying alternatives to be studied.
- Three pre-scoping public meetings were held. Approximately 180 people attended these meetings.
- RCTC received preliminary concurrence on alternatives from USACE and EPA.
- RCTC distributed a newsletter to provide the public with information identifying alternatives to be studied.
- RCTC and project team initiated engineering and environmental studies in support of the Draft EIR/EIS.
- Three public scoping meetings were held. Approximately 230 people attended these meetings. Comments received in response to the Notice of Preparation (NOP), Notice of Intent (NOI), and scoping meetings primarily focused on community and environmental impacts and are discussed in further detail in the MCP Scoping Summary Report (February 2008).

#### 2005/2006:

- Caltrans conducted four Value Analysis (VA) Studies compliant with the National Highway System (NHS) Act of 1995. The four Value Analysis studies executed were on the SR-79/MCP interchange, the I-215/MCP interchange, the I-15/MCP interchange, and the mainline MCP.
- Metropolitan Water District (Metropolitan) and the State Department of Water Resources (DWR) issued letters stating concerns with the close proximity of some of the MCP alignments to the Lake Mathews Dam, Lake Perris Dam, and adjoining facilities.

- FHWA sent a request for preliminary concurrence on the revised range of Alternatives to be carried forward in the environmental process that was submitted to participating agencies.
- FHWA received preliminary concurrence on Alternatives from the USACE and EPA and a response letter from USFWS indicating their informal role of providing technical assistance when requested.
- A field review was conducted with USACE, CDFW, and EPA staff to verify results of the jurisdictional delineation.
- RCTC distributed a newsletter to the public providing updates to the project and informing the public of an upcoming public meeting.
- An additional public meeting was held to seek public input. Approximately 320 people attended this meeting.
- RCTC received preliminary concurrence on a revised range of alternatives from USACE and EPA.
- RCTC distributed a newsletter to the public identifying updates to the suite of alternatives.

## 2007:

- The City of San Jacinto identified the base case southerly alignment connecting to SR-79, rather than the San Jacinto North Design Variation (SJN DV), as a locally preferred alternative. The City of Perris did not state a preference for any one alternative alignment through the City of Perris.
- RCTC received preliminary agreement to move forward in pursuing a locally preferred alternative from the participating agencies.
- RCTC met with staff from the Western Riverside County Regional Conservation Authority (RCA), USFWS, CDFG/CDFW, and USA Waste, the permittee for the El Sobrante Landfill Multiple Species Habitat Conservation Plan. As a result, refinements were made to suite of alternatives to minimize effects on El Sobrante Landfill.
- Public agency input was received in response to the Supplemental NOP that was issued to add Alternative 9 to the range of alternatives to be studied. Comments primarily focused on community and environmental impacts.
- RCTC identified Alternative 9 as the locally preferred alternative and distributed a newsletter summarizing the Commission's action.
- RCTC received final concurrence from participating agencies on the suite of alternatives to be discussed in the Draft EIR/EIS.

#### 2008:

- RCTC and the project consultant team met in the field with representatives from the Cahuilla Band of Indians, Morongo Band of Mission Indians, Pechanga Band of Luiseño Indians, and Ramona Band of Cahuilla and confirmed that the nine possible cupule boulders of concern to the Pechanga Band of Luiseño Indians were all outside of the MCP right of way.
- The Pechanga Band of Luiseño Indians sent FHWA and RCTC a letter to provide comments on the Preliminary Recommendations of Eligibility and Level of Effects memorandum.
- RCTC and the project consultant team met with USA Waste, USFWS, CDFW, and the Riverside County Habitat Conservation Agency (RCHCA) to continue discussing the El Sobrante Habitat Conservation Plan.
- RCTC and the project consultant team participated in a teleconference with the transportation agencies (FHWA and Caltrans), the State Historic Preservation Officer, and the Advisory Council on Historic Preservation to clarify the purpose, process, and distribution of the Preliminary Recommendations of Eligibility and Level of Effects memorandum, as well as how the document would be incorporated into the Draft EIR/EIS.
- RCTC and the project consultant team met with the Bureau of Land Management (BLM) as a result of the letter submitted to RCTC by BLM in response to the Supplemental Notice of Preparation.
- USACE sent RCTC a letter stating approval of the jurisdictional delineation for the MCP project.
- RCTC sent letters to BLM and RCHCA summarizing the meeting and confirming the agreements reached on April 2, 2008.
- RCHCA sent a response letter as requested by RCTC providing concurrence to the agreements reached at the April 2, 2008, meeting between RCTC, BLM, and RCHCA.
- USA Waste (permittee of the El Sobrante Landfill) sent RCTC a letter regarding the El Sobrante Habitat Conservation Plan.
- FHWA sent the State Historic Preservation Officer a letter requesting formal concurrence with the Phased Evaluation and Findings of Effect under Section 106 approach, as indicated by Mike McGuirt in the meeting held on May 23, 2007.
- BLM sent a response letter as requested by RCTC providing concurrence on the agreements reached at the April 2, 2008, meeting between RCTC, BLM, and RCHCA.
- FHWA sent a letter to Caltrans stating acceptability (conditional approval) of the original New Connection Report.

- FHWA sent a letter to the Pechanga Band of Luiseño Indians in response to comments received from the tribe on January 25, 2008, for the Preliminary Recommendations of Eligibility and Levels of Effect memorandum.
- RCTC met with USA Waste to discuss the May 6, 2008, letter sent by USA Waste regarding impacts to the El Sobrante Landfill with implementation of the MCP project.
- The State Historic Preservation Officer (SHPO) sent a letter to FHWA stating concurrence on phased approach.
- RCTC sent a letter to USA Waste to summarize the discussion and understandings reached at the June 3, 2008, meeting.
- FHWA sent a letter to the State Historic Preservation Officer requesting a provisional concurrence on the preliminary determinations of eligibility regarding historic properties and provisional concurrence on a preliminary Finding of Adverse Effect.
- The State Historic Preservation Officer sent FHWA a letter stating concurrence on preliminary determination of eligibility regarding historic properties and finding of adverse effect.
- The Draft EIR/EIS was circulated for public review with the close of the public comment period on January 8, 2009, providing a 90-day comment period.
- RCTC distributed a newsletter summarizing release of the Draft EIR/EIS for public review and dates for community workshops and public hearings. Approximately 4,500 newsletters and formal Notices of Availability under CEQA were mailed to all properties within a 300-foot distance of the MCP Build Alternatives, interested public members, and the last known name and address of all organizations and individuals who had previously requested CEQA notices.
- Three public meetings were held in three different cities. A total of 185 people attended these meetings. Two public hearings were held during public circulation of the Draft EIR/EIS at the Perris City Council Chamber and RCTC Board Room. A public meeting was held by First District Supervisor Bob Buster in the City of Perris. Approximately 95 people attended this meeting.
- Comments were received from the public in response to the Draft EIR/EIS. Two key themes emerged in the public review comments: the cost and timing of available funds for the project and concerns about the impacts to rural communities and existing habitat reserves.

## 2009/2010:

 RCTC, FHWA, and Caltrans developed an approach in response to comments on the Draft EIR/EIS to modify the MCP project limits from 32 mi (I-15 to SR-79) to 16 mi (I-215 to SR-79) in order to focus transportation funding where the need is the greatest, between I-215 to SR-79, near existing facilities (i.e., Ramona Expressway). This approach was reviewed with USACE, EPA, USFWS, and CDFW.

- Resolution No. 3235 of the City of San Jacinto, California, expressing a preference for the RCTC to construct the MCP starting at the eastern end and working westerly.
- RCTC formally took action to refine the project purpose statement and refine the project alternatives to focus on the transportation needs between I-215 to SR-79 at the July 8, 2009 Commission meeting. See Section 3A for the background on this decision.
- RCTC gave an update on the MCP project to the City of Perris City Council during a Work Session.
- RCTC distributed a newsletter summarizing refinements to the project.
- Caltrans sent letters to USACE, EPA, and USFWS requesting a formal "Agree/Disagree" response for the modified MCP Purpose and Need. In July 2010, Caltrans received letters from USACE and EPA indicating their final agreement and a letter from USFWS indicating no further comments.
- Caltrans sent letters to USACE, EPA, and USFWS requesting a formal "Agree/Disagree" response for the modified MCP set of alternatives. In January 2011, Caltrans received letters from USACE, EPA, and USFWS indicating their final agreement on the modified set of alternatives to be evaluated in this Recirculated Draft EIR/Supplemental Draft EIS.
- The City of San Jacinto identified the base case San Jacinto South, as opposed to the design variation San Jacinto North, as a locally preferred alternative, resolution number 3235. The City did not state a preference for any one alternative alignment through the City of Perris.

#### 2011:

- RCTC gave an update on the MCP project to the City of Perris City Council during a Work Session.
- The City of Perris identified Alternative 9 Modified as a locally preferred alternative, resolution number 4428.
- RCTC presented project update to the City of San Jacinto at the Special Meeting
   Joint Council and Transportation Workshop.
- RCTC and the project consultant team met with the Regional Water Quality Control Board (RWQCB) staff to review RCTC's action in July 2009 to modify the project limits and to update the agency on the modified build alternatives and project schedule.
- RCTC, Caltrans, and FHWA met with the State Historic Preservation Officer and tribal representatives from the Cahuilla Band of Indians, Soboba Band of Luiseño

Indians, and Ramona Band of Cahuilla to provide a clear understanding of how the project has changed from its original alignment and to outline major milestones and review the schedule for completing the Section 106 documents.

- RCTC, Caltrans, and FHWA met with the tribal representatives from the Pechanga Band of Luiseño Indians and the Morongo Band of Mission Indians to provide a clear understanding of how the project has changed from its original alignment and to outline major milestones and review the schedule for completing the Section 106 documents.
- Caltrans sent the Soboba Band of Luiseno Indians Cultural Resource Director a letter regarding the Draft Historic Property Survey Report (HPSR) for the project.
- Caltrans sent the Pechanga Band of Luiseño Indians Cultural Resource Director a letter regarding the Draft HPSR for the project.
- Caltrans sent the Morongo Band of Mission Indians Cultural Resources Center a letter regarding the Draft HPSR for the project.
- Caltrans sent the Pechanga Band of Luiseño Indians Cultural Resources Center a letter regarding the Draft HPSR for the project.
- Caltrans sent the Cahuilla Band of Indians Environmental Protection Officer a letter regarding the Draft HPSR for the project.
- Caltrans sent the Cahuilla Band of Indians Chairperson a letter regarding the Draft HPSR for the project.
- Caltrans sent the Gabrielino Tongva Nation Secretary Cultural Resource Management Coordinator a letter regarding the Draft HPSR for the project.
- November 21, 2011: Caltrans sent the Gabrielino/Tongva San Gabriel Band of Mission Indians Cultural Resource Management Coordinator a letter regarding the Draft HPSR for the project.
- November 21, 2011: Caltrans sent the Ramona Band of Cahuilla Cultural Resources Coordinator a letter regarding the Draft HPSR for the project.
- November 21, 2011: Caltrans sent the Pechanga Band of Luiseño Indians Chairman a letter regarding the Draft HPSR for the project.
- November 21, 2011: Caltrans sent the Gabrielino/Tongva San Gabriel Band of Mission Indians Chairperson a letter regarding the Draft HPSR for the project.
- November 21, 2011: Caltrans sent the Ramona Band of Cahuilla Chairman a letter regarding the Draft HPSR for the project.

2012:

 Preparation of the Recirculated Draft EIR/Supplemental Draft EIS began for the modified range of alternatives from I-215 to SR-79.

- Coordination occurred between resource agencies and transportation agencies during preparation of updated technical reports.
- RCTC, Caltrans, and FHWA met with the tribal representatives from the Pechanga Band of Luiseño Indians. The Pechanga Band of Luiseño Indians gave a detailed presentation regarding the project area as part of its ethnographic and ancestral territory and stated that it has multiple issues with the MCP project and its potential to impact cultural resources.
- The Pechanga Band of Luiseño Indians sent FHWA a letter with comments on the Mid County Parkway Historic Property Survey Report.
- The Pechanga Band of Luiseño Indians sent FHWA a letter with comments on the Mid County Parkway Findings of Effect.
- FHWA sent the Pechanga Band of Luiseño Indians a letter in response to their February 22, 2012, letter.
- FHWA sent the State Historic Preservation Officer a letter requesting formal concurrence on the Historic Property Survey Report.
- FHWA sent the State Historic Preservation Officer a letter requesting formal concurrence on the Findings of Effect.
- FHWA sent the Pechanga Band of Luiseño Indians a letter in response to their April 23, 2012, letter.
- FHWA, Caltrans, and RCTC met with a representative from the Soboba Band of Luiseño Indians per their request to provide an update on the status of the project.
- The State Historic Preservation Officer sent FHWA a letter with comments on the determinations of eligibility and findings of effects for the Mid County Parkway on historic properties.
- FHWA submitted the Finding of Effect (FOE) to SHPO

#### 2013:

- The Recirculated Draft EIR/Supplemental Draft EIS was circulated for public review between January 25, 2013 and April 10, 2013, for the modified project (I-215 to SR-79)
- In January 2013, SHPO provided concurrence in the Finding of Effect.
- On February 20, 2013, a public hearing was held in the City of Perris during the public review period for the Recirculated Draft EIR/Supplemental Draft EIS. A total of 57 people attended this meeting.
- In June 2013, the FHWA, Caltrans, and RCTC initiated consultation with the Native American Tribes and the SHPO as part of the development of the Memorandum of Agreement (MOA) and Discovery and Monitoring Plan (DMP).

- Coordination was conducted between September 2013 and December 2013 with resource agencies and transportation agencies in preparation of the NEPA 404 Checkpoint 3 package to identify the preliminary Least Environmentally Damaging Practicable Alternative (LEDPA).
- In December 2013, the Project Development Team concurred on Alternative 9 Modified with the San Jacinto River Bridge Design Variation as the preferred alternative.
- In December 2013, the USACE sent RCTC a letter of approval of the Jurisdictional Delineation.

#### 2014/2015:

- The "Recirculated Sections of Chapter 4.0 (III, Air Quality; VII, Greenhouse Gases; 4.5, Climate Change; and Table 4.10) of the Recirculated Draft EIR" was circulated for public review between January 31, 2014, and March 17, 2014.
- In February 2014, the United States Army Corps of Engineers (USACE), the United States Environmental Protection Agency (EPA), and the United States Fish and Wildlife Service (USFWS) concurred on Alternative 9 Modified with the San Jacinto River Bridge Design Variation as the preliminary LEDPA. In addition, the USFWS agreed with the preliminary LEDPA subject to the inclusion of mitigation that provides biologically equivalent or superior preservation of sensitive alkali plant species.
- In April 2014, Caltrans notified the USFWS, USACE, and the EPA that the transportation agencies (FHWA, RCTC, and Caltrans) made the decision to identify Alternative 9 Modified with the San Jacinto River Bridge Design Variation as the Preliminary LEDPA for the MCP project. This completed compliance with Checkpoint 3 in the NEPA/404 MOU.
- On April 29, 2014, FHWA transmitted the proposed Memorandum of Agreement (MOA) for the MCP project to SHPO.
- On October 6, 2014, A Joint Project Review (JPR) prepared by the Regional Conservation Authority determined that the project is consistent with both the Criteria and Other Western Riverside County MSHCP plan requirements.
- On October 20, 2014, The Wildlife Agencies (USFWS and CDFW) sent RCTC a letter to provide comments that relate to the project's consistency with the Western Riverside County MSHCP focusing on the Determination of Biologically Equivalent or Superior Preservation (DBESP).
- On October 24, 2014, RCTC sent a letter to the Wildlife Agencies responding to their comments on the DBESP and requesting the Wildlife Agencies concurrence.
- On October 28, 2014, The Metropolitan Water District of Southern California sent a letter to Jacobs Engineering, Inc. indicating that Metropolitan found the

Preliminary Geotechnical Evaluations Revision 3 (Kleinfelder 2014) regarding the MCP project crossing of the Colorado Aqueduct acceptable and requested that RCTC submit any additional evaluation as part of the final design and grading plans to Metropolitan for review.

- On October 30, 2014, SHPO concurred with the MOA for the MCP project.
- On November 14, 2014, The Wildlife Agencies (USFWS and CDFW) sent RCTC a letter indicating their concurrence with the October 24, 2014, "Addendum to MSHCP Consistency Determination and Determination of Biologically Equivalent or Superior Preservation Analysis (Mid County Parkway)."
- On December 9, 2014, FHWA requested Section 7 consultation with the USFWS.
- On February 11, 2015, the USFWS issued the Biological Opinion for Alternative
  9 Modified with the San Jacinto River Bridge Design Variation.

## C. Existing Facilities

#### Ramona Expressway (I-215 to SR-79):

The existing Ramona Expressway is a major west-east route in western Riverside County. Ramona Expressway connects with Cajalco Road at I-215 and continues east through the City of Perris, directly south of Lake Perris, across the San Jacinto River and connects to SR-79 in the City of San Jacinto. Portions of Ramona Expressway are in unincorporated Riverside County.

The segment of Ramona Expressway within the project limits has the following additional characteristics:

- Right of way: 128 to 210 feet
- Access Control: Partial
- Capacity / Adequacy: 2 to 6 Lanes / At some locations LOS D/F
- Geometrics:
  - Median: No median in rural areas; up to 15 feet in the City of Perris
  - o Terrain: Flat
  - Vertical alignment: varying from 0% to 1.1%
  - Lane widths: 12 feet
  - Shoulders: 3 to 8 feet
  - Superelevation: Varies, 1.5% to 9.9%
- Structural Section Condition: Asphalt Concrete Pavement, good

• Drainage: Culverts, bridge over the Perris Valley Storm Drain (an open channel), bridge over the San Jacinto River with expected overtopping with the 100-year flow

# I-215 (Nuevo Road to Van Buren Boulevard):

Interstate 215 is a major north-south regional facility in Riverside County. The segment of I-215 within the project limits is a six-lane freeway following a north-south alignment.

The segment of I-215 within the project limits has the following additional characteristics:

- Right of way: 190 to 671 feet
- Access Control: Limited-Access
- Capacity / Adequacy: 6 Lanes / LOS C/F
- Geometrics:
  - Median: 46 feet median
  - Terrain: flat
  - Vertical alignment: varying from 0.5% to 0.8%
  - Lane widths: 12 feet
  - Outside Shoulders: 10 feet
  - Inside Shoulders: 10 feet
  - Superelevation: Varies, Crowned (-2.0%) to +2.0%
- Structural Section Condition: Asphalt Concrete Pavement, good
- Drainage: Culverts and Reinforced Concrete Box (RCB) culverts

All of the existing overcrossing structures on the section of I-215 between Van Buren Boulevard and Nuevo Road meet minimum vertical clearance. There are no sight distance issues.

Beginning to the north, there are three existing local interchanges within the project limits. They are the Van Buren Boulevard interchange, the Harley Knox Boulevard interchange, and the Cajalco Road/Ramona Expressway interchange. The spacing between the Van Buren Boulevard interchange and the Harley Knox Boulevard local interchange is about 1.9 miles. The spacing between the Harley Knox Boulevard interchange and the Cajalco/Ramona local interchange is about 1.7 miles.

To the south, a grade separation overcrossing exists at Placentia Avenue. There are no ramps at Placentia Avenue currently, although the City of Perris General Plan Circulation Element calls for a future local interchange to I-215 at Placentia Avenue. At the request

of the City of Perris, RCTC has agreed to include a local interchange to I-215 at Placentia Avenue as part of the MCP project.

Farther to the south, there is the existing Nuevo Road local interchange. The spacing between the Nuevo Road interchange and the existing interchange to the north (Cajalco Road/Ramona Expressway interchange) is about 3.1 miles. The existing Nuevo Road interchange has approved improvements to be constructed within the next five years, as verified with the City of Perris and RCTC. Improvements at Van Buren Boulevard and Cajalco Road/Ramona Expressway interchange were recently completed.

A railroad line parallels I-215 on the west side of the freeway. This line is owned by RCTC with limited freight operations conducted by Burlington Northern Santa Fe (BNSF). RCTC has plans to extend Metrolink commuter rail passenger service on this line, this project is called the Perris Valley Line and is scheduled to be in operation by 2015. The alignment of I-215 is generally straight, but curves in the vicinity of the cross-streets (Nuevo, Placentia, Cajalco Road/Ramona Expressway, and Van Buren) to provide separation between the freeway and the railroad for ramps.

The portion of I-215 in the MCP study area is part of the Department of Defense Rural and Single Interstate Routes (Highway Design Manual 309.2), formerly known as the FHWA 26,000 mile Priority Network.

# SR-79:

The portion of SR-79 through the San Jacinto Mountains is called Lambs Canyon Road. This segment was widened to a four-lane highway in 1995 extending just south from I-10 to Gilman Springs Road. The portions of SR-79 that pass through the urbanized areas of Hemet and San Jacinto are generally a five-lane section with two lanes in each direction and a center left-turn lane. These segments are heavily urbanized, with numerous traffic signals and driveways. A realignment project on SR-79 EA 494000 (PN 0800000784), between Domenigoni Parkway and Gilman Springs Road, near the Cities of Hemet and San Jacinto is currently in the PA/ED phase, with expected construction prior to MCP construction. The SR-79 realignment configuration will connect with the MCP improvements near the intersection of existing Sanderson Avenue and Ramona Expressway.

At this location, the characteristics of the realigned SR-79 will be as follows:

- Right of way: 230 to 400 feet
- Access Control: Limited-Access
- Capacity / Adequacy: 4 to 6 Lanes / LOS C
- Geometrics:
  - Median: 14.0 to 84.0 feet

- o Terrain: flat
- Vertical alignment: varying from 0.65% to 2.14%
- Lane widths: 12 feet
- Outside Shoulders: 10 feet
- Inside Shoulders: 5 feet
- Superelevation: Crowned -2.0%
- Structural Section Condition: Portland Cement Concrete (Proposed)
- Drainage: Culverts

All of the overcrossing structures on this section of State Route 79 will meet minimum vertical clearance.

To the north of the proposed MCP/SR-79 interchange, within the project limits, there is one existing local interchange at Gilman Springs Road. The spacing between this existing local interchange and the proposed MCP/SR-79 interchange is approximately 1.8 miles.

To the south of the proposed MCP/SR-79 interchange, but outside the MCP project limits, a proposed local interchange at Sanderson Avenue is anticipated to be constructed as part of the SR-79 Realignment project EA 494000 (PN 0800000784). This project is projected to begin construction in the year 2018. The spacing between this proposed local interchange and the proposed MCP/SR-79 interchange is approximately 1.6 miles.

# 4. PURPOSE AND NEED

The Resource Agencies and Caltrans, as well as FHWA as the NEPA lead agency and RCTC as the CEQA lead agency, developed and agreed upon the original MCP Purpose and Need Statement and it was included in the DEIR/DEIS that was circulated to the public in fall of 2008.

In 2009, when the project limits were modified, the resource and transportation agencies agreed that the modified project was a continuation of the original PA/ED process. The resource and transportation agencies developed a modified Purpose and Need statement for the MCP project. Pursuant to the 2006 NEPA/CWA 404 MOU, Caltrans on behalf of RCTC and FHWA transmitted the modified MCP Purpose and Need Statement to the resource agencies for a checkpoint decision response in June 2010. All agencies agreed to the modified MCP Purpose and Need statement to be included in the RDEIR/SDEIS. For the full version of the Purpose and Need statement, refer to Chapter 1 of the FEIR/FEIS.

#### Purpose:

The purpose of the proposed action is to provide a transportation facility that would effectively and efficiently accommodate regional west-east movement of people, goods, and services between and through the cities of Perris and San Jacinto.

More specifically, the selected alternative would:

- Provide increased capacity to support the forecast travel demand for the 2040 design year;
- Provide a limited access facility;
- Provide roadway geometrics to meet state highway design standards;
- Accommodate Surface Transportation Assistance Act National Network trucks<sup>1</sup>; and
- Provide a facility that is compatible with a future multimodal transportation system

The MCP project provides logical termini since it connects to two major north-south transportation facilities (I-215 and SR-79). It also has independent utility because the project is usable and a reasonable expenditure even if no additional transportation improvements in the area are made. The MCP project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The proposed Mid County Parkway provides a facility that efficiently serves future traffic demand, reduces traffic congestion on parallel roadways, and reduces overall travel time in the vicinity of the study area.

## Need:

The MCP is located in an area of western Riverside County that is currently undergoing substantial population and employment growth. According to the 2010 Census, the population in Riverside County is approximately 2.2 million people. Population in Riverside County overall is expected to increase to approximately 3.4 million by 2035 and employment is projected to increase to 1.2 million jobs by 2035.<sup>2</sup> In addition, according to the Inland Empire Quarterly Economic Report (January 2012), the Inland Empire which includes the counties of Riverside and San Bernardino, experienced a 2 percent growth in employment from December 2010 to December 2011 indicating the region's recovery had begun following the 2008 recession.

Within western Riverside County, population is expected to increase by over 1.3 million people between 2010 and 2035, an increase of more than 60 percent. Growth in employment is expected to occur at an even higher rate, approximately 80 percent

<sup>&</sup>lt;sup>1</sup> These are larger trucks that are permitted on the federal Interstate system and the non-Interstate Federal-aid Primary System.

<sup>&</sup>lt;sup>2</sup> 2012 RTP Integrated Growth Forecast, Southern California Association of Governments.

between 2010 and 2035, with an overall doubling of the number of jobs between 2003 and  $2035^3$ .

In 2040, the existing major west-east facilities in western Riverside County, SR-60 and SR-91, as well as several segments of SR-74, are projected to operate at level of service (LOS) F, even with planned improvements. Ramona Expressway comprises the only major, west-east, continuous transportation corridor located between SR-74 to the south and SR-60 to the north that provides a connection between I-215 and SR-79. Ramona Expressway currently operates at an overall LOS C with a maximum average daily traffic (ADT) of 27,500 vehicles in 2010. By 2040, it is projected, that even with planned improvements in the Riverside County General Plan Circulation Element,<sup>4</sup> Ramona Expressway will operate at an unacceptable LOS F, with an ADT of approximately 79,000 vehicles. The 2040 projections show a more than 100 percent increase in traffic demand through the corridor. Existing capacity is inadequate to meet the future traffic demand. The Travel Time Analysis concluded that the travel times between I-215 and SR-79 in 2040 under existing conditions and existing conditions with General Plan Circulation Element planned improvements would be 93 minutes and 44 minutes, respectively.

Although currently funded transportation improvements will address some of the projected future demand, additional transportation improvements are needed to provide for the efficient movement of people and goods in this part of western Riverside County in the future.

## A. Problem, Deficiencies, Justification

The existing major west-east facilities in western Riverside County consist of State Routes 60, 91, and 74 (SR-60, SR-91, and SR-74, respectively), and Interstate 10 (I-10) (see B-1 in Attachment B, Purpose and Need Exhibits – Circulation Element). These facilities provide linkages between the major north-south facilities of I-15, I-215, and SR-79. In 2040, SR-60 and SR-91, as well as several segments of SR-74, are projected to operate at level of service F. The previous HCLE CETAP studies evaluated several parkway alternatives along Ramona Expressway, Cajalco Road, and El Sobrante Road, as well as other alternatives to the south along portions of SR-74, Domenigoni Parkway, Ethanac Road, and Newport Road (see B-2 in Attachment B, Purpose and Need Exhibits – HCLE Study Area). While the Riverside County General Plan identifies several major alternative west-east arterials south of SR-74, Ramona Expressway comprises the only major, west-east, continuous transportation corridor located between SR-74 to the south and SR-60 to the north (see B-3 in Attachment B, Purpose and Need Exhibits – Freeways and Other State Highways), that provides a connection between I-

<sup>&</sup>lt;sup>3</sup> 2012 RTP Integrated Growth Forecast, Southern California Association of Governments

<sup>&</sup>lt;sup>4</sup> Planned improvements include widening of Ramona Expressway to a 6–8-lane limited-access facility per the Riverside County General Plan Circulation Element.

215 and SR-79. Ramona Expressway is a two- to six-lane expressway with partial access control.

The City of Perris is currently served by I-215 in a north-south direction but is not served by a major west-east facility. Similarly, the community of San Jacinto is served by SR-79 in a north-south direction but is not served by a major west-east facility (see B-3 in Attachment B).

Ramona Expressway is expected to operate at unacceptable LOS D/F in 2040. In addition, future traffic projections indicate all existing freeways will be operating at LOS F even with implementation of planned improvements as identified in the Regional Transportation Improvement Program (RTIP), the Riverside County General Plan Circulation Element, the Measure A Expenditure Plan, and the implementation of transit "oases"<sup>5</sup> as identified in the Riverside County General Plan.

Traffic demand forecasts and modeling indicate that approximately 37 percent of the trips in the MCP corridor would be traveling the entire length of the corridor from I-215 to the SR-79/Sanderson Avenue area, indicating regional trips; 63 percent would travel within the corridor, indicating an origin and destination between the Cities of Perris and San Jacinto. Based on this percentage of through trips, the MCP project would not only be serving as a major arterial within the communities through which it passes, but would also provide a vital regional transportation role by serving longer trip lengths. Based on traffic model results for the 2040 conditions (with no MCP), approximately 60 percent of the westbound peak hour traffic on Ramona Expressway south of Lake Perris is destined for Perris, unincorporated areas north of Perris, and Moreno Valley. The remaining 40 percent of westbound traffic has a directional split of approximately 16 percent northbound on I-215, 23 percent westbound on Cajalco Road, and 1 percent southbound on I-215.

The MCP connects major population and employment centers in western Riverside County as identified in the Land Use Element of the County of Riverside General Plan, specifically the communities of Perris and San Jacinto (see B-4 in Attachment B, Purpose and Need Exhibits – Jurisdictional Boundaries). The corridor is centrally located between the existing west-east corridors of SR-60/SR-91 to the north and SR-74 to the south and provides a continuous route that connects I-215 on the west to SR-79 on the east. The features of the corridor, including continuous connections between major communities for 16 miles and linkages with I-215 and SR-79, will result in a freeway that will efficiently serve future regional traffic demand, reduce traffic congestion on parallel roadways, and reduce overall travel time in the vicinity of the study area. The congestion relief that will result from the selected alternative is a benefit of the proposed project.

<sup>&</sup>lt;sup>5</sup> The transit oases concept is based on a system of locally served rubber-tired transit service (i.e., bus) to concentrations of employment, community activity, and residences in a manner that is linked with regional transportation opportunities.

# B. Regional and System Planning

# i. Systems

The MCP is currently not included in the following systems:

- Interstate System
- National Highway System
- Freeway and Expressway System
- Scenic Highway System
- Inter Regional Road System
- State Highway Extra Legal Load (SHELL) Route System

RCTC proposes to recommend the MCP for adoption as a new State Route alignment. Pending a decision on State Route adoption, RCTC will give consideration to submit the MCP for designation in the above systems where applicable. The MCP will connect to I-215 and SR-79, which are part of the National Highway System (NHS) and the State Freeway and Expressway (F&E) System, respectively.

## ii. State Planning

The MCP is recognized by Caltrans as a possible future State Highway and will be considered for adoption as such. Upon adoption of MCP as a state route, SR-74 from generally the same limits as MCP (from I-215 to SR-79) may be relinquished to the local agencies, subject to a future, formal agreement. The relinquishment would be an action of CTC resolution. SR-74 is an existing, west-east state highway located approximately 6 miles south of MCP.

## California Recreational Trails Plan

The California Recreational Trails Plan is considered in the planning of the MCP project and provisions are being made so that bike routes and trails can use the planned overcrossing bridges and undercrossings to cross the MCP freeway where existing and/ or planned features exist.

## State Implementation Plan for Air Quality

The MCP project is included in the 2012 Regional Transportation Plan (RTP) (Amendment No. 1), which was found to conform by FHWA on July 15, 2013. The project is also in the 2015 Federal Transportation Improvement Program (FTIP), which was determined to conform to the State Implementation Plan for air quality conformity on December 14, 2014. The Build Alternatives are consistent with the scope of design concept of the RTP/FTIP. Therefore, the proposed project is consistent with the federal regulations regarding air quality conformity.

Regional PM<sub>10</sub> State Implementation Plan (SIP) budget compliance was accounted for during the current approved 2012 RTP and 2015 FTIP conformity determination, approved by FHWA on December 14, 2014. Following circulation of the Recirculated Draft EIR/Supplemental Draft EIS for public review and identification of a preferred alternative, FHWA made a project-level conformity determination. The project-level air quality conformity determination is included in the Final Environmental Impact Statement prior to approval of the Record of Decision in 2015. Also refer to Section 6 F, Air Quality Conformity, for further discussion of considerations and compliance with the South Coast Air Quality Management District (SCAQMD) Rules and Regulations.

#### Transportation and District System Management Plan

Corridor System Management Plans are now a requirement in California following the passage of the Proposition 1B Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act in the November 2006 election. If the MCP is adopted as a State Route, in the next phase of design, a system management plan, Performance Measurement Systems (PeMS) and other tools can be considered. The current design does not preclude adding these tools.

#### Route Concept Fact Sheets

The MCP will connect to I-215 and SR-79. Caltrans has developed a new Route Concept Plan (Transportation Concept Report) for I-215 dated September 2012. The MCP project does not preclude future widening on I-215 for the new Route Concept. The Route Concept describes the ultimate transportation corridor as a ten-lane freeway consisting of eight mixed-flow lanes and two high-occupancy vehicle (HOV) lanes from SR-60 to Ramona Expressway, and an eight-lane freeway consisting of six mixed-flow lanes from Ramona Expressway to Nuevo Road. The SR 79 Realignment Project would be a divided limited-access expressway with four travel lanes (two lanes in each direction). The Project would begin at R25.4 post mile [PM] R15.78, which is 1.26 mi south of Domenigoni Parkway, and end approximately 18 mi north at the intersection of SR 79 and Gilman Springs Road (KP R54.4 [PM R33.80]).The SR-79 is planned to be realigned under EA 494000, RTP/FTIP Project ID Number RIV62024, prior to MCP construction.

#### iii. Regional Planning

The project is currently included in the 2012 RTP (Amendment No. 1) and is listed as New Mid County Parkway (RIV031218). The following is the description for the project:

"IN WESTERN RIV CO – NEW MID CO PKWY: CONS 6 THRU LN (3 LNS IN EA DIR) APPROX 16-MI BTWN I-215 IN PERRIS EAST TO SR-79 IN SAN JACINTO, INC CONS/RECONS OF 13 ICS, ADD OF AUX LN REDLANDS – EVANS AND EB AUXILIARY LN EVANS – ANTELOPE. I-215 IMP: ADD 1 MF LN IN EA DIR NUEVO RD – VAN BUREN BLVD, & ONE AUX LN IN EA DIR MID CO PKWY – CAJALCO/RAMONA EXP AND FROM MID CO PKWY – NUEVO." The PA/ED, Plans, Specifications, and Estimates (PS&E), right of way and construction phases are programmed in the FTIP. The design concept and scope of the MCP project is consistent with the project description in the 2012 RTP and the 2015 FTIP, and the open to traffic assumptions of SCAG's regional emissions analysis.

The RTP, RTIP and Riverside County General Plan Circulation element include a transportation corridor between I-15 and I-215, designated as a Community and Environmental Transportation Acceptability Process (CETAP) Corridor, which could possibly tie-in to the I-215/MCP systems interchange as the west leg. To the east, the MCP connects to SR-79 just south of existing Ramona Expressway and just east of existing Sanderson Avenue.

## iv. Local Planning

The Riverside County General Plan Circulation Element, City of Perris General Plan Circulation Element, and City of San Jacinto General Plan Circulation Element currently identify Ramona Expressway as a future expressway of six to eight lanes. If the MCP project is built from Antelope Road to Warren Road, it would be built in place of Ramona Expressway, but Ramona Expressway remains from I-215 to Antelope Road and from Warren Road to SR-79.

The proposed Mid County Parkway will supersede the existing and planned expressway designations in the Circulation Element of the County of Riverside General Plan for portions of the Ramona Expressway and will constitute a minor amendment to the Circulation Element of the adopted County General Plan (October 2003). The minor amendment would take place after the MCP Record of Decision (ROD). The County is in the process of a major amendment to the General Plan with an expected date of 2015 for release to the public. If the timing for County's amendment is soon after MCP's ROD, then it would be included in the major amendment. The proposed MCP project executes the intent of the prior RCTC and County actions with regard to the Hemet to Corona/Lake Elsinore (HCLE) Corridor and is consistent with the intent of the County's Will result in appropriate amendments to the General Plan.

RCTC is planning the SR-79 EA 494000 (PN 0800000784) Realignment project and is currently in the Project Report and Environmental Document phase. This project will realign SR-79 from Gilman Springs Road south to Domenigoni Parkway. This section of SR-79 is being planned as an expressway initially with the capability of being converted to a freeway in the future. The schedule for the SR-79 EA 494000 (PN 080000784) Realignment project calls for a ROD at the end of 2016.

## v. Federal Planning

The project is also included in the financially constrained 2015 Federal Transportation Improvement Program (FTIP), Project #RIV031218. The following is the programming description included in the 2015 FTIP:

"IN WESTERN RIV CO – NEW MID CO PKWY: CONS 6 THRU LN (3 LNS IN EA DIR) APPROX 16-MI BTWN I-215 IN PERRIS EAST TO SR-79 IN SAN JACINTO, INC CONS/RECONS OF 13 ICS, ADD OF AUX LN REDLANDS – EVANS AND EB AUXILIARY LN EVANS – ANTELOPE. I-215 IMP: ADD 1 MF LN IN EA DIR NUEVO RD – VAN BUREN BLVD, & ONE AUX LN IN EA DIR MID CO PKWY – CAJALCO/RAMONA EXP AND FROM MID CO PKWY – NUEVO."

The MCP, as part of CETAP, is recognized as a Presidential Executive Order 13274 (signed September 18, 2002) for Environmental Stewardship and Transportation Infrastructure Project. As an Executive Order Project, the MCP meets the criteria for a High Profile Project under the FHWA and Caltrans Joint Stewardship and Oversight Agreement (signed September 4, 2007, and the subsequent update signed October 14, 2010) and therefore is not considered as an Assigned Project.

In October 2003, participating agencies signed a Partnership Agreement committing to a streamlined completion of the MCP project environmental review process. This partnership agreement was developed by RCTC and participating transportation and resource agencies as a commitment to complete their project pursuant to Executive Order 13274 on Environmental Stewardship and Streamlining. CETAP was one of the first seven in the nation to be covered under Executive Order 13274.

In 2007, FHWA and Caltrans clarified and defined their roles, responsibilities, authorities and accountability for the Federal-Aid Highway Program (FAHP) by issuing an agreement, the Joint Stewardship and Oversight Agreement. Under this agreement, FHWA will maintain project level approval for High Profile Projects. Based on an estimated total project cost of over \$500 million, the MCP is classified as a Major Project by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 1904; therefore, the MCP should follow FHWA Major Project guidance. MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law by President Obama on July 6, 2012. MAP-21 did not change the designation of the MCP as a High Profile Project.

FHWA has been involved with the MCP project since it was identified as a key west-east regional transportation corridor in Riverside County's RCIP and more specifically CETAP planning efforts, which began in 1999. CETAP study efforts were jointly undertaken by RCTC and the County in coordination with Caltrans and FHWA. FHWA has participated in the planning process through RCIP, CETAP, and now the PA/ED of the MCP. The current FHWA staff that participates on a regular basis for oversight and/or environmental review of the project are as follows:

- Shawn Oliver: Team Leader State Programs (South)
- Brett Gainer: Legal Counsel
- Tay Dam: Senior Transportation Engineer
- Larry Vinzant: Senior Environmental Specialist

In addition, Senior Transportation Engineer Tay Dam and Design Traffic Operations Engineer Jeff Holm reviewed the Supplemental New Connection Report for the I-215 and related Exception to Mandatory Design Standards Fact Sheets. On May 14, 2008, FHWA sent a memo to Caltrans stating findings of conceptual acceptability for the original New Connection Report for the Placentia Alternative at I-215. On August 17, 2012, FHWA sent a memo to Caltrans stating findings of conceptual acceptability for the Supplemental New Connection Report for the I-215. This approval supersedes the original FHWA approval letter for the New Connection Report for the Placentia Alternative at the I-215 in May 2008.

The FHWA Major Project Designation triggers a number of deliverables for submittal to FHWA for approval including: (1) A Cost Estimate Review (CER) which was performed by FHWA and Caltrans in April 2014, 60 to 90 days prior to signature of the final environmental document. The CER will be updated prior to construction and 60 to 90 days prior to the Initial Financial Plan (IFP); (2) RCTC will submit a draft Project Management Plan (PMP) to FHWA 90 days prior to approval of final NEPA decision document. The final PMP will be finalized within 90 days after approval of ROD and is required prior to approval of the IFP. The PMP will be updated and approved throughout construction (3) RCTC will submit a Financial Plan to FHWA when all elements of the plan are fully completed, but no later than prior to requesting authorization of Federal-aid funds for construction. Finance plan updates will be submitted annually once the initial Finance Plan is approved until construction is substantially complete.

## vi. Transit

The location of the MCP through the City of Perris offers an opportunity to create a strong linkage between the proposed MCP and two major planned transit projects. The Perris Valley Line will provide commuter rail service from the City of Riverside to the City of Perris by extending existing service (Metrolink 91 line) that links the City of Riverside with Downtown Los Angeles via Fullerton. It is anticipated that the proposed Perris Valley Line will connect with a new Perris Multimodal Facility to be located in Downtown Perris and to provide for connecting bus (including the Riverside Transit Agency) and rail (including Metrolink) service. The Perris Multimodal Facility is in close proximity to the MCP. Four new stations have been identified for construction along the Perris Valley Line, and one additional station in the future, at the I-215/Cajalco Expressway/Ramona Expressway interchange. Construction for the first phase of Perris Valley Line began in October 2013 and is expected to be complete by late 2015.

# C. Traffic

The existing and forecasted traffic conditions for the MCP mainline and adjacent facilities within the project area for the project are summarized in this section.

# i. Existing Traffic Data

Table 4.A shows existing ADT conditions and the capacity analysis (volume-to-capacity [V/C] ratio and level of service [LOS]) for I-215. This facility intersects the MCP and is included in the traffic analysis study area for the project. Existing traffic conditions for the MCP itself and for SR-79 (the other state route that intersects the MCP) are not available. SR-79 does not yet exist in a freeway configuration and MCP does not yet exist at all.

Segments on I-215	No. of lanes	2010 ADT	LOS	V/C
Van Buren Boulevard–Harley Knox Boulevard	6	124,000	F	1.06
Harley Knox Boulevard–Cajalco Road	6	117,000	E	0.99
Cajalco Road–Placentia Avenue	6	103,000	D	0.88
Placentia Avenue-Nuevo Road	6	103,000	D	0.88

Table 4.A:								
Existing (2010) Segment ADT and Capacity Analysis on I-215								

ADT – Average Daily Traffic

LOS – Level of Service

V/C – Volume to Capacity ratio

Existing (2010) ADT information was obtained from the Caltrans website titled "2009 Traffic Volumes on the California State Highway System" and was updated to reflect 2010 conditions. Capacity analysis was based on the level of service table from the Riverside County General Plan.

Existing segment traffic conditions along Ramona Expressway from I-215 to Sanderson Avenue range from LOS D to F. Individual intersection levels of service within this area range from LOS A to F.

# ii. Forecast Traffic Data

Traffic forecasts for the MCP project were based on the 2008 SCAG RTP. The 2008 RTP included the preparation of a travel forecasting model for the SCAG region and this model was refined and updated for use in Riverside County. The resulting refined and updated version of the SCAG model was prepared by the Riverside County and is known as the RivTAM model (Riverside Traffic Analysis Model). The RivTAM model was further refined for use on the MCP project to incorporate land use and network details that are specific to the MCP study area. The use of this modeling process was approved by FHWA, Caltrans, and SCAG prior to proceeding with the details of the traffic forecasts. Riverside County also participated in this process as the owner of the base RivTAM model from which the MCP project traffic forecasting model was prepared.

The MCP traffic forecast was developed using the year 2035 SCAG and RivTAM models. Since the horizon year for the MCP traffic analysis is 2040, the forecasts from the SCAG and RivTAM models were used to extrapolate to reflect 2040 conditions.

ADT forecasts for the entire study area are shown for the project in C-1 to C-4 in Attachment C, 2040 ADT Forecasts, Directional ADT and Peak Hour Horizon Year 2040 and Capacity and Level of Service Horizon Year 2040. For peak hour freeway mainline and ramp forecasts, see C-5 to C-8 in Attachment C. For freeway mainline and ramp capacities and levels of service, see C-9 to C-18 in Attachment C.

The interchange layouts for the MCP freeway to freeway interchanges at I-215 and at SR-79 are shown in F-3 to F-5 and F-21 to F-23, respectively, in Attachment F, Layout Plans. The peak hour forecasts for the MCP freeway to freeway interchanges at I-215 and at SR-79 are shown in D-1 and in D-2, respectively, in Attachment D, Peak Hour Traffic Forecasts 2040 – Systems Interchanges. Interchange layouts for the MCP local interchanges are shown in F- 6 and F-10 to F-20 in Attachment F. Local interchange peak hour traffic forecasts are shown in E-1 to E-11 in Attachment E, Peak Hour Traffic Forecasts 2040 – Service Interchanges.

Capacity analysis for the MCP for various scenarios of future conditions is shown in Tables 4.B through 4.D. Design designation data for various sections of the MCP project are shown in Table 4.E.

Traffic Index (TI) values were approved by Caltrans Traffic Forecasting Unit in April 2012. The Caltrans Traffic Index Memorandum is provided in G-10, Attachment G.

# Table 4.B: Future (2040) Segment ADT and Capacity Analysis on Ramona Expressway (Alternative 1A)

Segments of MCP	No. of lanes	2040 ADT	LOS	V/C
East of I-215	4	79,000	F	2.20
San Jacinto River	2	63,500	F	3.53
West of SR-79	4	36,000	F	1.01

ADT – Average Daily Traffic

LOS – Level of Service

V/C – Volume to Capacity ratio

#### Table 4.C:

## Future (2040) Segment ADT and Capacity Analysis on Ramona Expressway (Alternative 1B)

Segments of MCP	No. of lanes	2040 ADT	LOS	V/C
East of I-215	6	79,000	F	1.47
San Jacinto River	6	63,500	F	1.18
West of SR-79	6	36,000	С	0.67

ADT – Average Daily Traffic

LOS – Level of Service

V/C – Volume to Capacity ratio

#### Table 4.D: Future (2040) Segment ADT and Capacity Analysis on MCP (Alternative 9 Modified) with SJRB DV

Segments of MCP	No. of lanes	2040 ADT	LOS	V/C
East of I-215	6	76,200	А	0.65
San Jacinto River	6	93,800	А	0.79
West of SR-79	6	55,000	А	0.47

ADT – Average Daily Traffic

LOS – Level of Service

V/C – Volume to Capacity ratio

Design Designation Data										
Segments of MCP	D	т	v	ADT (2020)	ADT (2040)	DHV				
MCP (General)	56%	5%	75 mph	53,000	102,000	10,190				
MCP (Depressed): Between Barrett Avenue and Wilson Avenue	53%	5%	75 mph	36,900	69,800	6,895				
I-215	57%	5%	75 mph	134,900	210,800	20,097				
SR-79	50%	5%	75 mph	24,120	56,100	5,648				

Table 4.E:Design Designation Data

ADT - Average Daily Traffic

DHV - The two way design hourly volume, vehicles

D - The percentage of DHV in the direction of heavier flow

T – Truck Traffic Volume expressed as a percent of the DHV

V – Design Speed in miles per hour

Prior to the final preparation of traffic forecasts for the MCP project, the socioeconomic (land use) data and roadway network were refined to reflect the latest available information. The socioeconomic data was compared to known land development plans within the MCP corridor and also discussed with the Planning Departments of the various agencies with jurisdiction in the area (Cities of Riverside, Corona, Moreno Valley, Perris, and San Jacinto, and Riverside County). Adjustments were made, as necessary, but the control totals for land use within SCAG's Regional Statistical Areas (RSA) were not changed.

The regional model produces traffic forecasts that provide reasonable accuracy on an ADT basis for freeways and other major roadways. Traffic forecasts for local roadways and peak hour forecasts for all roadways were prepared through a refinement process. This process generally followed the procedures of National Cooperative Research Program Report 255 (*Highway Traffic Data for Urbanized Project Planning and Design*, Transportation Research Board, 1982).

Following are additional procedures that were followed:

- ADT forecasts for major facilities (MCP, I-215, and SR-79) were taken directly from the model's traffic forecasts, with only minor refinements.
- Wherever the model provided reasonable ADT forecasts for local streets, they were used directly. In other cases, ADT forecasts were taken from local Circulation Elements of General Plans. Where sufficient detail was not provided in these documents, ADT values were assumed to correspond to LOS C conditions for the type of roadway specified in the Circulation Element of the General Plan.
- Peak hour forecasts for major facilities were determined through an assumption of 10% PM peak hour traffic and 9% AM peak hour traffic. Directional distribution of peak hour traffic was determined through peak period traffic model forecasts or existing travel patterns.

## iii. Accident Rates

Existing accident information for I-215 is shown in Table 4.F. Existing accident history on Ramona Expressway is shown in Table 4.G. Discussion of the results is included below for each of these facilities. Existing accident information for the MCP itself and for SR-79 (the other state route that intersects the MCP) are not available. SR-79 does not yet exist in a freeway configuration and MCP does not yet exist at all. SR-79 accidents are not reviewed as that two-lane highway will be replaced by a six-lane expressway or freeway at roughly the same time frame as the Mid County Parkway.

Facility	Leastion	DM	Actual Accident Rates <sup>(1)</sup>			Average Accident Rates <sup>(1)</sup>		
гасшту	Location	PM	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
I-215 NB Mainline	D St to Nuevo Rd	27.23 – 27.89	0.000	0.10	0.27	0.005	0.28	0.87
	Nuevo Rd to Placentia Ave	27.89- 29.40	<mark>0.012</mark>	0.18	0.39	<mark>0.004</mark>	0.24	0.77
	Placentia Ave to Cajalco/Ramona	29.40- 30.93	0.000	0.08	0.29	0.005	0.23	0.71
	Cajalco/Ramona to Harley Knox	30.93- 32.33	0.000	0.10	0.28	0.005	0.25	0.76
	Harley Knox to Van Buren Ave	32.33- 34.17	<mark>0.008</mark>	0.11	0.41	<mark>0.006</mark>	0.27	0.80

Table 4.F: Existing Accident Data on I-215 Mainline and Ramps (10/1/2009 to 9/30/2012)
			Actual		Average Accident Rates <sup>(1)</sup>			
Facility	Location	РМ	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
	Van Buren Ave to Harley Knox	32.33- 34.17	0.000	0.10	0.41	0.006	0.27	0.80
	Harley Knox to Cajalco/Ramona	30.93- 32.33	0.000	0.11	0.44	0.005	0.25	0.76
I-215 SB Mainline	Cajalco/Ramona to Placentia	29.40- 30.93	0.000	0.10	0.24	0.005	0.23	0.71
	Placentia to Nuevo Rd	27.89- 29.40	0.000	0.16	0.50	0.004	0.24	0.77
	Nuevo Rd to D St	27.23- 27.89	0.000	0.22	0.71	0.005	0.28	0.87
I-215/	SB Off-Ramp	27.30	0.000	0.00	0.20	0.004	0.24	0.75
D St I/C	NB On-Ramp	27.38	0.000	0.21	0.42	0.003	<mark>0.14</mark>	0.41
1.015/	NB Off-Ramp	27.68	0.000	0.14	0.14	0.003	0.35	1.01
Nuevo	NB On-Ramp	28.03	0.000	<mark>0.23</mark>	0.56	0.002	0.22	0.63
Rd I/C	SB Off-Ramp	28.08	0.000	0.22	0.66	0.003	0.35	1.01
	SB On-Ramp	27.70	0.000	<mark>0.28</mark>	0.42	0.002	<mark>0.22</mark>	0.63
I-215/	NB Off-Ramp	30.77	0.000	0.24	0.95	0.003	0.35	1.01
Cajalco-	NB On-Ramp	31.08	0.000	0.06	<mark>0.93</mark>	0.002	0.22	0.63
Ramona	SB Off-Ramp	31.11	0.000	0.31	<mark>1.68</mark>	0.003	0.35	<mark>1.01</mark>
I/C	SB On-Ramp	30.76	0.000	0.00	0.63	0.002	0.22	0.63
<b>I-215</b> /	NB Off-Ramp	32.14	0.000	0.48	<mark>1.92</mark>	0.003	0.35	1.01
Harley	NB On-Ramp	32.49	0.000	0.00	0.19	0.002	0.22	0.63
	SB Off-Ramp	32.55	0.000	0.00	0.17	0.003	0.35	1.01
	SB On-Ramp	32.20	0.000	0.61	1.22	0.002	0.22	0.63

Table 4.F: Existing Accident Data on I-215 Mainline and Ramps (10/1/2009 to 9/30/2012)

Table 4.F:	
Existing Accident Data on I-215 Mainline and Ramp	s
(10/1/2009 to 9/30/2012)	

Facility	Loootion	DM	Acci	Actual dent Rates	<b>(</b> 1)	Acci	Average dent Rates	(1)
гасшту	Location	PN	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
I-215/	NB Off-Ramp	33.97	0.000	0.00	0.00	0.003	0.35	1.01
Van	NB On-Ramp	34.34	0.000	0.00	0.12	0.002	0.22	0.63
Buren	SB Off-Ramp	34.37	0.000	<mark>0.59</mark>	<mark>1.40</mark>	0.003	<mark>0.35</mark>	<mark>1.01</mark>
I/C	SB On-Ramp	33.99	0.000	0.20	0.39	0.002	0.22	0.63

 Accident rates based on total number of **fatal** and **injury** accidents, as reported in Caltrans accident reports. Accident rates for mainline segments are expressed in accidents per million vehicle miles. Accident rates for ramps are expressed in accidents per million vehicles.

Su	mmary of Acci	dent History on	Ramona I	Expressv	vay
ion and	Accident				Property

Table 4.G:

Jurisdiction and Time Period	Accident Category	Location	Fatality	Injury	Property Damage Only	Total
City of Perris, 2003–2005	Roadway Segment	I-215 to Rider Street	4	40	78	122
Riverside County, 2006–2008	Roadway Segment	Rider Street to Sanderson Avenue	6	60	62	128

Source: *Riverside County*, 2009; *City of Perris*, 2009. I-215 = Interstate 215

Of the locations shown in Table 4.F, ten locations indicate higher-than-average accident rates and they are highlighted in Table 4.F. The analysis of accidents for these ten locations is as follows:

• On I-215 northbound between Nuevo Road and Placentia Avenue, the actual accident rate of 0.12 for fatal accidents is higher than the average accident rate of 0.004.

On I-215 northbound between Harley Knox Boulevard and Van Buren Avenue, the actual accident rate of 0.008 for fatal accidents is higher than the average accident rate of 0.006.

For the above two locations, while the actual rate was higher than the average rate, there was only one fatal accident over a three-year period. It is difficult to identify patterns of accident occurrence with a relatively low number of accidents and the average accident rate of less than two accidents per year indicates that a

meaningful analysis of accident patterns is not feasible. In addition, the actual accident rates for the other accident categories considered in this analysis (fatal plus injury and total) were less than statewide averages.

- At the I-215/D Street northbound on-ramp, the actual accident rate of 0.21 for fatal plus injury accidents is higher than the average accident rate of 0.14. This ramp and the adjacent freeway mainline have been under construction through a separate project to widen I-215 from Scott Road to Nuevo Road, EA 08-0F162 (Project Number 0800000116). Since a new ramp and mainline configuration are being built, the accident history for the previous ramp and freeway configuration are no longer relevant.
- At the I-215/Nuevo Road northbound on-ramp, the actual accident rate of 0.23 for fatal plus injury accidents is slightly higher than the average accident rate of 0.22. While the actual rate was higher than the average rate, the total number of accidents was only four over a three-year period. It is difficult to identify patterns of accident occurrence with a relatively low number of accidents and the average accident rate of less than two accidents per year indicates that a meaningful analysis of accident patterns is not feasible. The freeway segment south of this ramp has been under construction through a separate project to widen I-215 from Scott Road to Nuevo Road, EA 08-0F162 (Project Number 0800000116). No action is recommended at this time, but if this location experiences accident rates above averages in the future, an evaluation could be conducted following completion of the construction.
- At the I-215/Nuevo Road southbound on-ramp, the actual accident rate of 0.28 for fatal plus injury accidents is higher than the average accident rate of 0.22. While the actual rate was higher than the average rate, the total number of accidents was only four over a three-year period. It is difficult to identify patterns of accident occurrence with a relatively low number of accidents and the average accident rate of less than two accidents per year indicates that a meaningful analysis of accident patterns is not feasible. The freeway segment south of this ramp has been under construction through a separate project to widen I-215 from Scott Road to Nuevo Road, EA 08-0F162 (Project Number 0800000116). No action is recommended at this time, but if this location experiences accident rates above averages in the future, an evaluation could be conducted following completion of the construction.
- At the I-215/Cajalco-Ramona Expressway northbound on-ramp, the actual accident rate of 0.93 for total accidents exceeds the average accident rate of 0.63. There were a total of 15 accidents reported at this location over a three-year period of which none were fatal and one involved injuries. This interchange had improvements installed recently by Riverside County in a project that added lanes to the ramp terminal intersections to relieve traffic congestions. The recent improvements are expected to reduce the level of accidents and no additional action is recommended at this time.

- At the I-215/Cajalco-Ramona Expressway southbound off-ramp, the actual accident rate of 1.68 for total accidents exceeds the average accident rate of 1.01. There were a total of 27 accidents reported at this location over a three-year period of which none were fatal and five involved injuries. This interchange had improvements installed recently by Riverside County in a project that added lanes to the ramp terminal intersections to relieve traffic congestions. The recent improvements are expected to reduce the level of accidents and no additional action is recommended at this time.
- At the I-215/Harley Knox Boulevard northbound off-ramp, the actual accident rate of 0.48 for fatal plus injury accidents is higher than the average accident rate of 0.35. In addition, the actual accident rate of 1.92 for fatal total accidents is higher than the average accident rate of 1.01. While the actual rate was higher than the average rate for both fatal plus injury accidents and total accidents, the total number of accidents was only four over a three-year period. It is difficult to identify patterns of accident occurrence with a relatively low number of accidents that a meaningful analysis of accident patterns is not feasible. Therefore, the relatively high accident rates are due to a few accidents occurring at a location with relatively low traffic levels that caused rates to exceed averages. No action is recommended at this time.
- At the I-215/Harley Knox Boulevard southbound on-ramp, the actual accident rate of 0.61 for fatal plus injury accidents is higher than the average accident rate of 0.22. In addition, the actual accident rate of 1.22 for fatal total accidents is higher than the average accident rate of 0.63. While the actual rate was higher than the average rate for both fatal plus injury accidents and total accidents, the total number of accidents was only two over a three-year period. It is difficult to identify patterns of accident occurrence with a relatively low number of accidents and the average accident rate of less than one accident per year indicates that a meaningful analysis of accident patterns is not feasible. Therefore, the relatively high accident rates are due to a few accidents occurring at a location with relatively low traffic levels that caused rates to exceed averages. No action is recommended at this time.
- At the I-215/Van Buren Boulevard southbound off-ramp, the actual accident rate of 0.59 for fatal plus injury accidents is higher than the average accident rate of 0.35. In addition, the actual accident rate of 1.40 for total accidents is higher than the average accident rate of 1.01. There were a total of 12 accidents reported at this location over a three-year period of which none were fatal and five involved injuries. This interchange had improvements installed recently by Riverside County in a project that added lanes to the ramp terminal intersections to relieve traffic congestions. The recent improvements are expected to reduce the level of accidents and no additional action is recommended at this time.

## 5. ALTERNATIVES

## A. Viable Alternatives (Build and No-Build Alternatives and Design Variations)

This Final Project Report is being prepared for the modified 16-mile Mid County Parkway project in support of the Final EIR/Final EIS. This report is a final version of the Revised Draft Project Report that was prepared for the modified 16-mile Mid County Parkway project in support of the RDEIR/SDEIS that was released in 2013.

Two no-build alternatives and three build alternatives were considered in the RDEIR/SDEIS. Descriptions of the two No Project/No Action Alternatives (Alternatives 1A and 1B), the three Build Alternatives (Alternatives 4 Modified, 5 Modified, and 9 Modified) and two Design Variations (San Jacinto River Bridge [SJRB DV] and San Jacinto North [SJN DV]) that were evaluated in the RDEIR/SDEIS and considered in this report are provided below.

Alternatives 2 and 3 (North Lake Mathews/North Perris Alternative and North Lake Mathews/South Perris Alternative) were considered but eliminated from further analysis in the Draft EIR/EIS in 2008. Alternative 4 (South of Lake Mathews/North Perris (Drain)), Alternative 5 (South of Lake Mathews/South Perris (at Rider Street)), Alternative 6 (General Plan North and South of Lake Mathews/North Perris (Drain)), Alternative 9 (Far South/Placentia Avenue) were considered in the DEIR/DEIS in 2008, but eliminated from further analysis in the RDEIR/SDEIS, based on RCTC action taken in June 2009 (see Section 5B, Rejected Alternatives for more information). The No Project/No Action General Plan Circulation Element Conditions Alternative, originally identified as Alternative 8, was renumbered Alternative 1B.

## Alternative 1A: No Project/No Action—Existing Ground Conditions

Alternative 1A represents 2040 traffic on the planned street network except for future improvements to Ramona Expressway, which would remain as it exists today. Construction of the MCP project would not be implemented with the No Project/No Action Alternative 1A. The future west-east traffic described in the study area would be served by the existing Ramona Expressway between I-215 and SR-79. This alternative assumes 2040 land use conditions and implementation of planned improvements to the regional and local circulation system, as accounted for in the adopted Riverside County General Plan (2003), RCTC's Measure A program, and other adopted plans and policies.

# Alternative 1B: No Project/No Action—General Plan Circulation Element Conditions

Alternative 1B represents 2040 traffic levels on the planned street network, according to the Circulation Element of the Riverside County General Plan. Construction of the MCP project would not be implemented with No Project/No Action Alternative 1B. This

alternative is the same as Alternative 1A but includes implementation of Ramona Expressway consistent with the Riverside County General Plan Circulation Element.

#### Alternative 4 Modified: North Perris (Drain)

Alternative 4 Modified proposes to construct a six-lane controlled access freeway with six mixed-flow lanes for most of its length. Alternative 4 Modified proposes eight local interchanges with MCP, one new interchange on I-215, one modified interchange on I-215, one new interchange on SR-79 and two freeway to freeway interchanges. Alternative 4 Modified begins in the city of Perris and County of Riverside, at the I-215 at Ramona Expressway, follows a northern alignment through the city of Perris along the Perris Drain, and continues along the Ramona Expressway to Warren Road. The alignment continues east, proceeding south of Ramona Expressway from Warren Road to SR-79 in the city of San Jacinto.

Freeway to freeway interchanges are proposed for all Build Alternatives at I-215 and SR-79.

#### I-215

The I-215 freeway to freeway interchange is proposed as a three-level interchange that will not preclude possible future connectors to the west. At its highest point, the interchange would be approximately 75 to 100 ft above ground level. The existing railroad tracks west of I-215 are proposed to remain in place. All of the modified Build Alternatives, including Alternative 4 Modified, include improvements to I-215. These improvements are as follows:

- (1) The addition of one auxiliary lane between the MCP/I-215 systems interchange and the adjacent service interchange to the north and south to facilitate movement between the MCP and I-215.
- (2) The addition of an operational/mixed-flow lane from MCP to the Van Buren Boulevard Interchange to accommodate additional traffic on I-215 as a result of the MCP.
- (3) The addition of an operational/mixed-flow lane from Nuevo Road to Harley Knox Boulevard to facilitate weaving on I-215.
- (4) The addition of a new interchange on I-215 at Placentia Avenue.
- (5) Modification of the existing interchange at I-215/Cajalco Road/Ramona Expressway and restriping at the existing I-215/Nuevo Road interchange.
- (6) Alternatives 4 Modified includes realignment of I-215 to the east, due to limited right of way on the west side, from Ramona Expressway to Harley Knox Boulevard.
- (7) Alternative 4 Modified also includes ramp modification to the existing Harley Knox Boulevard interchange.
- (8) Access to Cajalco Road/Ramona Expressway is precluded from I-215/MCP direct connectors and is via the Perris Boulevard/MCP interchange.

#### SR-79

A three-level interchange is proposed at SR-79 at an approximate height of 75 ft. There is a base case and a design variation. For the base case, the MCP connection to SR-79 will be made at the proposed realignment of SR-79, south of Ramona Expressway.<sup>6</sup> The MCP provides direct connectors to northbound and southbound SR-79 MCP then continues as a six-lane easterly extension that terminates at a proposed signalized intersection on the east side of SR-79 at Ramona Expressway. The extension has at grade intersections with Sanderson Ave, Bridge St and Ramona Expressway. Both Ramona Expressway and Sanderson Avenue have access to and from MCP via ramps from the at grade extension to MCP. Both Ramona Expressway and Sanderson Avenue have access to and from SR-79, located between Sanderson Ave and Ramona Expressway.

Interchanges for Alternative 4 Modified are proposed at eight local interchanges with MCP 1) Perris Blvd, 2) Evans Ave, 3) Ramona Exp/Antelope Rd, 4) Bernasconi Rd, 5) Reservoir Ave, 6) Town Center Blvd, 7) Park Center Blvd, 8) Warren Ave, one new interchange at I-215 9) I-215 /Placentia Ave, one modified interchange at I-215 10) I-215/Cajalco Rd/Ramona Exp, one new interchange at SR-79 11) SR-79/Ramona Exp/Sanderson Ave and two freeway to freeway interchanges 12) MCP/I-215 and 13) MCP/SR-79.

Alternative 4 Modified includes two design variations at the eastern terminus of the alternative and at San Jacinto River, Lakeview Nuevo Area:

- **1) San Jacinto North Design Variation** is an alignment north of Ramona Expressway from Warren Road to SR-79.
- 2) San Jacinto River Bridge Design Variation is a proposal to construct two shorter bridges instead of one longer bridge in the Lakeview Nuevo area (see F-14, Attachment F, Layout Plans).

These two design variations are described in more detail at the end of this section.

#### Alternative 5 Modified: South Perris (at Rider Street)

Alternative 5 Modified proposes to construct a six- lane controlled access freeway with six mixed-flow lanes for most of its length. Alternative 5 Modified proposes eight local interchanges with MCP, one new interchange on I-215, one modified interchange on I-215, one new interchange on SR-79 and two freeway to freeway interchanges. Alternative 5 Modified begins at I-215 at Rider Street, follows a southern alignment through the city of Perris along Rider Street, and continues along the Ramona

<sup>&</sup>lt;sup>6</sup> SR-79 is proposed to be realigned as a four-lane limited-access expressway on a new alignment from south of Domenigoni Parkway to north of Gilman Springs Road and is currently undergoing a separate environmental review.

Expressway to Warren Road. The alignment continues east, proceeding south of Ramona Expressway from Warren Road to SR-79 in the city of San Jacinto.

Freeway to freeway interchanges proposed for Alternative 5 Modified are the same as Alternative 4 Modified, with connections at I-215 and SR-79. The I-215 freeway to freeway interchange differs from Alternative 4 Modified as it connects the MCP to I-215 near Rider Street. As with Alternative 4 Modified, it is proposed as a three-level interchange, and the proposed design will not preclude possible future connectors to the west. The interchange will be approximately 75 to 100 ft above ground level. The existing railroad tracks west of I-215 are proposed to remain in place. Alternative 5 Modified, includes improvements to I-215 and are the same as Alternative 4 Modified including access to Cajalco Road/Ramona Expressway, which is precluded from I-215/ MCP direct connectors and is via the Perris Boulevard/MCP interchange. The limits of the addition of an operational/mixed-flow lane from Nuevo Road to Harley Knox Boulevard differs for Alternative 5 Modified and is located from Nuevo Road to Cajalco Road/Ramona Expressway to facilitate weaving on I-215. Alternative 5 Modified also includes realignment of I-215 to the east, due to limited R/W on the west side from Ramona Expressway to Harley Knox Boulevard and ramp modifications to the existing Harley Knox Boulevard interchange.

Alternative 5 Modified, the same as Alternative 4 Modified, ends with an at grade extension to intersections at Sanderson Ave, Bridge Street and Ramona Expressway with access to and from MCP via ramps. Alternative 5 Modified also includes a single point interchange at SR-79/Ramona Exp/Sanderson Ave on at grade MCP between Sanderson Ave and Ramona Exp.

Interchanges for Alternative 5 Modified are proposed at eight local interchanges with MCP 1) Perris Blvd, 2) Evans Ave, 3) Ramona Exp/Antelope Rd, 4) Bernasconi Rd, 5) Reservoir Ave, 6) Town Center Blvd, 7) Park Center Blvd, 8) Warren Ave, one new interchange at I-215 9) I-215 /Placentia Ave, one modified interchange at I-215 10) I-215/Cajalco Rd/Ramona Exp, one new interchange at SR-79 11) SR-79/Ramona Exp/Sanderson Ave and two freeway to freeway interchanges 12) MCP/I-215 and 13) MCP/SR-79.

Alternative 5 Modified includes two design variations at the eastern terminus of the alternative and at San Jacinto River, Lakeview Nuevo Area:

- **1) San Jacinto North Design Variation** is an alignment north of Ramona Expressway from Warren Road to SR-79.
- 2) San Jacinto River Bridge Design Variation is a proposal to construct two shorter bridges instead of one longer bridge in the Lakeview Nuevo area (see F-14, Attachment F, Layout Plans).

These two design variations are described in more detail at the end of this section.

#### Alternative 9 Modified: (at Placentia Avenue)

Alternative 9 Modified proposes to construct a six-lane controlled access freeway with six mixed-flow lanes between I-215 and SR-79. Alternative 9 Modified proposes eight local interchanges with MCP, one new interchange on I-215, one modified interchange on I-215, one new interchange on SR-79, and two new freeway to freeway interchanges. Alternative 9 Modified begins in the city of Perris and County of Riverside, at the I-215 at Placentia Avenue, follows Placentia Avenue through the city of Perris, and continues along the Ramona Expressway to Warren Road. The alignment continues east, proceeding south of Ramona Expressway from Warren Road to SR-79 in the city of San Jacinto (see F-1 to F-23, Attachment F, Layout Plans).

Freeway to freeway interchanges proposed for Alternative 9 Modified are the same as Alternative 4 Modified, with connections at I-215 and SR-79 (see F-3 to F-5 and F-21 to F-23, Attachment F, Layout Plans). The I-215/MCP interchange differs from Alternative 4 Modified as it connects approximately 150 ft south of Placentia Avenue. The freeway to freeway interchange is proposed as a three-level interchange, and the proposed design will not preclude possible future connectors to the west. At its highest point, the interchange would be approximately 75 to 100 ft above ground level. The existing railroad tracks west of I-215 are proposed to remain in place. Alternative 9 Modified includes improvements to I-215 and are the same as Alternative 4 Modified I-215 improvements, except Alternative 9 Modified does not require a mainline shift to the east between Ramona Expressway and Harley Knox Boulevard and the limits of the addition of an operational/mixed-flow lane from Nuevo Road to Harley Knox Boulevard differs for Alternative 9 Modified and is located from Nuevo Road to Cajalco Road/Ramona Expressway to facilitate weaving on I-215. Alternative 9 Modified also differs from Alternative 4 Modified in that Alternative 9 Modified has access to Cajalco Road/Ramona Expressway via the I-215/MCP direct connectors. Alternative 9 Modified, the same as Alternative 4 Modified, ends with an at grade extension to intersections at Sanderson Ave, Bridge Street and Ramona Expressway with access to and from MCP via ramps. Alternative 9 Modified also includes a single point interchange at SR-79 and the MCP roadway extension between Sanderson Ave and Ramona Expressway. This alternative includes MCP as a depressed grade facility from Barrett Avenue to Wilson Avenue.

Alternative 9 Modified proposes eight new local interchanges on MCP, one new local interchange on SR-79, one new local interchange on I-215, one modified local interchange on I-215, and two new freeway to freeway interchanges, and are as follows:

- Eight new local interchanges on MCP at:
  - Redlands Ave (see F-10, Attachment F, Layout Plans)
  - Evans Ave (see F-11)
  - Ramona Exp/Antelope Rd (see F-12)
  - Bernasconi Rd (see F-13)
  - Reservoir Ave (see F-15)

- Town Center Blvd (see F-16)
- Park Center Blvd (see F-17)
- Warren Ave (see F-20)
- One new local interchange on SR-79 at:
  - MCP Roadway Extension between Sanderson Ave and Ramona Expressway (see F-21 and F-22)
- One new local interchange on I-215 at:
  - Placentia Ave (see F-4)
- One modified local interchange on I-215 at:
  - Cajalco Rd/Ramona Exp (see F-6 and F-7)
  - Two new freeway to freeway interchanges at:
    - MCP/I-215 (see F-3 to F-5)
    - MCP/SR-79 (see F-21 to F-23)

Alternative 9 Modified includes the following two design variations at the eastern terminus of the alternative and at San Jacinto River, Lakeview Nuevo Area:

- **1) San Jacinto North Design Variation** is an alignment north of Ramona Expressway from Warren Road to SR-79.
- 2) San Jacinto River Bridge Design Variation is a proposal to construct two shorter bridges instead of one longer bridge in the Lakeview Nuevo area (see F-14, Attachment F, Layout Plans).

These design variations are described in more detail at the end of this section.

## **Design Variations**

Descriptions of the design variations are provided below.

## San Jacinto North Design Variation

The San Jacinto North Design Variation terminates MCP on the east end slightly different from the base case described in Alternative 4 Modified. This alignment proceeds north of Ramona Expressway from Warren Road to SR-79. Similar to the base case, there are direct connectors to north and southbound SR-79. MCP has an at-grade intersection with Sanderson Avenue just west of SR-79. Both Ramona Expressway and Sanderson Avenue have access to and from SR-79 via ramps joining MCP and/or Ramona Expressway. A connection to Ramona Expressway is also provided at the Warren Road interchange. Different from the base case, MCP becomes Ramona Expressway east of SR-79. The San Jacinto North Design Variation is a design variation in this area for all of the MCP Build Alternatives.

## San Jacinto River Bridge Design Variation

Under the San Jacinto River Bridge Design Variation, the MCP project would construct two bridges in the Lakeview Nuevo area: a 508-foot long bridge spanning Martin Street and a 1,953-foot long bridge spanning the San Jacinto River, for a total of 2,461 feet of bridge (see

F-14, Attachment F, Layouts Plans, and H-B-34 and H-B-35, Attachment H, Cost Estimates). The base case proposes one 4,321-foot long bridge to span the floodplain and Martin Street. The San Jacinto River Bridge Design Variation applies to all three build alternatives (Alternative 4 Modified, 5 Modified, and 9 Modified). The San Jacinto River Bridge Design Variation would also include a section of 1,849 linear feet of fill on either end of the bridges within the same limits as the base case bridge. Similar to the base case, the bridges under this design variation would be located to the south of the existing Ramona Expressway Bridge, which is 255 feet in length and would remain in place.

#### i. Selection of Alternatives

Alternative 9 Modified with the San Jacinto River Bridge Design Variation was selected as the preferred alternative.

#### Identification of the Preferred Alternative

As the CEQA and NEPA lead agencies, respectively, RCTC and FHWA identified a Preferred Alternative after comments were received from the public during the public review period of the Recirculated Draft EIR/Supplemental Draft EIS in a process consistent with the NEPA/404 Integration MOU (2006). This Least Environmentally Damaging Practicable Alternative (LEDPA) analysis process is summarized below and discussed in detail in the FEIR/FEIS. Based on the LEDPA analyses discussed below, Alternative 9 Modified, with the SJRB DV and the San Jacinto Base Case alignment through the City of San Jacinto, has been identified as the preferred alternative. The Mid County Parkway Project Development Team (PDT), consisting of representatives from RCTC, Caltrans, FHWA, the County of Riverside, the City of Perris, the City of San Jacinto, the City of Corona, and the City of Riverside, concurred with Alternative 9 Modified with the San Jacinto Base Case with the SJRB DV their meeting of November 20, 2013.

## Comparison and Evaluation of Alternatives

The comparison of Alternatives includes the comparison of costs, key features and potential environmental effects on the evaluation criteria. In 2011, the evaluation criteria was agreed upon by the Resource Agency Coordination group for the Recirculated Draft EIR/Supplemental Draft EIS.

In general, the environmental impacts of Alternative 4 Modified are consistently greater than the impacts of Alternatives 5 Modified and 9 Modified.

Based on the key evaluation criteria for the Build Alternatives, the impacts to natural resources are not substantially different among the Build Alternatives, particularly east of City of Perris due to the common alignment in that area.

Alternative 9 Modified has slightly more total impacts to federal jurisdictional waters and is ranked slightly higher than Alternative 5 Modified in hydrology impacts but has lower water quality impacts.

Alternative 9 Modified has lower impacts to Riversidean upland scrub communities than Alternative 5 Modified and less impacts to PQP lands.

Alternative 9 Modified has substantially fewer business and employee displacements, has the least impacts to designated farmland overall and Prime Farmland, and is the only alternative with no impacts to schools. Both Alternatives 4 Modified and 5 Modified have impacts to school areas.

Alternative 4 Modified is the longest route, takes a circuitous route through the City of Perris and has a lengthy bridge structure paralleling the Perris Valley Storm Drain, all resulting in higher costs and more visibility to the public. Alternative 5 Modified has higher impacts to areas of existing and future businesses and employment in the community.

Both Alternatives 4 Modified and 5 Modified require realignment of the I-215 freeway for several miles. Alternative 9 Modified is the most direct and shortest route of the three build alternatives.

Finally, Alternative 9 Modified is the most cost-effective Build Alternative, costing \$110 million (over 7 percent) less than Alternative 5 Modified and \$490 million (30 percent) less than Alternative 4 Modified.

For a complete analysis of the criteria and more detail on the above summary refer to the FEIR/FEIS.

## Preliminary LEDPA Determination

Based on the analyses described above, Alternative 9 Modified, with the San Jacinto River Bridge (SJRB DV) and the Base Case southerly alignment through the City of San Jacinto, was recommended as the Preliminary LEDPA. Several coordination meetings with the USFWS, the USACE, and EPA were held in late 2013 and early 2014. FHWA formally requested each agency's Agreement/Disagreement on the Preliminary LEDPA in letters to those three agencies. In letters dated February 2014, USACE concurred, EPA and USFWS agreed with the selection of Alternative 9 Modified with the bridge design variation as the preliminary LEDPA. In letters dated April 16, 2014, Caltrans notified the USFWS, the USACE, and the EPA that the transportation agencies (FHWA, RCTC, and Caltrans) made the decision to identify Alternative 9 Modified with the San Jacinto River Bridge Design Variation as the Preliminary LEDPA for the MCP project. The correspondence cited above is provided in Appendix J, Supplemental Chapter 5 Attachments, in the Final EIR/EIS.

From here forward in this document, Alternative 9 Modified with the San Jacinto Base case and the SJRB DV is referred to as "the project" or MCP.

## ii. Modifications of Preferred Alternative

After the circulation of the RDEIR/SDEIS and identification of the preferred alternative as Alternative 9 Modified with SJRB DV, RCTC evaluated two refinements to the alignment of the preferred Alternative, which either minimized or avoided resources.

**Preferred Alternative Modification in the Vicinity of the San Jacinto Wildlife Area** Modifications of the Preferred Alternative include MCP mainline realignment between approximately Antelope Road to the west and Bernasconi Road to the east to avoid the permanent incorporation of land from the San Jacinto Wildlife Area. Because the San Jacinto Wildlife Area is subject to the requirements for protection under Section 4(f), RCTC evaluated shifting an approximately 1.5-mi long segment of the MCP facility about 200 feet to the south between Antelope Road and Bernasconi Road, away from the San Jacinto Wildlife Area. The realignment is shown in F-12 and F-13, Attachment F, Layout Plans and in the figures, text, and analyses in the Final EIR/EIS. Without the realignment, the permanent use of 3.4 acres of land from the San Jacinto Wildlife Area would have been required for the MCP project. The shift in alignment was done within the original project study area.

In addition to the avoidance of direct impacts to 3.4 acres of land from the San Jacinto Wildlife Area, the realignment of 1.5 miles of the MCP facility would result in minor changes to right of way impact and environmental impact, including a reduction in impacts to the Los Angeles pocket mouse habitat.

## Preferred Alternative Modification to Reduce Impacts to the Los Angeles Pocket Mouse and other Species

While the realignment of 1.5 miles of MCP facility would already reduce permanent impacts to the Los Angeles pocket mouse habitat, RCTC also investigated additional design options that could further reduce impacts to the habitat, including the use of retaining walls. RCTC identified three retaining walls that would reduce the impacts on the Los Angeles pocket mouse habitat, which total 5,203 linear feet along the north side of the MCP. The use of those retaining walls would result in a reduction of 23.20 acres of Los Angeles pocket mouse habitat impacted by the project. The three retaining walls are shown in F-12 and F-13, Attachment F, Layout Plans and in the figures, text, and analyses in the Final EIR/EIS.

#### iii. Proposed Engineering Features

a. Typical Sections, Horizontal and Vertical Alignment Summaries, Right of Way Widths, Access Control Requirements

The three build alternatives for the MCP generally follow a west-east alignment and consist of six lanes of access-controlled freeway. The alternatives provide a minimum

standard 62 ft wide median for freeways and expressways in rural areas. This median width is also sufficiently wide to accommodate future planning of multimodal transportation facilities that includes both managed lanes or a future transit facility. The Final EIR/Final EIS for this project only addresses the proposed MCP freeway; any future multimodal facility would be subject to separate environmental documentations.

The following elements are included in the design concept for the ultimate facility:

- Three mixed-flow lanes in each direction for the facility alternatives.
- Shoulders designed to Caltrans standards for freeways.
- Median designed to Caltrans standards for freeways.

Land uses adjacent to the three build alternatives vary from urbanized area that consists of residential, commercial, and industrial uses to rural/agricultural uses and environmental reserve areas.

The three build alternatives generally have the following characteristics:

- Median: 62 feet
- Terrain: 20% Mountainous and Rolling and 80% Flat
- Vertical Alignment: varying from 0.3% to 4% for facility
- Lane Widths: 12 feet
- Outside Shoulders: 10 feet
- Inside Shoulders: 10 feet
- Right of Way Widths: 224 feet in flat terrain and up to 770 feet in rolling and mountainous terrain, typically 400 feet maximum in rolling terrain. At interchanges, typically 1000 feet but up to 1376 at Redlands Ave interchange.

The alternative will require R/W that varies in width as a result of topography, features of the natural and built environment, potential constraints that may limit the width of the facility, and design requirements. Therefore, variations in these cross sections are needed in certain constrained areas. The R/W widths defined for preservation for each alternative may be larger than indicated in the cross section diagrams. Generally, the needed R/W varies from 220 to 400 feet wide. Typical sections for the project are shown in G-1 to G-6, Attachment G, Typical Sections.

The anticipated hourly and daily capacity are shown on the typical sections in the list of design designations. The projected level of service for the design year of 2040 is A. Assuming a typical growth rate in traffic of 1% per year for the years beyond 2040, all MCP segments would be expected to operate at LOS D or better through the year 2065.

## b. Design Units – U.S. Customary (English) Units

The preliminary design was originally performed in accordance with Caltrans 2006 Highway Design Manual (HDM), Sixth Edition Change #6 (English). The design as shown in the approved Geometric Approval Drawings (GAD) was later updated wherever possible to 2012 HDM design standards. During the final design phase (PS&E), the project will be designed further to meet the latest HDM design standards, and a note indicating as such is included on the GAD sheets.

#### c. Truck Climbing Lanes

In accordance with Caltrans HDM Section 204.5 regarding sustained grades, climbing lanes are needed where the grade exceeds 2 percent and the total change in elevation is greater than 250 ft. No truck climbing lanes are required for any of the build alternatives. However, in accordance with Caltrans Highway Design Manual Section 504.2, Freeway Entrances and Exits, for trucks on ascending entrance ramps to freeways with sustained upgrades exceeding 2 percent, an auxiliary lane should be provided. Therefore, an auxiliary lane is provided for the Evans Road eastbound on-ramp to the Ramona Expressway/Antelope Road eastbound off-ramp.

#### d. Geometrics of interchanges

The proposed local interchanges for the build alternatives consist of the following interchange types: Type L-1, L-2, L-7, L-9, L-13, and their combinations. For detailed exhibits of all the local interchanges for the project, see F-1 to F-23 Attachment F, Layout Plans.

#### e. Structural Section Requirements

The structural section requirements are based on the Preliminary Materials Report by Kleinfelder, dated May 2013 and updated in October 2014. The preliminary recommended flexible and rigid pavement sections included in the Preliminary Materials Report (PMR) were developed in general accordance with Chapters 600 through 630 of the July 2009 edition of the Caltrans HDM. The flexible pavement sections were developed using the CalFP computer program by Caltrans (version 1.1).

Preliminary pavement section recommendations for the project were developed for the following locations:

- MCP mainline from I-215 to SR-79
- MCP ramps
- I-215 widening from Nuevo Road to Van Buren Boulevard.
- I-215 ramps
- SR-79 mainline

According to the Life-Cycle Cost Analysis (LCCA) Procedures Manual, a life-cycle cost analysis need not be performed for every interchange ramp but rather it should be performed for an individual ramp or for a select few ramps that are representative of all the ramps. The ramps on both MCP and I-215 have been categorized into two types of ramps that are considered to be representative of all the ramps: (1) Ramp A with general load truck traffic – a ramp with truck traffic volumes that is approximately equal to the average truck traffic volumes for all the ramps; and (2) Ramp B with high truck traffic volumes that is on the higher range of truck traffic volumes for all the ramps.

Traffic Index (TI) values were evaluated for the MCP mainline, I-215 mainline widening improvements, MCP ramps, and I-215 ramps. TI values on the ramps were further broken down to Ramp A on MCP, Ramp B on MCP, Ramp A on I-215 and Ramp B on I-215. The TI values were calculated based on the procedures presented in the Caltrans HDM Section 613.3(3) using traffic data provided in the Air Quality and Noise Studies, assuming 5 percent trucks and are shown in the table below. The MCP TI values were approved by Caltrans Traffic Forecasting Unit in April 2012 (the Caltrans Memorandum is provided in G-10, Attachment G, Traffic Index Memorandum):

Traffic Index (TI)				
	Design Life			
Location	(Years)	TI		
	20	11.5		
MCP Mainline	40	13.0		
	20	10.0		
MCP Ramp A	40	11.5		
	20	10.0		
MCP Ramp B	40	11.5		
	20	12.0		
I-215 Mainline Widening	40	13.0		
	20	10.0		
I-215 Ramp A	40	11.5		
	20	10.0		
I-215 Ramp B	40	11.5		

Table	e 5.A:	
Traffic	Index	(TI)

The R-value tests were performed in accordance with California Test 301. Eleven untreated resistance value (R-value) tests were performed on samples collected from borings along the proposed roadway alignments, and an R-Value of 25 was determined to be applicable for the project. The R-Value of 25 was used in the determination of the recommended pavement structural sections for MCP and I-215.

The Preliminary Materials Report (PMR) structural section recommendations include flexible pavement sections for Hot-Mix Asphalt (HMA) and Rubberized Hot-Mix Asphalt (RHMA) as well as rigid pavement sections for Jointed Plain Concrete Pavement (JPCP). The flexible pavement recommendations are for design lives of 20 years and 40 years while the rigid pavement recommendations are for a 40-year design life.

The life-cycle cost analysis was submitted in November 2011 and again in October 2014 to evaluate the PMR recommendations for the MCP mainline and ramps. For each pavement alternative, LCCA compares the agency costs (initial construction and future maintenance and rehabilitation), user costs (motorist delay during construction activities), and total life-cycle cost (combined agency and user costs). The alternative with the lowest life-cycle cost is viewed as having the lowest impact to the State; however, according to the LCCA Procedures Manual, "in some instances, the lowest life-cycle cost option may not ultimately be selected after such considerations as available budget, constructability and maintainability issues, and environmental concerns are taken into account."

The LCCA was performed for three types of locations: the MCP mainline, MCP Ramp A, and MCP Ramp B. Table 5.B provides a summary of the LCCA alternatives that were evaluated.

Pavement Surface (Design Life)	MCP Mainline	MCP Ramp A: Typical Ramp	MCP Ramp B: High Truck Traffic Ramp
HMA (20 Year)	X	X	X
HMA w/ RHMA (20 Year)	Х	x	x
HMA w/ RHMA (40 Year)	X	X	x
JPCP(40 Year)	X	X	X

Table 5.B: LCCA Alternatives

LCCA results were evaluated in accordance with Section 4.4.2 of the LCCA Procedures Manual. The 40-year JPCP was determined to have the lowest life-cycle cost for the MCP mainline and ramps while the 20-year HMA with RHMA was determined to have the second lowest life-cycle cost. The recommended pavement sections for the 40-year JPCP and 20-year HMA/RHMA for both the MCP mainline and ramps are detailed in the Table 5.C MCP Structural Sections below. Note, the structural sections for Ramp A and Ramp B were determined to be identical in both the 20-year and 40-year design lives and are therefore combined together in the table. Further details of the results are included on the LCCA forms provided in G-7 to G-9 in Attachment G, Life Cycle Cost Analyses.

	MCP M	ainline	MCP Ramp	s A and B
Pavement	20-Year	40-Year	20-Year	40-Year
Section Material	Design Life	Design Life	Design Life	Design Life
	(TI 11.5)	(TI 13.0)	(TI 10.0)	(TI 11.5)
JPCP		0.85		0.85
RHMA - G	0.20		0.20	
HMA - BB		0.10		0.10
HMA	0.50		0.50	
LCB		0.50		0.50
AB	1.35		1.00	
AS		0.70		0.60
Total Structural				
Section Thickness	2.05	2.15	1.70	2.05
(Feet)				

Table 5.C: MCP Structural Sections (Feet)

The LCCA usually plays an important role in pavement type selection. However, on the MCP project, pavement type selection will depend primarily on whether MCP is adopted as a State Route and less on the findings in the LCCA. If MCP is adopted as a State Route, Caltrans has asserted it will want the 40-year JPCP rigid pavement section for MCP. If MCP is not adopted as a State Route, MCP will become a Riverside County facility and is expected to be constructed with the 20-year HMA/RHMA flexible pavement section, as Riverside County is not equipped to provide maintenance for concrete pavement. The determination of whether or not MCP will be a State Route is expected to be made after the completion of the PA/ED with final selection of pavement type on MCP made during the Plans, Specifications, and Estimates (PS&E) phase.

Two submissions of the LCCA were made to Caltrans, one in November 2011 and the other in October 2014; however, in January 2015, after recognizing pavement type selection on MCP will depend primarily on whether MCP is adopted as a State Route and not on results of the LCCA, Caltrans recommended not to make any further progress on the LCCA and indicated LCCA approval will not be required as it would not influence the selection of the pavement type. For the purposes of project cost estimating, the 20-year flexible pavement was assumed for the pavement section. If MCP is ultimately adopted as a State Route requiring rigid pavement, the cost estimate for the MCP project is expected to increase by approximately \$15M for the six-lane, 16-mile facility, based on an estimated incremental cost of \$150K per lane mile for the 40-year rigid pavement compared to the 20-year flexible pavement.

For the I-215 widening improvements between Nuevo Road and Van Buren Boulevard, both flexible and rigid pavement types were evaluated for consideration. Caltrans

generally prefers rigid pavement for its freeways, and the 40-year JPCP rigid pavement section, as detailed in Table 5.D I-215 Structural Sections below, was recommended by the PMR as the rigid pavement section for the widening improvements on the I-215 mainline. Because the pavement section on other RCTC I-215 corridor widening projects, such as the I-215 Central project that is currently in construction and the I-215 South project that completed construction in 2013, is very similar to the PMR-recommended HMA/RHMA flexible pavement section for 20-year design life, as presented in Table 5.D I-215 Structural Sections below, consideration will be given for constructing the I-215 widening improvements with 20-year HMA/RHMA. Ultimately, final selection of pavement type for I-215 widening will be made during the PS&E phase.

I-215 Structural Sections (Feet)					
Pavement	I-215 Mainlii	I-215 Ramps A and B			
Section Material	20-Year	40-Year	20-Year		
	Design Life	Design Life	Design Life		
	(TI 12.0)	(TI 13.0)	(TI 10.0)		
JPCP		1.00			
RHMA - G	0.20		0.20		
HMA - BB		0.10			
НМА	0.40		0.50		
LCB		0.50			
AB	1.70		1.00		
AS		0.70			
Total Structural					
Section Thickness	2.30	2.30	1.70		
(Feet)					

Table 5.D:	
215 Structural Sections	(Fee

If the 20-year HMA/RHMA is ultimately selected, the project is expected to also cold plane and overlay the existing I-215 mainline pavement with 0.1' rubberized hot mixed asphalt. Recent Caltrans pavement condition report on the I-215 freeway between Nuevo Road and Van Buren Boulevard indicates existing I-215 mainline pavement is in satisfactory condition and does not warrant pavement rehabilitation under the MCP project.

For the purposes of project cost estimating, the 40-year rigid pavement was assumed as the pavement section for I-215 widening improvements. If the 20-year flexible pavement is ultimately selected instead of rigid pavement, the project cost estimate will decrease by approximately \$2.2M at an estimated cost savings of \$150K per lane mile. Because the existing I-215 ramps are paved with flexible pavement, the 20-year flexible pavement section is recommended for the I-215 ramps, as shown in Table 5.D I-215 Structural Sections above. Ramp A and Ramp B have identical pavement sections and are combined together in the table.

The recommended pavement section for SR-79 is intended to match the proposed pavement section of the future SR-79 4-lane expressway project (EA 494000; PN 0800000784). The structural section for the future SR-79 expressway project is shown in the Table 5.E SR-79 Structural Section below. Final selection of pavement type on SR-79 will be made during the PS&E phase.

Pavement Section Material	SR-79 Mainline
JPCP	1.00
HMA - BB	0.10
LCB	0.33
AB	1.00
Total Structural Section	
Thickness (Feet)	2.43

Table 5.E: SR-79 Structural Section (Feet)

For the purposes of project cost estimating, the local roads were assumed to be 0.50' HMA over 2.00' AB (Class 2). This is a preliminary assumption for cost estimating purposes only. Final selection of pavement type on local roads will be made during the PS&E phase.

#### f. Drainage Structures

The MCP project is entirely located within the San Jacinto Watershed in Riverside County within the cities of Perris, Lakeview and San Jacinto. Within the watershed, the San Jacinto River is the major water course.

The project site is located within Riverside County Flood Control and Water Conservation District's - Perris Valley, San Jacinto River, Lakeview, Nuevo and San Jacinto Valley Master Drainage Plans (MDP) boundaries.

The offsite and onsite drainage study was done for the project only within the San Jacinto River Watershed. Drainage design is limited to drainage facilities located within the project right-of-way and it examines all of the offsite drainage systems that may be affected by the project and any proposed offsite and onsite systems. MDP facilities

crossing MCP R/W, existing or planned at the time of final design, will be sized to convey the MDP storm water flows through the MCP R/W.

Existing drainage systems were identified in four distinct areas within the San Jacinto Watershed: I-215, City of Perris, City of Lakeview and City of San Jacinto areas. The existing drainage facilities are as follows:

- I-215 Several reinforced concrete box culverts (RCBs), alternative pipe culverts (APCs) and corrugated steel pipes (CSPs) convey the majority of off-site flows under I-215.
- City of Perris Perris Valley Storm Drain (PVSD) is the main drainage facility,
- City of Lakeview the San Jacinto River is the major drainage facility, which is crossed by the 255-ft long San Jacinto River Bridge. Other facilities are concrete pipes (RCPs), APCs and CSPs.
- City of San Jacinto's major drainage facility is the San Jacinto River, which is crossed by the 1226-ft long San Jacinto River Bridge at Sanderson Ave, along SR-79.

The project will add paved areas and realign the freeway ramps, therefore, existing drainage systems maybe inadequate. The impacts on existing drainage systems may be minimized or avoided by relocation, extension and adjustment of the existing system, by additional inlets of drainage systems or by abandonment of the existing systems.

Proposed drainage systems were sized no less than the sizes in the drainage master plan. Along the new highway, many existing culverts would be extended to daylight lines, removed or protected in place, new culverts would be placed and retaining walls would be installed to ensure the cut/fill slopes have minimal impact to the proposed site and surroundings. Several new bridges and viaducts would also be built and existing bridges would be widened. Reinforced concrete boxes and a large steel ellipse animal crossing have been proposed for the project.

The design considered culvert versus bridge placement and/or channel improvements to convey the existing watercourse. Traditional concrete channel lining was not considered as an alternative due to environmental concerns. Three types of cross culverts are used to convey the tributary flow across the MCP project.

- Reinforced concrete pipe (RCP) culverts are proposed at locations with adequate cover between the top of the pipe and the roadway surface.
- Single-cell RCB culverts are shown where the conveyance requirements exceed the available RCP diameter or insufficient cover is available.
- Multiple-cell RCB culverts are specified at locations where a single-cell RCB or RCP do not have sufficient conveyance.

The project is broken down into three segments for discussion purposes. Drainage system descriptions summaries for each segment are as follows:

- 1. Segment 1: I-215 Area and the Placentia Avenue to Lake Perris Area.
  - I-215/Placentia Area: This area includes affected areas on I-215 between Van Buren Boulevard to the north and Nuevo Road to the south. For this alternative along I-215, 14 existing culverts will be extended to daylight lines of the proposed grading and incorporated into the existing flow patterns. Seven existing culverts will be removed, 12 existing culverts will be protected in place and 10 new crossing culverts will be proposed. The proposed new culverts are 24 inches in diameter. In this area, the largest proposed drainage facility is a 168-inch wide × 54-inch high RCB proposed south of the I-215/Cajalco Road interchange and is an extension of an existing culvert.
  - Placentia Avenue to Lake Perris Area: This area includes from the east side of I-215 at Placentia Avenue, along Placentia Avenue, crossing over the area main drainage facility, the Perris Valley Storm Drain (PVSD), and east to the south end of Lake Perris. The PVSD collects runoff from the city of Moreno Valley, the city of Perris, and unincorporated areas of Riverside County. The Master Drainage Plan (1989) addresses future drainage needs along the existing PVSD. Due to rapidly increasing development, the Cities of Moreno Valley and Perris undertook a study in 2003 for an alternative design for the PVSD. The portion of the alignment that crosses over the PVSD crosses with an 853-foot long bridge. The crossing of the PVSD spans such that the impact from the 100year flood event would not increase the river's water surface elevation by more than 1.0 foot. The bridge crossing of the PVSD accommodates all previously proposed alternative improvements to the PVSD with no adverse impacts to hydraulics. The proposed bridge minimizes floodplain encroachment. The major drainage facility in this section is a detention basin designed to hold the runoff from a 100-year 24-hour storm event, equaling 928,069 cubic feet. The storm water in the detention basin will be pumped out at the end of the storm into a 264-inch wide × 90-inch high concrete channel that drains into PVSD. The concrete channel is part of the drainage master plan.
  - All existing culverts within the section will be extended to maintain the existing flow paths. Proposed new culverts will be 36 inches in diameter and the second largest drainage facility (besides the detention basin and regional storm drain channel) is a 144-inch wide × 72-inch high RCB at Placentia Avenue and Indian Avenue.
- 2. Segment 2: San Jacinto "River" Area or "Lakeview Nuevo Area".
  - This area includes from the south end of Lake Perris, along Ramona Expressway to the east of Warren Road. The San Jacinto River Floodplain is in this area. It is a natural curving watercourse that is relatively wide, approximately 3,936 ft. The typical river slope is less than 0.001. In the planning

of the MCP project, RCTC decided to develop its project without waiting for the Master Plan to be implemented. As part of the project, two 1953-foot long threelane bridges would be constructed across San Jacinto River downstream of the existing Ramona Expressway crossing. The existing two lane bridge is expected to overtop with the 100-year flow. The proposed new bridges would be separated by a gap approximately 38 ft wide. The total width of the two bridges would be 159 ft. The existing bridge would become a frontage road. This layout is preferable because it would minimize the floodplain encroachment and potential hydraulic impacts. The majority of existing culverts in the section will be extended to the daylight line of the proposed grading. A few of the existing culverts will either be removed or abandoned. All proposed new culverts in the section are between 24 and 72 inches in diameter and the largest proposed drainage facilities are 168-inch wide × 84-inch high RCB proposed along MCP east of Town Center Boulevard and west of Park Center Boulevard. There is one drainage culvert / animal crossing in this area.

- 3. Segment 3: San Jacinto City area between Warren Road and Ramona Expressway east of SR-79. This segment of MCP connects to the proposed realignment of SR-79 south of Ramona Expressway and then continues as a six-lane easterly extension that terminates at a proposed signalized intersection at Ramona Expressway. In this segment both Ramona Expressway and Sanderson Avenue have access to and from SR-79 via ramps joining MCP and/or Ramona Expressway.
  - San Jacinto Area: This area includes from the Ramona Expressway at Warren Road along Ramona Expressway to realigned SR-79 and portions of SR-79 north up to Gilman Springs and portions of realigned SR-79 approximately 6.820 ft south of Ramona Expressway. In the planning of the MCP project, RCTC decided to develop its project without relying on the San Jacinto River levee improvements near SR-79. As part of the project, the 15,748-foot long roadway of the proposed section would be constructed on elevated ground ranging from 10 to 26 ft in order to elevate the road above the 100-year floodplain. This would help minimize the 100-year flooding on the land south of the MCP. After passing through the proposed SR-79 Bridge and the Sanderson Avenue Bridge, flow would be held to the north of the MCP. Also, four connector bridges are to be built for the MCP/SR-79 interchange. For the San Jacinto alignment, these connector bridaes include an approximate 2,540-foot long SR-79 southbound/MCP westbound bridge, a 3,380 foot long SR-79 northbound/MCP westbound bridge, a 2,160-foot long MCP eastbound/SR-79 southbound bridge, and a 3,490-foot long MCP eastbound/SR-79 northbound bridge. All of the existing culverts in these sections will be removed and replaced with new ones, and the sizes range between 24 and 36 inches in diameter.

## iv. Nonstandard Design Features

The project was originally designed according to the design standards set forth in Caltrans 2006 Highway Design Manual (HDM), Sixth Edition Change #6 (English) and then later updated per the 2012 HDM. The nonstandard features in the Fact Sheets are based on the 2012 HDM. Fact Sheet Exceptions to Mandatory Design Standards for the original I-215/MCP systems interchange and SR-79/MCP systems interchange were both approved in August 2007. As discussed earlier, in 2009, the original project limits were modified to focus on the transportation needs between I-215 and SR-79. The project modifications triggered supplemental exceptions to mandatory design standards on I-215 for MCP Alternative 9 Modified, which was approved by Caltrans in September 2011 and later approved by FHWA in August 2012. All other Design Exception Fact Sheets have also obtained Caltrans' approval. The I-215 Advisory Fact Sheet was approved in April 2014, and the MCP Mainline Mandatory Fact Sheet was approved in March 2015.

The design exception items for the preferred Alternative 9 modified are listed below. For additional explanation on justifications, see the project Fact Sheets Exceptions to Design Standards.

#### Advisory

Location No.	Location of 2:1 Side Slopes	Standard	Proposed	Approved
1	I-215/MCP NB-EB Connector	4:1	2:1 Beyond Clear Recovery Zone (CRZ)	Yes
2	I-215/MCP SB-EB Connector	4:1	2:1 Beyond CRZ	Yes
3	I-215/MCP WB-NB Connector	4:1	2:1 Beyond CRZ	Yes
4	I-215/MCP WB-SB Connector	4:1	2:1 Beyond CRZ	Yes
5	EB off-ramp to Antelope Road MCP Sta 345+00 to 358+50	4:1	2:1 Beyond CRZ	Yes
6	EB on-ramp from Antelope Road MCP Sta 363+00 to 380+00	4:1	2:1 Beyond CRZ	Yes
7	WB off-ramp to Bernasconi Road MCP Sta 416+00 to 422+50	4:1	2:1 Beyond CRZ	Yes
8	MCP EB mainline east of Bernasconi Rd MCP Sta 445+00 to 462+00	4:1	2:1 Beyond CRZ	Yes

a. <u>Side Slope Standards</u>: The Advisory Standard in HDM Index 304.1 cannot be met. The locations of the proposed nonstandard side slopes are as follows:

Location No.	Location of 2:1 Side Slopes	Standard	Proposed	Approved
9	MCP EB mainline west of Reservoir Ave to EB off-ramp to Reservoir Ave MCP Sta 490+00 to 516+50	4:1	2:1 Beyond CRZ	Yes
10	WB off-ramp to Reservoir Ave MCP Sta 518+50 to 523+00	4:1	2:1 Beyond CRZ	Yes
11	EB off-ramp to Town Center Blvd MCP Sta 575+00 to 580+50	4:1	2:1 Beyond CRZ	Yes
12	WB off-ramp to Town Center Blvd MCP Sta 581+50 to 587+00	4:1	2:1 Beyond CRZ	Yes
13	EB on-ramp from Town Center Blvd MCP Sta 582+50 to 587+50	4:1	2:1 Beyond CRZ	Yes
14	WB on-ramp from Park Center Blvd MCP Sta 637+50 to 643+00	4:1	2:1 Beyond CRZ	Yes
15	EB off-ramp to Park Center Blvd MCP Sta 633+00 to 643+00	4:1	2:1 Beyond CRZ	Yes
16	WB off-ramp to Park Center Blvd and MCP WB mainline east of Park Center Blvd MCP Sta 643+00 to 716+00	4:1	2:1 Beyond CRZ	Yes
17	EB on-ramp from Park Center Blvd MCP Sta 643+00 to 648+50	4:1	2:1 Beyond CRZ	Yes
18	MCP EB mainline east of Park Center Blvd MCP Sta 669+00 to 688+50	4:1	2:1 Beyond CRZ	Yes
19	WB on-ramp from Warren Road MCP Sta 812+50 to 822+50	4:1	2:1 Beyond CRZ	Yes
20	WB off-ramp to Warren Road MCP Sta 824+50 to 838+50	4:1	2:1 Beyond CRZ	Yes
21	EB on-ramp from Warren Road MCP Sta 824+50 to 838+50	4:1	2:1 Beyond CRZ	Yes
22	SR-79/MCP SB-WB Connector SR-79 Sta 906+00 to 920+00	4:1	2:1 Beyond CRZ	Yes
23	SR-79/MCP EB-NB Connector SR-79 Sta 886+00 to 913+00	4:1	2:1 Beyond CRZ	Yes
24	SR-79 SB mainline south of Gilman Springs Road SR-79 Sta 932+00 to 963+00	4:1	2:1 Beyond CRZ	Yes
25	SR-79/MCP EB-SB Connector SR-79 Sta 850+00 to 867+00	4:1	2:1 Beyond CRZ	Yes
26	SR-79/MCP NB-WB Connector SR-79 Sta 850+00 to 867+00	4:1	2:1 Beyond CRZ	Yes

CRZ = Clear Recovery Zone

The proposed I-215/MCP freeway-to-freeway interchange is located adjacent to an existing railroad west of I-215, a frontage road east of I-215, and near established businesses and residential homes. In order to avoid or minimize right-of-way impacts to these areas, the project proposes to provide nonstandard embankment side slopes.

A large portion of the MCP corridor alignment runs through environmental resource areas of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the Los Angeles Pocket Mouse (LAPM) habitat, cultural resource sites, planned commercial, residential, and business developments, wetlands, floodplains, and the Colorado River Aqueduct (CRA). In order to avoid or minimize impacts to these sensitive land areas, instead of the standard 4:1 side slope for the entire embankment area, the project proposes to provide the following nonstandard fill side slopes in those areas:

- In the area of the I-215/MCP systems interchange and along the MCP mainline - 4:1 fill slope within a 30-foot Clear Recovery Zone (CRZ) followed by a 2:1 fill slope beyond the CRZ to the toe of slope.
- Along the ramps 4:1 fill slope within a 20-foot CRZ followed by a 2:1 fill slope beyond the CRZ to the toe of slope.
- b. <u>Distance between Ramp Intersection and Local Road Intersection</u>: The Advisory Standard in HDM Index 504.3(3) cannot be met. The locations of the proposed nonstandard distances between intersections are as follows:

Location No.	Distance between Ramp Intersection and Local Road Intersection Location	Standard	Proposed	Approved
1	Proposed Placentia Ave NB ramp intersection and Placentia Ave/realigned East Frontage Road intersection	500'	427'	Yes
2	Proposed MCP/Redlands Ave EB ramp intersection and Redlands Ave/Placentia Avenue intersection	500'	470'	Yes
3	Proposed MCP/Evans EB ramp intersection and Evans Rd/Toliver Rd intersection	500'	450'	Yes

At location 1, to provide the standard 500' intersection spacing would require either realignment of the East Frontage Road at least 73 feet to the east or realignment of the Placentia Avenue northbound on-ramp and off-ramp at least 73 feet to the west. Realigning East Frontage Road approximately 150 feet to the east to connect to existing Susan Lane would result in relocation of the Susan Lane cul-de-sac and additional right of way impacts. Another option to meet the intersection spacing would be to remove the existing East Frontage Road directly to Walnut Street. However, the City of Perris opposed this option because access to East Frontage

Road from Placentia Avenue would be too circuitous (i.e., Placentia Avenue to Indian Street to Walnut Street to East Frontage Road)

At location 2, to provide the standard 500' intersection spacing would require realigning existing Placentia Avenue to the south, resulting in five full and four partial residential acquisitions, utility relocations on the south side of Placentia Avenue, and impacts to the existing Paragon Park and North Perris Fire Station #90. Another consideration would be to move the Redlands Avenue EB on- and off-ramps farther to the north. However, this is not a viable option as it would result in nonstandard superelevation on the EB on-ramp and nonstandard corner sight distance at the intersection of the eastbound off-ramp.

At location 3, to provide the standard 500' intersection spacing would require realigning Toliver Road to the south, but this would necessitate three full and four partial residential acquisitions, as well as utility relocations. Another consideration is to move the ramp intersection 50' to the north by either designing the eastbound loop on-ramp with a smaller radius curve or moving the MCP mainline alignment to the north. The proposed curve radius on the eastbound loop on-ramp is at minimum standard. Reducing its curve radius would result in a nonstandard radius for the loop ramp. Relocating the MCP alignment 50 feet to the north would not be practical because it would impact Sparrow Way which provides access to 32 existing residential homes.

Location No.	Location	Standard	Proposed	Approved
1	Proposed I-215/Ramona Expwy SB Ramps and Ramona Expwy Intersection	Two curb ramps	One curb ramp is proposed at each corner along Ramona Expwy westbound. No curb ramps are proposed at each corner along Ramona Expwy eastbound.	
2	Proposed I-215/Ramona Expwy NB Ramps and Ramona Expwy Intersection	Two curb ramps	One curb ramp is proposed at each corner along Ramona Expwy westbound. No curb ramps are proposed at each corner along Ramona Expwy eastbound.	Yes
3	Proposed I-215/Placentia Ave SB Ramps and Placentia Ave Intersection	Two curb ramps	One curb ramp is proposed at each corner along Placentia Ave westbound. No curb ramps are proposed at each corner along Placentia Ave eastbound.	Yes

c. <u>Two Curb Ramps</u>: The Advisory Standard in HDM Index 105.5(2) cannot be met. The locations of the proposed nonstandard curb ramps are as follows:

Location No.	Location	Standard	Proposed	Approved
4	Proposed I-215/Placentia Ave NB Ramps and Placentia Ave Intersection.	Two curb ramps	Two curb ramps are proposed at NE corner, one curb ramp is proposed at NW and SE corners, no curb ramp is proposed at SW corner.	Yes
5	Proposed MCP/Redlands Ave WB Ramps and Redlands Ave Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
6	Proposed MCP/Redlands Ave EB Ramps and Redlands Ave Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
7	Proposed MCP/Evans Rd WB Ramps and Evans Rd Intersection	Two curb ramps	One curb ramp is proposed at the SW corner and one at the SE corner.	Yes
8	Proposed MCP/Evans Rd EB Ramps and Evans Rd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
9	Proposed MCP/Ramona Expwy WB Ramps and Ramona Expwy Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
10	Proposed MCP/Antelope Rd EB Ramps and Antelope Rd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
11	Proposed MCP/Bernasconi Rd WB Ramps and Bernasconi Rd Intersection	Two curb ramps	One curb ramp is proposed at each of the two corners.	Yes
12	Proposed MCP/Reservoir Ave WB Ramps and Reservoir Ave Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
13	Proposed MCP/Reservoir Ave EB Ramps and Reservoir Ave Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
14	Proposed MCP/Town Center Blvd WB Ramps and Town Center Blvd Intersection	Two curb ramps	One curb ramp is proposed at each of the two corners.	Yes
15	Proposed MCP/Town Center Blvd EB Ramps and Town Center Blvd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
16	Proposed MCP/Park Center Blvd WB Ramps and Park Center Blvd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
17	Proposed MCP/Park Center Blvd EB Ramps	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes

Location No.	Location	Standard	Proposed	Approved
	and Park Center Blvd Intersection			
18	Proposed MCP/Warren Rd WB Ramps and Warren Rd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
19	Proposed MCP/Warren Rd EB Ramps and Warren Rd Intersection	Two curb ramps	One curb ramp is proposed at each of the four corners.	Yes
20	Proposed MCP/SR-79 Single Point Interchange all ramp intersections	Two curb ramps	One curb ramp is proposed at each of the eight corners.	Yes

At locations 1 (SB Ramps and Ramona Exp Intersection) and 2 (NB Ramps and Ramona Exp Intersection), the project proposes to provide sidewalk on Ramona Expressway only in the westbound direction to match the existing condition between Harvill Avenue and Nevada Avenue. Because there would be no sidewalk in the eastbound direction, no crosswalk across Ramona Expressway is being proposed, and therefore, the standard two curb ramps are not proposed on the westbound side. No curb ramps are proposed along the eastbound side because no sidewalks are proposed on that side. The I-215/Ramona Expressway overcrossing bridge was recently widened, as part of a separate project. The bridge widening did not include a new sidewalk in the eastbound direction.

At location 3 (SB Ramps and Placentia Ave Intersection), the project proposes to provide sidewalk on Placentia Avenue only in the westbound direction to match the existing condition. Sidewalk is not proposed in the eastbound direction due to the presence of an existing equestrian pathway. Because of the equestrian community in the area, Caltrans, the County of Riverside and City of Perris agreed not to remove the existing equestrian pathway and replace it with a sidewalk. Because there would be no sidewalk in the eastbound direction, no crosswalk across Placentia Avenue is being proposed, and therefore, the standard two curb ramps are not proposed on the westbound side. No curb ramps are proposed along the eastbound side because no sidewalks are proposed on that side.

At location 4 (NB Ramps and Placentia Ave Intersection), the project proposes a sidewalk along both sides of Placentia Avenue east of the northbound ramp intersection. A sidewalk is provided only on the westbound side west of the northbound ramp intersection due to the presence of an existing equestrian pathway along the eastbound side. Because of the equestrian community in the area, Caltrans, the County of Riverside and City of Perris agreed not to remove the existing equestrian pathway and replace it with a sidewalk. The standard two curb ramps are not provided at the northwest corner because there is no crosswalk across Placentia Ave. Similarly, the standard two curb ramps are not provided at the southeast corner because there is no crosswalk across the northbound off-ramp. No

curb ramps are proposed at the southwest corner because there is no pedestrian access at this location.

At locations 5 through 20, the project proposes to provide a sidewalk along each side of the cross streets (Redlands Avenue, Evans Road, Ramona Expressway, Antelope Road, Reservoir Avenue, Town Center Boulevard, Park Center Boulevard, Warren Road, and along MCP Extension at the SR-79 Single Point Interchange) except at Bernasconi Road where sidewalks are proposed only on the east side of the road. At each of these ramp intersections, except at location 7, crosswalks are proposed across the ramps but not across the local streets because the lack of development in the area is expected to result in low pedestrian traffic, and crossing the local streets can be achieved at nearby local street intersections. Because crosswalks across the local street are not proposed, single curb ramps rather than the two curb ramps are being proposed.

d. <u>Superelevation Transition/Runoff Length Standard</u>: The Advisory Standard in HDM Index 202.5(1) cannot be met. The locations of the proposed nonstandard superelevation runoff lengths are as follows:

Location No.	Location	Standard	Proposed	Approved
1	MCP/Evans Rd WB Loop on-ramp	300 ft	200 ft	Yes
2	MCP/Bernasconi Rd EB Loop on-ramp	300 ft	204 ft	Yes
3	MCP/Reservoir Ave EB Loop on-ramp	300 ft	207 ft	Yes
4	MCP/Town Center Blvd WB Loop on-ramp	300 ft	201 ft	Yes
5	MCP/Park Center Blvd WB Loop on-ramp	300 ft	217 ft	Yes
6	MCP/Warren Rd WB Loop on-ramp	300 ft	241 ft	Yes
7	MCP/Ramona Expressway-Antelope Rd WB on-ramp	300 ft	200 ft	Yes

At locations 1 through 6, new loop on-ramps are proposed at local street interchanges along the proposed MCP alignment. A design exception is requested for a nonstandard superelevation transition/runoff length for the 12% superelevation rate on the curve of the loop on-ramps. To meet the general condition for superelevation transition lengths and to comply with the Advisory Standards in the HDM, a runoff length of 300 feet and minimum 200 feet tangent on both sides of the horizontal curve would be required in correspondence with a 12% superelevation rate. However, a long tangent preceding the loop curve is considered undesirable as it may allow the driver an opportunity to accelerate into the small radius and low design speed curve. Per the HDM 504.3(8), loop ramps should have a radius in the range of 150 feet to 200 feet which corresponds to a low design speed less than 25

mph. Although the proposed short tangent preceding the curve on the loop ramps prohibits meeting the standard superelevation runoff lengths, the short tangent limits the opportunity to accelerate into the loop curve, thereby providing a safety benefit.

Although the superelevation transition standard is not met per HDM Figure 202.5A, it is met per the "Restrictive Situations" condition in HDM 202.5(3) which states, "In restrictive situations, such as on...interchange ramps...where curve radius and length and tangents between curves are short, standard superelevation rates and/or transitions may not be attainable. In such situations,...the rate of change of cross slope should not exceed 6 percent per 100 feet." The loop on-ramps fall under "restrictive situations" as they are interchange ramps with short curve radii and tangents. The proposed superelevation runoff lengths (between 200' and 241'), as shown in above table, all meet the advisory standard of 6% per 100 feet superelevation transition rate for the tangent preceding the loop curve for each of the loop on-ramps.

Eliminating the loop on-ramp and replacing it with a direct on-ramp to change the interchange configuration to a diamond interchange at locations 2 and 4 was investigated in an attempt to avoid this nonstandard feature; however, due to the impacts of the diamond configuration to the MSHCP area at location 2 and impacts to right of way at location 4, it was not feasible at either location.

At location 7, to provide the standard 300' runoff length, instead of the proposed 200', on the Ramona Expressway/Antelope Road WB on-ramp would require lengthening the tangent near the ramp intersection. This would require moving the westbound ramp intersection and the alignments of all three westbound ramps to the northwest to further encroach by an additional 0.81 acres into the Los Angeles Pocket Mouse (LAPM) habitat area. The LAPM habitat is protected habitat lands for the conservation of the Los Angeles pocket mouse (Perognathus longimembris brevinasus), a California species threatened by agricultural and urban development, under the MSHCP. Although the superelevation transition standard is not met per HDM Figure 202.5A, the 6% per 100 feet superelevation transition rate per HDM 202.5 (3) "restrictive situations" is met.

e. <u>Mainline Lane Reduction at Interchanges Standard</u>: The Advisory Standard in HDM Index 504.6 cannot be met. The locations of the proposed nonstandard mainline lane reduction are as follows:

Location No.	Location	Standard	Proposed	Approved
1	I-215 Northbound at the I-215/Van Buren Interchange	No Lane Reduction	1 Lane Reduction	Yes
2	I-215 Southbound at the I-215/Nuevo Road Interchange	No Lane Reduction	1 Lane Reduction	Yes

Location No.	Location	Standard	Proposed	Approved
3	MCP Eastbound at the MCP/Redlands Ave Interchange	No Lane Reduction	1 Lane Reduction	Yes

At location 1 (I-215 at Van Buren Blvd Interchange), the proposed I-215 within the project limits is a four-lane facility in each direction. To match the existing three-lane condition north of the project limits, the project proposes to reduce one northbound mixed-flow lane at the Van Buren Boulevard interchange area. In order to comply with the HDM 504.6 standard and avoid dropping a mainline lane through the Van Buren interchange, consideration was given to dropping a lane between the Van Buren Boulevard northbound slip on-ramp and the Cactus Avenue northbound off-ramp, to the north. However, this location is not desirable for a lane reduction because it is the weaving area with an auxiliary lane between the northbound off-ramp and the northbound hook on-ramp of the Van Buren interchange.

At location 2 (I-215 at Nuevo Rd Interchange), the proposed I-215 within the project limits is a four-lane facility in each direction. To match the existing three-lane condition south of the project limits, the project proposes to reduce one southbound mixed-flow lane at the Nuevo Road interchange area. In order to comply with the HDM 504.6 standard and avoid dropping a mainline lane through the Nuevo Road interchange, consideration was given to dropping a lane between the Nuevo Road southbound on-ramp and the D Street southbound off-ramp, to the south. However, this location is not desirable for a lane reduction because this segment of the freeway is a weaving area with a nonstandard weaving distance less than 2,000 feet. Also, an auxiliary lane is being constructed at this location to mitigate the nonstandard weaving, making this location even more undesirable for a mainline lane drop. The project, therefore, is proposing the lane drop between the southbound off-ramp and the southbound on-ramp of the Nuevo Road interchange.

At location 3 (MCP at Redlands Ave Interchange), the proposed design for the eastbound lanes of the Mid County Parkway is three mixed flow lanes with an additional two lanes from the I-215 connectors such that MCP has five eastbound lanes between I-215 and the Redlands Avenue interchange. Because the MCP is a six-lane facility East of Redlands Avenue interchange, two lanes need to be dropped. The two lanes from the I-215 connectors serve as weaving lanes for the merging of the connectors' traffic onto MCP. One of the two additional lanes from the connectors will be a must-exit lane to the two-lane eastbound exit ramp to Redlands Avenue while the second lane is proposed to be dropped through the MCP/Redlands Avenue interchange, resulting in this nonstandard. To meet the HDM 504.6 standard, consideration was given to dropping a lane between the Redlands Ave eastbound on-ramp and the Evans Road interchange eastbound off-ramp, to the east. However, this location is not desirable for a lane reduction because it is the weaving area with

an auxiliary lane between those ramps. The project, therefore, is proposing the lane drop between the eastbound off-ramp and on-ramp at the MCP/Redlands Ave interchange.

f. <u>Median Width Standard</u>: The Advisory Standard in HDM Index 305.1(1)(a) cannot be met. The location of the proposed nonstandard median width is as follows:

Location No.	Location	Standard	Proposed	Approved
1	SR-79 median from Ramona Expressway to Gilman Springs Road (STA 900+14 to 966+88.32)	36 ft	Varies 14.4 to 36 ft	Yes

A design exception is requested for the proposed SR-79 median width between Ramona Expressway and the SR-79 northern project terminus at Gilman Springs Road. The proposed SR-79 median is 62' wide south of the MCP Extension road. At the northern project limits on SR-79 just south of Gilman Springs Road, SR-79 has an existing median width of 14.4'. In order for the project to join the existing median, the proposed median width needs to transition from 62' to 14.4' where it will be nonstandard in the transition from 36' to 14.4'. As a safety measure to reduce the risk of errant vehicles crossing the nonstandard-width median and colliding with opposing traffic, a Type 60 concrete median barrier is proposed where the median width is nonstandard (between 14.4' and 36'), in compliance with Caltrans median barrier design standard.

In order to meet the standard 36' wide median, not only would the SR-79 median need to be widened to 36' from Ramona Expressway to Gilman Springs Road, it would also need to be widened from 14.4' to 36' for an additional 6.5' miles from Gilman Springs Road to the SR-79 northern terminus at the I-10 freeway in the City of Beaumont, as that segment of SR-79 falls under the California freeway and expressway system. However, the terrain through this area of Lamb Canyon is mountainous, and the SR-79 widening costs, including additional pavement, bridge widening, and earthwork for such an extensive distance through mountainous terrain would be cost prohibitive.

## Mandatory

g. <u>Horizontal Stopping Sight Distance</u>: The Mandatory Standard in HDM Index 201.6 cannot be met. The locations of the proposed nonstandard stopping sight distances are as follows:

Location No.	Location	Standard	Proposed	Approved
1	WB MCP to SB I-215 Connector	S = 430' for Design Speed of 50 mph	335' / 43 mph (R=870')	Yes
2	I-215 SB 1459+92 to 1471+10	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes

Location No.	Location	Standard	Proposed	Approved
3	I-215 NB 1475+90 to 1493+09	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes
4	I-215 SB 1531+38 to 1540+74	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes
5	I-215 NB 1549+16 to 1568+58	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes
6	I-215 SB 1576+43 to 1586+49	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes
7	I-215 SB 1620+09 to 1628+18	S = 840' for Design Speed of 75 mph	824' / 74 mph (R=5300')	Yes
8	I-215 NB 1631+95 to 1645+75	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes
9	I-215 SB 1652+40 to 1660+58	S = 840' for Design Speed of 75 mph	800' / 73 mph (R=5000')	Yes

The reason for the nonstandard feature at location 1 is to avoid substantial right of way impact and avoid the realignment of the I-215 mainline which would negatively impact the geometries of the other connector ramps resulting in additional nonstandard features. The west side of I-215 is also constrained by railroad right of way. To mitigate the nonstandard stopping sight distance, a 10' wide inside shoulder is proposed in place of the 5' wide minimum width. For locations 2 to 9, the nonstandard stopping sight distances result from the inside widening of I-215; to provide standard stopping sight distances would require realignment of the existing I-215 to increase the centerline radii, which would in turn necessitate reconstruction of existing overcrossing structures.

h. <u>Standards for Superelevation</u>: The Mandatory Standard in HDM Index 202.2(1) cannot be met. The locations of the proposed nonstandard superelevation rates are as follows:

Location No.	Location of MCP Nonstandard Superelevation	Standard	Proposed	Approved
1	MCP/Ramona Expressway/Antelope Road WB off-ramp	12%	4%	Yes
2	MCP/Reservoir Avenue EB on-ramp	12%	6%	Yes
3	MCP/SR-79 SB off-ramp	12%	3%	Yes
4	MCP/SR-79 SB on-ramp	12%	3%	Yes
5	MCP/SR-79 NB off-ramp	12%	3%	Yes
6	MCP/SR-79 NB on-ramp	12%	3%	Yes

At location 1, to provide the standard 12% superelevation rate and associated superelevation transition for the proposed 450' radius curve on the Ramona Expressway/Antelope Road WB off-ramp would require lengthening the tangent at the ramp terminus. This would result in extending the ramp alignment farther north to further encroach by an additional 0.63 acres into the Los Angeles Pocket Mouse (LAPM) habitat area. The LAPM habitat is protected habitat lands for the conservation of the Los Angeles pocket mouse (Perognathus longimembris brevinasus), a California species threatened by agricultural and urban development, under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The curve with the proposed nonstandard 4% superelevation rate is located near the off-ramp terminus where vehicles are slowing down to a design speed between 30 and 35 mph. The proposed 4% superelevation rate exceeds the 3% superelevation rate for maximum comfortable speed for a 450' radius curve at 35 mph. The proposed 4% superelevation to tie into the cross street and meets the Americans with Disabilities Act (ADA) requirements.

At location 2, on the EB on-ramp of the Reservoir Avenue interchange, lengthening the tangent at the ramp terminus would be required to provide the standard 12% superelevation rate and associated superelevation transition for the 500' radius curve. Increasing the tangent length would extend the on-ramp farther east, requiring relocation of existing Reservoir Avenue and all the existing utilities running along Reservoir Avenue. These utilities include aerial electric and telecom lines along with underground water and natural gas lines, including a 36" gas line. Existing Reservoir Avenue parallels the on-ramp and will serve as a frontage road after MCP is constructed. The 500' radius curve is located near the ramp intersection where the design speed is 30 to 35 mph. Although the proposed 6% superelevation rate does not meet the standard 12%, it does considerably exceed the 1% superelevation rate corresponding to a maximum comfortable speed of 35 mph for a 500' radius curve. The proposed superelevation rate also allows for a transition to tie into the cross street and meets the Americans with Disabilities Act (ADA) requirements.

At locations 3, 4, 5, and 6, all four ramps of the Single Point Interchange (SPI) at MCP Extension and SR-79 have a 330' radius horizontal curve near the ramp terminus. The standard superelevation rate for a 330' radius curve is 12%. The proposed nonstandard 3% superelevation rate on all four ramps allows for smooth transitions into the 2% crowned cross slope of the MCP Extension alignment. If the standard 12% superelevation rate were applied, it would cause an undesirable and nonstandard algebraic grade break at the join between the MCP alignment and all four ramps. Additionally, because the 330' radius curves are located at the ramp termini, applying the standard 12% superelevation rate on these curves would potentially cause truck overturning near the ramp intersection. Although the proposed 3% superelevation rate at all four ramp locations does not meet the standard 12%, it does exceed the 2.3% superelevation rate corresponding to a 330' radius curve for a maximum comfortable speed of 30 mph. The design speed at the ramp terminus is 25 to 30 mph.

i. <u>Interchange Spacing</u>: The Mandatory Standard in HDM Index 501.3 cannot be met. The locations of the proposed nonstandard interchange spacing are as follows:

Location No.	Location I-215 Freeway to Freeway and Local Street Interchange Spacing	Standard	Proposed	Approved
1	Proposed MCP/I-215 Interchange and existing Cajalco Road/Ramona Expressway Interchange	2 miles	1.60 miles	Yes
2	Proposed MCP/I-215 Interchange and proposed Placentia Avenue Interchange	2 miles	0.07 mile	Yes
3	Proposed MCP/I-215 Interchange and MCP/Redlands Avenue Interchange	2 miles	1.40 miles	Yes <sup>1</sup>
4	Proposed MCP/I-215 Interchange and existing Nuevo Road Interchange	2 miles	1.45 miles	Yes

<sup>1</sup> The previously approved location was at Perris Boulevard with a spacing of 0.85 miles. The modified location at Redlands Avenue provides a greater spacing of 1.40 miles, which is closer to standard; therefore, a new design exception approval is not being requested.

The reason for the design exceptions at locations 1 through 4 is to avoid the closure of the existing local street interchanges at Harley Knox Boulevard and/or Nuevo Road and/or Cajalco Road/Ramona Expressway, as well as eliminating the proposed interchange at Placentia Avenue from local and regional plans. To provide standard spacing along MCP would require deleting a proposed interchange at Redlands Avenue. The closure or deletion of any of these interchanges would cause traffic congestion on the existing local streets and adjacent interchanges. Relocation of any of these existing or proposed interchanges on I-215 or MCP would result in conflict with the flight approach clearance zones around March Air Reserve Base, adverse impacts to commercial and industrial properties and the movement of goods, and/or introduce another nonstandard interchange spacing and weaving for a different location.

Location No.	Location SR-79 Freeway to Freeway and Local Street Interchange Spacing	Standard	Proposed	Approved
1	MCP/SR-79 Interchange and MCP/Warren Road Interchange	2 miles	1.68 miles	Yes
2	MCP/SR-79 Interchange and SR- 79/Ramona Expressway Interchange	2 miles	0.00 mile	Yes
3	MCP/SR-79 Interchange and SR- 79/Sanderson Avenue Interchange	2 miles	1.62 miles	Yes
4	MCP/SR-79 Interchange and existing SR- 79/Gilman Springs Road Interchange	2 miles	1.78 miles	Yes
The reason for the approved design exceptions at locations 1 through 4 is that to provide current standard spacing along MCP or SR-79 would require deleting or moving a proposed interchange at Warren Road, an existing interchange at SR-79/Gilman Springs Road, and a proposed interchange at Ramona Expressway. The closure or deletion of these interchanges would result in traffic congestion on local roads and at adjacent interchanges. Traffic analysis conducted to investigate the situation concluded that there were no feasible improvements that would relieve the traffic congestion caused by the closure or deletion of these interchanges. Justifications against deleting or moving the proposed MCP/Warren Road interchange include: Warren Road is the only major northsouth arterial in this area, would require extensive realignment that results in odd angles and not consistent or compatible with land use plans, and impacts to existing dairy operations. Justifications against deleting or relocating the existing SR-79/Gilman Springs Road Interchange include: impacts to MSHCP area and existing environmental areas, results in removal of the only access point before Lamb Canyon area, loss of access to numerous properties along Gilman Springs Road, and loss of connection from SR-79 to SR-60.

j. <u>Interchange Weaving Length:</u> The Mandatory Standard in HDM Index 504.7 cannot be met. The locations of the proposed nonstandard weaving lengths are as follows:

Location No.	Location I-215 Nonstandard Weaving	Standard	Proposed	Approved
1	Between proposed I-215/MCP WB-NB connector and existing (realigned) I- 215/Cajalco-Ramona Expressway NB off- ramp	5,000'	3,960'	Yes
2	Between existing (realigned) I-215/ Cajalco- Ramona Expressway SB on-ramp and proposed I-215/MCP SB-EB connector	5,000'	4,540'	Yes
3	Between proposed I-215/MCP WB-SB connector and existing I-215/ Nuevo Rd SB off-ramp	5,000'	3,850'	Yes
4	Between existing I-215/Nuevo Rd NB on- ramp and proposed I-215/MCP NB-EB connector	5,000'	3,690'	Yes
5	Between proposed MCP/Redlands Ave WB on-ramp and proposed I-215/MCP WB-NB connector ramp	5,000'	2,600'	Yes
6	Between proposed I-215/MCP SB-EB connector and proposed MCP/Redlands Ave EB off-ramp	5,000'	3,000'	Yes

At locations 1, 2, 3, and 4, in order to provide the current standard weaving length of 5,000', removal of either the proposed I-215/MCP systems interchange or the existing I-215/Cajalco/Ramona Expressway and I-215/Nuevo Road local street interchanges

would be required. However, removal of either local street interchange is not a viable option. The closure or deletion of these interchanges would cause immitigable traffic congestion at the existing adjacent interchanges at Harley Knox Blvd and D St along I-215.

Another option to achieve current standard interchange spacing and weaving section lengths would be to relocate the Cajalco/Ramona Expressway interchange to the north and the Nuevo Road interchange to the south. Moving the Cajalco/Ramona Expressway interchange to the north is not feasible because the relocation would result in significant economic impacts to properties surrounding the existing interchange, including the Majestic Development. Moving the Nuevo Road interchange to the south is not feasible because the relocation would result in nonstandard interchange spacing and weaving lengths between Nuevo Road and the next interchange to the south at D Street.

At locations 5 and 6, in order to provide the current standard weaving length of 5,000', removal of either the proposed I-215/MCP systems interchange or the proposed MCP/Redlands Ave local street interchange would be required. Removal of the MCP/Redlands Ave interchange would result in standard weaving lengths between the I-215/MCP interchange and the proposed MCP/Evans Rd interchange located 1 mile east of the MCP/Redlands Ave interchange. However, removal of either interchange is not a viable option.

Redlands Avenue is a designated truck route in the City of Perris' General Plan. Without the proposed MCP/Redlands Ave interchange, truck traffic will be accessing MCP via Evans Rd or accessing I-215 via Placentia Ave. Neither of these routes is optimal because both locations are in predominately residential areas, and improving the local streets to be used as truck routes is not consistent with the city's general plan. Proposing an interchange with MCP at Redlands Ave provides the most direct access for trucks to MCP, therefore avoiding routing trucks through residential areas. This is important to traffic circulation, therefore it is crucial to have an interchange with MCP at Redlands Avenue. The MCP/Redlands Ave interchange offers an optimum location among the potential adjacent local street options. It provides better spacing to the I-215/MCP interchange ramps with standard auxiliary lane lengths than proposing an interchange at MCP/Perris Blvd. It also provides a standard spacing of one mile to the MCP/Evans Rd interchange that neither the neighboring Wilson Ave nor Murrieta Rd interchange would provide. In addition, Wilson Ave and Murrieta Rd are both collector roads in the City of Perris' General Plan, while Redlands Ave is a designated truck route and secondary arterial. Thus, the relocation of the proposed MCP/Redlands Ave interchange is not a viable consideration.

Removal of the I-215/MCP systems interchange would eliminate the weaving altogether at all the locations. However, removal of the systems interchange is not a viable option. The I-215/MCP systems interchange is critical to meeting the project's Need and Purpose, which states that the MCP project is proposed for the purpose of transporting people, goods, and services regionally west-east between Perris and San Jacinto. With the I-215 freeway in the City of Perris serving as the MCP logical west terminus and 76,200 ADT vehicles at the MCP mainline west terminus, the I-215/MCP systems interchange is a necessary connection to effectively provide access and maintain mobility for MCP traffic in order to meet the project's Need and Purpose.

The aforementioned justifications listed in section <u>i. Interchange Spacing</u> for nonstandard interchange spacing on SR-79 also apply to nonstandard weaving lengths for the two locations on SR-79 shown below.

Location No.	Location SR-79 Nonstandard Weaving	Standard	Proposed	Approved
1	Between SR-79/Gilman Spring Road SB on-ramp and MCP/SR-79 SB-WB connector	5,000'	3,930'	Yes
2	Between MCP/SR-79 EB-SB Connector and SR-79/Sanderson Ave SB off-ramp	5,000'	3,700'	Yes

## v. Interim Features

The County of Riverside approved a project along Ramona Expressway from the curve south of Lake Perris to Warren Road. This project is currently known as Specific Plan 342, The Villages of Lakeview. The EIR for The Villages of Lakeview Specific Plan was certified by the Riverside County in March 2010. On May 23, 2012, the approval of the Final EIR for The Villages of Lakeview Specific Plan was set aside by Riverside County Superior Court, who found the EIR did not adequately address some impacts. The EIR and project are currently being revised to address those impacts. When the project moves forward, it would add two additional lanes to the existing Ramona Expressway and three grade separated interchanges. This project is part of the County of Riverside development conditions for development currently being planned in the Lakeview Nuevo area referred to as the above-mentioned "The Villages of Lakeview." The County project would construct two new lanes to the south of the existing two-lane facility. The two existing lanes would become the westbound lanes and the two new lanes would be the eastbound lanes of Ramona Expressway. The new lanes would be constructed in accordance with the design for the two outside eastbound lanes of MCP. The project would include interchanges at Reservoir Avenue, Town Center Boulevard, and Park Center Boulevard. Some of this construction could take place as part of the potential phasing of the project as described in the Build Alternatives section. The majority of the project would be funded by Riverside County Transportation Uniform Mitigation Fees (TUMF).

## vi. High Occupancy Vehicle (HOV) Lanes

On-ramps proposed by the project accommodate the option for HOV preferential lanes if it is determined necessary in the future. The provision for future freeway to freeway HOV direct connectors at I-215/MCP is not provided in this project due to right of way and railroad constraints. Additionally, I-215 configuration does not provide provisions for direct HOV connection from I-215 to I-215/SR-60; therefore, a through HOV lane is not provided within Riverside County. There is no HOV lane construction as part of the MCP, but design does not preclude future HOV lanes.

## vii. Ramp Metering

The MCP project provides provisions for ramp metering facilities, including provisions for loop detectors, enforcement areas, and connectors to I-215. Final locations to be provided will be determined during the final design phase.

## viii. CHP Enforcement Areas

Areas for CHP enforcement are provided for at the local interchange on-ramps.

## ix. Park and Ride and Maintenance Facilities

Park and Ride lots are not proposed as part of the MCP project. The use of Park and Ride lots to support ridesharing and future HOV lanes is being coordinated. Park and Ride lots adjacent to MCP are part of the District's Long Range Operations Plan. This project will not include the construction of a Park and Ride lot because there are existing and planned Park and Ride facilities in the MCP project area. These include the existing Perris Multimodal Facility (PMF), the existing Mt San Jacinto College Park and Ride lot, and the planned Perris Valley Line with stations in close proximity to MCP. The PMF currently includes a park-and-ride facility, with 141 Park and Ride stalls, and serves as a transit center for the Riverside Transit Agency, connecting seven transit lines. The Mt San Jacinto College serves as a Park and Ride lot, with 26 Park and Ride stalls, and as a transit transfer point, connecting four transit lines. Existing bus routes travel northsouth on the I-215, Perris Boulevard, Evans Road, and SR-79 within the MCP area. In the future, the MCP could be considered for an east-west bus route. The planned PVL station at Cajalco Road and Harvill Avenue plans to include a Park and Ride lot. Based on research of other Park and Ride lots, church sites appear to be amenable to allow use of parking for Park and Ride. There are some potential locations for new Park and Ride facilities in the area of the MCP project. In the Lakeview Nuevo area, 12,000 new residential units are planned as part of a development project; it is reasonable to assume a new church may be built in this area that could serve as a Park and Ride lot. Two other potential Park and Ride locations are the Calvary Chapel Perris Valley on Barrett Avenue and Nuevo Community Church on Nuevo Road both in the City of Perris. For a map showing existing, planned and potential Park and Ride lots see G-11, Appendix G, Park and Ride Locations.

Maintenance facilities are not proposed as part of the MCP project but are being coordinated. Two possible locations for maintenance facilities are near the I-215/MCP systems interchange and the SR-79/MCP systems interchange as discussed below. Depending on the type and size of the maintenance facility, there are full parcel takes that will have excess land and partial parcel takes that have additional land for purchase that could become a maintenance facility. For a map showing potential Maintenance Facility locations see G-11, Appendix G.

## I-215 Area:

The project has three potential maintenance facility locations: (1) between Cajalco Road Interchange northbound off-ramp and realigned frontage road, adjacent to Ramona Expressway, with access from the frontage road. At this location, there are parcels that are partial takes that have additional land that could be acquired for a maintenance facility. (2) at the northeast side of the Placentia Avenue interchange, between the northbound on-ramp and the realigned frontage road, with access from the frontage road. At this location, there are parcels that are partial takes that have additional land the realigned frontage road, with access from the frontage road. At this location, there are parcels that are partial takes that have additional land that could be acquired for a maintenance facility. (3) along Placentia Avenue, between Barrett Avenue and Perris Boulevard, with access from either street. At this location, there are full takes with approximately 7 acres excess land.

None of these areas have proposed developments.

## SR-79 Area:

The project near the SR-79 could have a potential maintenance facility location within the SR-79/MCP systems interchange in the northwest quadrant. At this location, there are parcels that are partial takes for the MCP direct connectors, and a maintenance facility could be located on approximately 6 acres of land in between the direct connector structures or on additional acquired lands to the northwest. In addition, where RCTC owns land south of the existing Sanderson Avenue and Ramona Expressway intersection, there would be excess land of approximately 10 acres that could be utilized for a maintenance facility.

## x. Utility and Other Owner Involvement

## **Existing Utilities:**

Existing utilities are located all along the project, primarily concentrated in the developed areas along Ramona Expressway and Placentia Avenue. The utility types and their owners are described in the Utility Information Sheets shown in Attachment I, Right of Way Data Sheets. Ownership of the various utilities was determined by contacting each known utility company operating within the project limits and requesting as-built records of their facilities. An investigation into determining prior rights has not been performed for this preliminary engineering phase. Affected utilities are located in the street R/W of local county-owned and city-owned streets and have been assumed to have prior rights for the preliminary engineering phase utility relocation cost estimates. Anticipated permit

obligations consist of the State granting Joint Use or Consent to Common Use Agreements with the existing utilities that cross the future State right of way.

#### Utility Impacts:

Construction of the project affects existing utilities as a result of R/W requirements, conflicts between facilities, and structural impacts such as additional soil loads on pipelines due to roadway embankments. Utilities located longitudinally in the proposed MCP R/W will be relocated outside of the R/W. Subsurface utilities crossing the MCP R/W will be relocated into steel casings across the R/W. Aerial lines will need to be evaluated for vertical clearance requirements from the roadway, and their supporting poles will be relocated to locations outside of the R/W. "Determination of Liability" will be prepared during the final design phase and a more detailed engineering study will be performed to identify the exact utility impacts.

There are also potentially a small number of permanent utility easements required in the Perris Valley area and potentially a "utility corridor" in the San Jacinto Valley. These locations are accounted for in the relocation estimate and Right of Way Data Sheets. Otherwise, all utilities are relocated into public R/W. Final locations are to be determined with each utility provider.

Table 5.F provides a summary of some of the more costly utilities and their potential impacts.

Utility Provider	Type of Utility	Potential Impacts
Verizon	Telephone	<ul> <li>Impacts consist of relocating conduits, cables, and aerial lines/poles outside of the MCP right of way to avoid longitudinal encroachments. The utility poles themselves may not be owned by Verizon. Conduits crossing the proposed MCP R/W at new bridge locations will be relocated into the bridge structure cells. Aerial crossings of the MCP R/W may require relocating poles outside the R/W or installation of taller poles to meet vertical clearance requirements. Protection in place may be required in areas where excavation will occur.</li> <li><i>Major relocations would include:</i> Relocate 72" conduit outside the MCP R/W along Ramona Expressway from Lakeview Avenue to N. Ramona Boulevard in San Jacinto.</li> </ul>
Adelphia	Cable TV	Impacts consist of relocating conduits and aerial lines/poles outside of the MCP R/W to avoid longitudinal encroachments. The utility poles themselves may not be owned by Adelphia. Conduits crossing the proposed MCP R/W at new bridge locations will be relocated into the bridge structure cells. Aerial crossings of the MCP R/W may require relocating poles outside the R/W or installation of taller poles to meet vertical clearance requirements. Protection in place may be required in areas where excavation will occur.
Southern California	Overhead and	Impacts consist of relocating aerial and underground lines and poles outside of the MCP R/W to avoid longitudinal encroachments. Aerial crossings of the

## Table 5.F: Utility Impacts

# Table 5.F: Utility Impacts

Utility Provider	Type of Utility	Potential Impacts
Edison	underground electric lines	<ul> <li>MCP R/W may require relocating poles outside the R/W or installation of taller poles to meet vertical clearance requirements. Opportunities for converting aerial lines to underground conduits and/or placing conduits into new bridge structure cells may be available. Protection in place may be required in areas where new construction will occur.</li> <li>From Orange Street east, the power lines are within MCP R/W.</li> <li>A number of poles on N. Sanderson Avenue at the MCP/SR-79 interchange will need to be relocated.</li> </ul>
The Gas Company	Natural gas lines, pressure reducing station	<ul> <li>Impacts consist of relocating pipelines outside of the MCP R/W to avoid longitudinal encroachments and relocating pipelines into jacked steel casings across the MCP R/W at perpendicular crossings. Protection in place may be required in areas where excavation will occur.</li> <li>Relocate 24" High Pressure line into jacked steel casing across the proposed MCP R/W. Located east of Martin Street crossing Ramona Expressway in San Jacinto.</li> <li>Relocate 16" High Pressure line into jacked steel casing across the proposed MCP R/W. Located east of Martin Street crossing Ramona Expressway in San Jacinto.</li> <li>Relocate 8" High Pressure line longitudinally outside of the MCP R/W from Martin Street east to west of Warren Road in San Jacinto.</li> <li>Relocate 4"-6" gas line within MCP R/W from the San Jacinto River to Orange Street.</li> <li>Relocate 36" line outside of the MCP R/W at the Reservoir Avenue interchange from Lakeview Avenue to Davis Road in San Jacinto.</li> <li>Relocate 36" line into jacked steel casing across the proposed MCP R/W at Davis Road/Hansen Avenue in San Jacinto.</li> <li>Relocate 8" line outside of the MCP R/W from west of Warren Road through the Warren Road interchange.</li> </ul>
Eastern Municipal Water District	Potable water, sanitary sewer	<ul> <li>Impacts consist of relocating pipelines outside of the MCP R/W to avoid longitudinal encroachments and relocating pipelines into jacked steel casings across the MCP R/W at perpendicular crossings. Protection in place may be required in areas where excavation will occur.</li> <li><i>Major relocations would include:</i> I-215 widening causes a 38" water pipe extension and casing, along with a pump station relocation at Morgan Street and Nevada Avenue intersection.</li> <li>Relocate well and pump station from MCP R/W on Perris Boulevard south of Placentia Avenue.</li> <li>Relocate 12" water line into 24" casing through Placentia Avenue Bridge.</li> <li>Relocate water line of unknown size within MCP R/W on Reservoir Avenue.</li> <li>Sewer on Placentia Avenue cut off by MCP in cut condition which will require a lift station.</li> <li>24" sewer conflict with Evan Road interchange.</li> <li>Relocate recycled water pump station from MCP R/W at Bridge Street in San Jacinto.</li> </ul>
Metropolitan	Water	The MCP, at various locations, will be located adjacent to and also cross
vvater District of	Supply Aqueduct	Colorado River Aqueduct (CRA) in three places, and run roughly parallel to it

## Table 5.F: Utility Impacts

Utility Provider	Type of Utility	Potential Impacts
Southern California	Pipe Lines	in other locations. The three crossings are located just east of Lake Perris, at Warren Road, and at the interchange with SR-79. In areas where the MCP is running roughly parallel to the CRA, the design would incorporate elements to ensure that settlement from the roadway embankments is either minimized or avoided. At the crossing locations, two designs would be utilized. Where the roadway facilities are near ground level, a protective slab would be built over the CRA, and the roadway would then be placed on a small fill above the slab. This would minimize the potential for settlement or other impacts to the CRA. Where the roadway facilities are substantially above ground level, structures would be built to carry the roadway facilities over the CRA. This would occur at Warren Road and with the connectors at the interchange with SR-79. These structures would have a minimal vertical clearance of 22 ft above ground at the CRA, as requested by Metropolitan for maintenance purposes. Columns for the elevated structures would be outside Metropolitan's right of way for the CRA, and the designs of these structures would be such that settlement or other impacts to the CRA would be minimized or avoided

# xi. Intelligent Transportation Systems (ITS)

Installation of ITS infrastructure will be considered for the project. A fiber optic communication system may be used for the transmission of video and data from field elements to the Transportation Management Center (TMC). Other infrastructure may include vehicle detection stations (VDS) for the collection of speed and volume data; changeable message signs (CMS) to convey traveler information to motorists; and closed circuit television (CCTV) cameras to enable the TMC to assess traffic incidents, construction closures, major events, and provide traveler information. Final locations of the ITS elements will be determined during the final design phase.

## xii. Railroad Involvement

The project crosses railroad lines west of I-215. The railroad lines are owned by RCTC in fee so no further easements are necessary. They are operated by BNSF, which holds a license from RCTC. The transverse crossings will be expanded at existing crossings at Cajalco Road and Placentia Avenue. No new fee R/W is anticipated from the existing railroad R/W and no new railroad alignment is anticipated. Early railroad notification is anticipated due to the lengthy notification and approval process typically encountered with railroad crossing approvals. Temporary Construction Easements (TCEs) are possible at these locations. Construction and Maintenance (C&M) agreements are also anticipated. A California Public Utility Commission Application (CPUC) will need to be submitted to the CPUC for approval. The type of application has yet to be determined.

#### xiii. Highway Planting

The project will include landscaping for unpaved areas within the MCP R/W, affected R/W of I-215 and SR-79, and any affected existing landscaping within the MCP area of potential effect. Landscaping will focus on native plant species, particularly in areas adjacent to undeveloped land and reserve areas with native plant species. The roadside within the project limits is generally classified as "natural" vegetation, with the exception of the existing I-215. The entire MCP corridor, including I-215 and SR-79, is considered to be in an urban area that will provide for "Highway Planting." The graded areas between the edge of shoulder and the cut/fill (daylight/catch point) line and at all Best Management Practice (BMP) basins are assumed to have highway planting that will include plant species consistent with adjacent vegetation and trees and shrubs that will enhance the visual character of the corridor while also being noninvasive. Plant pallets and materials will include those that are native, drought-resistant, shadow- and shaderesistant, noninvasive, and offer soil erosion control. All highway planting plans should be prepared by a licensed Landscape Architect. All highway planting within the state right-of-way should be reviewed and approved during the final design phase by the District Landscape Architect.

# xiv. Erosion Control, Runoff Management, Water Quality Best Management Practices (BMPs)

Permanent erosion control measures will be incorporated into the project for the proposed side slopes to help stabilize the slopes, minimize catch basin siltation, and prevent storm water pollution. During final design, slowing velocities via landform grading will be evaluated and applied in accordance with Caltrans' design standards. The erosion control plan will be reviewed and approved during the final design phase by a licensed Landscape Architect.

Design Pollution Prevention BMPs are permanent measures that are used to reduce erosion after construction is complete. Design Pollution Prevention BMPs applicable to the project include measures that minimize impacts to downstream drainage systems, slope surface protection, concentration flow conveyance systems, and preservation of existing vegetation. These BMPs will be implemented on the project to reduce storm water impacts. The Storm Water Data Report (September 2014) includes BMPs in a conceptual plan for the project. Thirty-six BMPs are proposed for this project in the conceptual BMP plans included in the Storm Water Data Report and shown in F- 1 to F-23, Attachment F, Layout Plans).

Biofiltration swales (bioswales) are vegetated channels that convey storm water and remove pollutants by filtration through the grass, sedimentation, absorption to soil particles, and infiltration through the soil. Bioswales are effective at removing debris and solid particles, although only some removal of dissolved constituents is achieved. Bioswales will be incorporated into the project wherever feasible. Two bioswales are proposed for this project as shown in the conceptual plans that are included in the Storm

Water Data Report. The two bioswales are located at the I-215 / Cajalco Road interchange and at the MCP and Ramona Expressway / Antelope Road interchange.

Infiltration basins are designed to remove pollutants by capturing storm water runoff and infiltrating it to the soil, instead of discharging it into receiving waters. Infiltration basins remove a wider range of pollutants than detention basins. Pollutants removed by infiltration basins include total suspended solids, nutrients, pesticides, particulate metals, dissolved metals, pathogens, litter, biochemical oxygen demand, and total dissolved solids (TDS). Table 5.G lists the number of bioswales and infiltration basins proposed for this project.

 Table 5.G:

 Quantities of Potential BMPs to be Implemented in the Project Area

Bioswales	Infiltration Basins
2	36

All proposed locations for bioswales and infiltration basins have been identified. Additional field studies will need to be conducted to determine if sites are suitable for these BMPs during the final design phase.

#### xv. Noise Barriers

For proposed noise barriers on private property, Caltrans requires that 100 percent of the property owners adjacent to that noise barrier approve the installation of that noise barrier at that location. For noise barriers on/along State right of way, Caltrans' Traffic Noise Analysis Protocol states that if 50 percent or more of the adjacent property owners deny the installation of that noise barrier at that location, then it is not considered reasonable. In accordance with Caltrans procedures, RCTC sent letters in January 2014 by certified mail to each property owner adjacent to a proposed noise barrier for Alternative 9 Modified (Preferred Alternative) to survey the owners on whether they would approve or disapprove of the noise barriers at the locations at or adjacent to their properties. Each letter included a noise barrier survey letter and survey form, a map showing the location of the noise barrier being considered specific to the individual property, and a postage paid return envelope. For the noise barriers proposed on private property (NB-5, NB-50, NB-43, and NB-44), responses in support of the noise barriers were less than 100 percent. Similarly, for the noise barriers that would be located on future State right of way, less than 50 percent of the adjacent property owners support the proposed noise barriers. Therefore, it was not possible to reach a conclusion on whether the noise barriers were reasonable under the "Viewpoints of Benefited Receptors" requirements in Caltrans' Traffic Noise Analysis Protocol. However, as Lead Agency under CEQA, RCTC will carry the feasible and reasonable noise barriers forward into final design for the preferred alternative and will continue to work with adjacent property owners to assess their support for those noise barriers.

## xvi. Non-Motorized and Pedestrian Features

Where feasible, the project will provide pedestrian crossings of the MCP facility in locations where local streets will cross the MCP facility. The sidewalks will comply with ADA requirements and the latest HDM standards during final design. Type D detector loops will be considered per Assembly Bill 1581. Type D is required at limit lines for the purpose of limit line bicycle/motorcycle detection.

Cross slopes for pedestrian crossings would be flatter than the maximum allowable cross slope per Caltrans and ADA standards, with the exception of some existing conditions. Lighting standards, electrical cabinets, fire hydrants, signs, and other fixed objects would be located per HDM 309.1 Horizontal Clearances for Highways. Temporary access for pedestrians, individuals with disabilities, and bicyclists will be considered during construction stages. Lighting will be considered in areas that are not within reserves or environmentally sensitive areas. In addition, existing and planned bike routes and trails are being considered in the design of the MCP project and provisions are being made so that bike routes and trails can use the planned overcrossing bridges and undercrossings to cross the MCP facility where existing and/or planned features exist. The Riverside County General Plan calls for a combination trail (Regional/Class 1 Bike Path) along the San Jacinto River south of Ramona Expressway, and along Cajalco Road west of I-215. The City of Perris is preparing a Trails Master Plan to identify existing and future needs for bikeway and trail users. The existing Placentia Avenue overcrossing and overhead structures have designated equestrian trails on the south sides of the bridges. Both of these bridges are being widened as part of the project and the widened structures will also include an equestrian crossing similar to the existing crossing on the south side of the widened structures.

## xvii. Needed Roadway Rehabilitation and Upgrading

In the next phase of design, any proposed modifications to existing I-215 and SR-79 will be coordinated with Caltrans to review the status of rehabilitation of these existing facilities.

#### xviii. Needed Structure Rehabilitation and Upgrading

In the next phase of design, any proposed modifications to existing structures on I-215 and SR-79 will be coordinated with Caltrans to review the status of rehabilitation and retrofitting of these existing structures.

#### xix. Cost Estimate

The project cost estimate was prepared using the Caltrans Project Cost Estimate Summary sheets. These summary sheets provide the cost breakdown and are presented in H-1 to H-8 in Attachment H, Cost Estimates, of this document. The cost estimates for the bridges can be found in the Advance Planning Study (APS) General Plan sheets included in H-B-1 to H-B-48, Attachment H. The list of the bridges and a key map showing their locations are provided in H-9 and H-10, respectively, Attachment H. APS General Plans for the following three bridge undercrossing locations on SR-79 were not prepared and are being deferred until the Plans, Specifications and Estimates (PS&E) phase: Ramona Expressway, MCP Extension and Record Road. The cost estimates for these three bridges are based on a bridge square footage cost in lieu of the APS cost estimates and are included in the total project cost estimate in Table 5.H below. The minimum vertical clearance requirements for these bridges have been met.

The cost estimate provided is for the project. Table 5.H summarizes the project costs, including construction (roadway and structure), right-of-way, and support costs.

Cost Item	Cost (in \$B)
Roadway	\$ 0.587
Structure	\$ 0.526
Subtotal Construction	\$ 1.113
Right-of-Way	\$ 0.237
TOTAL CAPITAL OUTLAY COST	\$ 1.350
PR/ED Support	\$ 0.045
PS&E Support	\$ 0.167
Right-of-Way Support	\$ 0.014
Construction Support	\$ 0.156
TOTAL CAPITAL OUTLAY SUPPORT COST	\$ 0.382
TOTAL PROJECT COST	\$ 1.732 B

Table 5.H: Cost Summary

## xx. Right of Way Data

New R/W acquisitions and utility easements will be required for the project. R/W acquisitions include partial takes and full takes. Permanent easements including utility easements and public lands (local, state, federal government, and public agency properties) are included in the estimate within the R/W footprint.

Total R/W cost include all identified R/W acquisitions, relocation expenses, demolition costs, SB-1210 appraisal costs, condemnation, and title and escrow fees. These costs are listed in the project Right of Way Data Sheet presented in Attachment I (November 2014).

#### xxi. Effect of Special Funded Proposal on State Highway

The Mid County Parkway is not currently a State Highway, but RCTC proposes to recommend this facility for adoption as a new State Route alignment. Any impacts the

proposed MCP facility would have on existing State Highways I-215 and SR-79 will be adequately mitigated by the MCP project. The project assumes and includes mitigation for a "no project" condition on the I-215 and SR-79.

#### B. Rejected Alternatives

#### i. Alternatives considered and withdrawn from further study

Seven alternatives were evaluated and eliminated from further study during the alternatives refinement process and response to concerns on the Draft EIR/EIS circulated in October 2008.

During the Value Analysis (VA) process, it became apparent that the alternative alignments near the dams at Lake Perris (Perris Dam) and Lake Mathews (Lake Mathews Dam) may be substantially constrained by engineering considerations associated with those dams. Section 6.B provides additional information about the VA process and steps undertaken to develop and refine alternatives. The additional alternatives considered in the development of this report but withdrawn from further consideration as a result of the VA process include Build Alternative 2 and Alternative 3, previously named Alternative 1B in the Tier 1 HCLE studies and named Alternative 2: Offsite Alternative – North of Lake Mathews in the PSR (December 2004).

To address the concerns in response to comments on the Draft EIR/EIS for a 32-mile MCP facility, in spring 2009, RCTC as the lead agency under CEQA, FHWA as the lead agency under NEPA, in cooperation with Caltrans, developed an approach for completing the EIR/EIS process for the project that would refine the project purpose statement and project alternatives to focus on the transportation needs from I-215 to SR-79. Therefore, the additional alternatives considered but withdrawn in response to these concerns include Alternatives 4, 5, 6, 7, and 9.

Table 5.I identifies and describes the alternatives withdrawn and provides a summary of the decisions to remove these alternatives from further study.

Alternative	Description	Comment
2 North Lake Mathews/ North Perris Alternative	Provide a six- to eight-lane controlled- access facility north of Lake Mathews and a north alignment through city of Perris near Perris Lake	This alternative was eliminated due to engineering safety concerns regarding proximity to the Lake Perris Dam, and Metropolitan facilities including Lake Mathews Dam, as stated in letters from Metropolitan dated
		May 13, 2005, and DWR dated August 19, 2005.
3	Provide a six- to eight-lane controlled-	This alternative was eliminated

 Table 5.I:

 Summary of Alternatives Withdrawn from Further Study

Alternative	Description	Comment
North Lake Mathews/ South Perris Alternative	access facility north of Lake Mathews and a south alignment through city of Perris near Perris Lake	due to engineering safety concerns regarding proximity to Metropolitan facilities including Lake Mathews Dam, as stated in a letter from Metropolitan dated May 13, 2005.
4 South Lake Mathews/ North Perris (Drain) Alternative	Provide a six- to eight-lane controlled- access parkway located south of Lake Mathews that follows a northern alignment through the City of Perris, adjacent to the Perris Drain	This alternative was eliminated in 2009 to address the concerns identified in public comments on the Draft EIR/EIS and to focus transportation funding where the need is the greatest, between I- 215 and SR-79.
5 South Lake Mathews/ South Perris (Rider Street) Alternative	Provide a six- to eight-lane controlled- access parkway located south of Lake Mathews that follows a southern alignment through the City of Perris along Rider Street	This alternative was eliminated in 2009 to address the concerns identified in public comments on the Draft EIR/EIS and to focus transportation funding where the need is the greatest, between I- 215 and SR-79.
6 General Plan/North Perris (Drain) Alternative	Implementation of General Plan Circulation Element improvements between I-15 and El Sobrante Road and a new six- to eight-lane controlled- access parkway east of El Sobrante Road to SR-79. Includes a four-lane urban arterial north of Lake Mathews, a four-lane controlled-access expressway south of Lake Mathews, west of El Sobrante Road, and a six- to eight-lane controlled-access parkway east of El Sobrante Road. Alternative 6 follows a northern alignment through the City of Perris.	This alternative was eliminated in 2009 to address the concerns identified in public comments on the Draft EIR/EIS and to focus transportation funding where the need is the greatest, between I- 215 and SR-79.
7 General Plan/South Perris Alternative	Implementation of General Plan Circulation Element improvements between I-15 and El Sobrante Road and a new six- to eight-lane controlled- access parkway east of El Sobrante Road to SR-79. Includes a four-lane urban arterial north of Lake Mathews, a four-lane controlled-access expressway south of Lake Mathews, west of El Sobrante Road, and a six- to eight-lane controlled-access parkway east of El Sobrante Road. Alternative 6 follows a	This alternative was eliminated in 2009 to address the concerns identified in public comments on the Draft EIR/EIS and to focus transportation funding where the need is the greatest, between I-215 and SR-79.

 Table 5.I:

 Summary of Alternatives Withdrawn from Further Study

Alternative	Description	Comment
	southern alignment through the City of	
	Perris along Rider Street.	
9	Provide a four- to six-lane controlled-	This alternative was eliminated
Far South/	access parkway south of both Lake	in 2009 to address the concerns
Placentia	Mathews and Mead Valley and a six- to	identified in public comments on
Avenue	eight-lane controlled-access parkway	the Draft EIR/EIS and to focus
Alternative	between Old Elsinore Road and I-215	transportation funding where the
	and a six- to eight-lane controlled-access	need is the greatest, between
	parkway between I-215 and SR-79.	I-215 and SR-79.

 Table 5.I:

 Summary of Alternatives Withdrawn from Further Study

#### ii. Rejected Environmental Site Avoidance Design Variations

No alternatives or design variations have been rejected due to environmental concerns.

# 6. CONSIDERATIONS REQUIRING DISCUSSION

#### A. Hazardous Waste

A Hazardous Waste Initial Site Assessment (ISA) was prepared for the project (LSA, July 2011) to determine whether construction of the proposed project could be affected by any recorded or visible hazardous waste problems and to recommend any additional work that may be needed. Releases of hazardous substances occurred in the vicinity of the project.

Historically, groundwater in the vicinity has been encountered between 20 and 350 feet below ground surface (bgs).<sup>7</sup> Six hazardous spill incidents have been recorded as occurring within the project footprint; these consist of five geocoded sites and one non-geocoded site.<sup>8</sup> None of the spill and/or release cases within the project footprint has affected area groundwater and/or is currently within remediation. Three leaking underground storage tank (LUST) sites have affected groundwater in the vicinity and are currently undergoing various stages of remediation. They are identified as Nandina Liquor store-Texaco gas station, Nuevo AM/PM, and U.S. Army Camp Haan (Former) Site Y. March Air Reserve Base (MARB) has also been identified as a source of extensive groundwater contamination and a National Priorities List site and is undergoing remediation. Due to the proximity of these sites to the project R/W, and as dewatering may occur during construction of the proposed project.

Based on the governmental records database search, site survey, and aerial photograph review, several measures are recommended, which apply the project. A Site

<sup>&</sup>lt;sup>7</sup> Water Quality Assessment Report for Mid County Parkway. August 2011.

<sup>&</sup>lt;sup>8</sup> Non-geocoded sites are sites where missing or inaccurate information has been provided by the reporting agency or where insufficient information prevents the proper placement of a site on a given map.

Investigation (SI) will be conducted for hazardous materials sites identified in the ISA that are within the right of way of the project.

- Prior to construction, prepare a site-specific Health and Safety Plan consistent with Caltrans requirements.
- SIs for any automotive or industrial uses will be coordinated with the Riverside County Department of Environmental Health (RCDEH). SIs for any clandestine drug lab locations will be coordinated with the RCDEH, Department of Toxic Substances Control (DTSC), and law enforcement agencies.
- Soil sampling will be conducted for aerially deposited lead (ADL) in unpaved locations adjacent to existing highway right of way within the project limits, if not previously tested.
- A certified consultant will conduct asbestos, lead-based paint (LBP), and polychlorinated biphenyl (PCB) surveys of building structures that will be renovated or demolished as part of the proposed project.
- Utility pole-mounted transformers within the project area will be inspected for leaks.
- Unless documentation from the utility company indicates that creosote was not used, all wooden utility poles that are to be removed or relocated as part of the proposed project as well as those soils located at the bases of these utility poles will be handled for treated wood waste in accordance with Caltrans SSP 14-11.09 "Treated Wood Waste" during PS&E or prior to construction.
- Notify and ensure that utility owners mark the locations of underground transmission lines and facilities; call the Underground Service Alert of Southern California at 811 at least 2 working days prior to subsurface excavation.
- Any yellow traffic striping and pavement-marking material will be tested and removed in accordance with Caltrans Standard Special Provisions.
- Prior to construction, determine whether removal of groundwater will be required during construction of the project. Any dewatering will require coordination with the Riverside County Department of Environmental Health, the DTSC regarding removal and disposal of groundwater, and the Department of Defense. The RCTC Project Engineer will provide the RCTC Resident Engineer and the Construction Contractor with the Waste Discharge Identification Number or a copy of an individual permit (as applicable) issued by the Regional Water Quality Control Board (RWQCB) prior to construction. During all disturbance, excavation, and drilling requiring groundwater dewatering, the RCTC Resident Engineer will require the Construction Contractor to collect any extracted groundwater and dispose of that water consistent with the requirements of the Waste Discharge Identification Number or the individual RWQCB permit.
- Soils adjacent to the BNSF railroad tracks that will be disturbed during construction of the project will be sampled for petroleum hydrocarbons, metals, and solvents at a minimum to determine whether they require special handling and disposal.

- Soil sampling for pesticides in former or current agricultural properties will be conducted where soil has not been disturbed (through grading, etc.) if these areas will be disturbed by the project.
- Any demolition or renovation of a structure requires notification and submittal of fees to the South Coast Air Quality Management District (SCAQMD) at least 10 days prior to proceeding with the demolition work (refer to SCAQMD Rule 1403). Contractors will adhere to the requirements of SCAQMD Rule 1403 during renovation/demolition activities.
- If suspect hazardous waste or underground tanks are encountered during construction, the contractor will stop work and follow the procedures in Caltrans Unknown Hazards Procedures for Construction.

Details of these recommendations are available in the ISA.

During preparation of the ISA for the project, RCTC requested that Preliminary Site Investigations (PSIs) be completed after the environmental studies stage. The basis for this request is that there is a long lead time for a project of this scale; thus, any PSIs conducted now may be outdated by the time the PS&E phase commences. Caltrans accepted this approach and approved the ISA in July 2011. Consistent with the American Society for Testing and Materials (ASTM) requirements, RCTC will update the approved ISA no later than 180 days prior to property acquisition to ensure no additional Recognized Environmental Concerns (REC) are present.

#### B. Value Analysis and Original Build Alternatives Refinement Process

Since the Notice of Intent/Notice of Preparation (NOI/NOP) was issued, Caltrans conducted a total of four Value Analysis (VA) Studies in 2004-2006, on the original project, to determine whether there were additional alignment refinements that could more effectively and efficiently meet the project Purpose and Need. As a result of the VA Study, new information became available with regard to the practicability of some of the alternative alignments, as well as opportunities to further avoid or minimize adverse environmental impacts to existing habitat reserves, Section 404 and Section 4(f) resources, and existing communities.

In addition, during this same period, the MCP engineering and environmental project team conducted engineering studies, environmental studies, fieldwork, public scoping meetings, and traffic modeling for the MCP. Based on these studies and results from the VA Studies, the Small Working Group (SWG) considered and approved the refined set of alternatives to be evaluated in the Draft EIR/ Draft EIS in 2008, later to be modified, approved and evaluated in the RDEIR/SDEIS in 2013. As described earlier in Section 5.B, the revised suite of alternatives eliminated two alternatives (Alternatives 2 and 3) that included a facility north of Lake Mathews and rerouted a segment of Alternatives 4 and 6 away from the Perris Dam due to engineering feasibility issues. The approved revised suite of alternatives also renumbered Alternative 8 to Alternative 1B (No

Action/No Project General Plan Circulation Element conditions) and added Alternative 9, the Far South Alternative. In 2009, the original project limits were modified to focus on the transportation needs from I-215 to SR-79. Alternatives 4, 5, 6, 7, and 9 were eliminated from further consideration based on the comments on the 2008 Draft EIR/EIS. In June 2009, RCTC took action to Alternatives 4, 5, and 9 to create a modified version referred to as Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified focusing on a 16-mile MCP project from I-215 to SR-79. Specific considerations in the alternatives refinement process are discussed below.

#### i. Value Analysis Study Results and Constraints Considered

This Project Report is the final version of the Revised Draft Project Report signed in January 2013 for the modified 16-mile Mid County Parkway project that supported the RDEIR/SDEIS released in 2013. The Revised Draft Project Report and RDEIR/SDEIS are the revised version of the original Draft Project Report signed in October 2008 for a 32-mile Mid County Parkway that supported the DEIR/DEIS released in 2008.

The VA Studies for the MCP alternatives were conducted by Caltrans District 8 as part of the original Draft Project Report and DEIR/DEIS process (2005 to 2008). The VA Study objectives were to identify alternatives that would maintain or improve MCP performance, reduce costs if possible, and minimize impacts to local agency land use plans, including local circulation access. The MCP VA mainline study complemented earlier VA studies that focused on the configuration of the MCP connections at SR-79, I-215, and I-15.

The VA Study process resulted in the generation of multiple alternative alignments that were presented to Caltrans, RCTC, the Cities, the County, and the SWG for consideration. Some of these alternative alignments offered advantages with regard to transportation and safety concerns, as well as the avoidance and/or minimization of impacts to the natural and built environments. Some of the specific resources and constraints that were addressed through the VA process and led to refinement of alternatives included the following.

**Engineering Constraints (Dams).** Two of the initial alternatives (Alternatives 2 and 3) included a facility north of Lake Mathews in close proximity to Lake Mathews Dam, and three of the initial alternatives (Alternatives 2, 4, and 6) included a facility along the existing Ramona Expressway in close proximity to Perris Dam. Lake Mathews Dam is owned and operated by Metropolitan and the Perris Dam is owned and operated by the State Department of Water Resources, with Metropolitan as the principal user of water from Lake Perris. For the alternatives in close proximity to Lake Mathews Dam and Lake Perris Dam, the VA team determined that it was prudent to consider other alternatives that would fully avoid close proximity to the dams given the engineering and safety constraints related to the two dams as described below.

The Department of Water Resources, Division of Safety and Dams, regulates the safety and integrity of dams in California. There are several constraints in the area adjacent to Perris Dam including Metropolitan facilities (pipeline, tunnels, and power plant) and Department of Water Resources (DWR) emergency facilities. The VA team developed a revised alignment for Alternatives 2, 4, and 6 to avoid the area adjacent to Perris Dam that also attempted to minimize community impacts in the City of Perris. The alignment proposed by the VA team extends west from Antelope Road, west along the South Perris alignment to the Perris Drain, north past Evans Road and parallel to and west of the Perris Drain, then turns west and joins the North Perris alignment before Perris Boulevard (at Perry Street). The advantages of this alignment include full avoidance of Perris Dam; however, one disadvantage is that it would require flood control improvements as part of the MCP to locate the facility outside the Perris Drain floodway or placing the facility on a structure to avoid impacts to the floodway. Consultation with the Riverside County Flood Control District (RCFCD) regarding the feasibility of a flood control project, resulted in the decision to study constructing the alternative on an elevated structure (such as a viaduct) to avoid the floodway.

Preceding and concurrent with the VA process, RCTC and the MCP project team consulted with the Metropolitan engineering staff and the State. The discussions focused on safety issues with regard to excavation, construction activities, and ultimate operation of a major transportation facility in proximity to the major dam structure, Perris Dam. In a letter dated May 13, 2005 (see J-1 to J-3 in Attachment J, Agency Letters), Metropolitan specified that excavation for the MCP facility could not take place within 1,000 feet of the Lake Mathews Dam abutment (Lake Mathews Dike No. 1). In letters dated June 8, 2005, and August 19, 2005 (see Figures J-4 and J-5 in Attachment J, Agency Letters), DWR expressed similar concerns regarding the potential impacts of a major transportation facility adjacent to Perris Dam, with specific concerns regarding the recent DWR seismic stability analysis, adjacent wildlife areas, and the need to maintain access to emergency outlet structures and a seepage collection system at the base of the dam. DWR requested that RCTC not move forward with the North Perris alignment in this location due to impacts to existing facilities and the need to maintain R/W for possible repair operations.

Given the discussed engineering and safety constraints, Alternatives 2 and 3 were removed from further consideration due to proximity to Lake Mathews Dam and Alternatives 4 and 6 were revised to be located away from the Perris Dam.

**Local Traffic Circulation.** The VA team evaluated the need to maintain parallel westeast access through the study area to accommodate local west-east traffic movement, especially through the Mead Valley area. The specific traffic concern identified by the VA Team was that Alternatives 4, 5, 6, and 7, parkway alternatives on Cajalco Road, would eliminate a major west-east thoroughfare for local traffic in Mead Valley. Although the County of Riverside Transportation staff identified long-term opportunities for the development of parallel access as provided for in the General Plan Circulation Element, the VA team also considered this concern in the development of other possible MCP alternatives. This discussion supported adding an alternative that did not eliminate Cajalco Road. Alternative 9 was added to the suite of alternatives. Alternative 9 was located approximately two miles south of Cajalco Road; therefore, existing Cajalco Road would remain in place and could continue to accommodate local west-east traffic movement.

**Other constraints considered in the Area East of Warren Road to SR-79.** The original alignment located the MCP alignment just north of the existing Ramona Expressway. Through the VA process, a second alignment was proposed in this area where the MCP to SR-79 alignment parallels the Colorado River Aqueduct (CRA) and is located between Ramona Expressway and adjacent to the CRA. This design variation alignment was proposed to better fit with planned land uses as designated in the City of San Jacinto General Plan, optimize the interchange configuration at SR-79, and move the alignment farther from the San Jacinto River and floodplain. This variation became part of the main alternative alignment and the original alignment in this area became the design variation for this area (San Jacinto North Design Variation).

#### ii. Other Alternatives Refinement

**Reorganization of the No Project/No Action Alternatives.** As a result of discussions with the SWG, the No Build Alternative 8 was renumbered to Alternative 1B and No Build Alternative 1 renumbered to 1A. The SWG identified two No Project/No Action Alternatives as described in the November 2004 NOI and NOP. Alternative 1 was represented by projected 2035 traffic on the planned street network with the exception of Cajalco Road and the Ramona Expressway, which would remain as they exist today.<sup>9</sup> Alternative 8 was described as full implementation of the County's General Plan Circulation Element street network, including the planned improvements to Cajalco Road and the Ramona Expressway. Both these alternatives are considered "No Action" alternatives for RCTC, FHWA, and Caltrans as they reflect conditions that would occur without the MCP. Therefore, to clarify the status of these alternatives as No Action alternatives, they were renumbered as Alternatives 1A and 1B and titled "No Action/No Project—Existing Ground Conditions" and "No Action/No Project—Existing Ground Conditions," respectively, as follows:

Alternative 1A (originally Alternative 1): No Project/No Action—Existing Ground Conditions

Alternative 1A is the CEQA No Project Alternative comparing the proposed MCP project to existing conditions ("plan to ground" comparison) and 2040 traffic on

<sup>&</sup>lt;sup>9</sup> The planned street network includes improvements in the 2003 Riverside County General Plan, Circulation Element.

the planned street network except for Ramona Expressway, which would remain as it exists today.

• Alternative 1B (originally Alternative 8): No Project/No Action—General Plan Circulation Element Conditions

Alternative 1B is the NEPA No Action Alternative including foreseeable future actions and 2040 traffic on the planned street network according to the Circulation Element of the Riverside County General Plan.

As a result, there is no Alternative 8 under consideration for this project and the No Build Alternatives are listed as Alternatives 1A and 1B, as discussed above.

## C. Resource Conservation

Features proposed affecting energy requirements and energy use efficiencies for various stages of construction, operation and maintenance include the construction techniques and design features. Existing fill slopes will be left in place wherever possible.

Measures proposed to minimize the consumption, destruction and disposal of nonrenewable resources include recycling of pavement and salvaging existing materials. Pavement recycling will be considered and specified in the project's Special Provisions where applicable. The contractor will have the option of recycling the existing asphalt concrete (AC) pavement for use on the project or stockpiling the removed AC for future use as a base material. If economically available and feasible, the contractor will have the option to utilize State-owned salvaged AC materials. In addition, items such as guardrails, light standards, and signs will be salvaged or relocated wherever possible.

## D. Right of Way Issues

Right of way acquisition costs account for approximately 14% of the total project costs. R/W impacts for the project are as follows: (1) outdoor advertisement signs, (2) dairies, (3) gas stations, (4) retail improvements, (5) utility substations, (6) sod farms, (7) singlefamily residences (SFRs), (8) mobile homes, (9) proposed residential tract development, and (10) industrial/manufacturing facilities.

Right of way spreadsheets for the build alternative detailing individual parcels have been submitted to Caltrans Right of Way staff for internal review and are not a part of this report due to the confidentiality of the information submitted.

Impact Type	Alt 9 Modified with SJRB DV
Number of Partial Acquisition (Fee)	239
Number of "Full Takes" (Fee)	199
Number of Anticipated Permanent Easements	TBD during PS&E

Table 6.A:Number of Parcels Affected by Project

Right of way Data Sheets for the project are provided in Attachment I. A Final Relocation Impact Report (FRIR) was prepared for this project. Proposed R/W impacts are both full and partial parcel acquisitions. Relocations will be required for the project.

## i. Right of Way Required

As noted above, various property types are affected by the project outlined in more detail in the Right of Way Data Sheets. Depending on the complexity and size, the R/W impacts are influenced and at times subordinate to the impacts from environmental and engineering design demands. Potential R/W cost impacts were considered for the project along with potential damage mitigation. Measures such as shifting the R/W line or adding retaining and sound walls were suggested to mitigate damages and impacts. These suggestions were considered in close cooperation with the engineering and environmental teams. Significant R/W cost impacts were examined for proposed new construction of improvements that would severely affect the project budget or community agencies. These included regional and national distribution warehouses, major housing developments, and commercial and industrial work centers. Attempts are made for avoidance of existing and proposed public facilities such as schools, parks, public safety, service facilities, and environmentally sensitive areas. Utility impacts have similar scrutiny.

## ii. Relocation Impact Studies

A Draft Relocation Impact Report (DRIR; December 2011) was prepared for all the build alternatives to determine potential property acquisitions. The DRIR covered a wide area due to the size of the project and examined the current and future impacts of the project related to relocation of residential, commercial, and industrial uses. An updated Final Relocation Impact Report was prepared in November 2014 for the project. Below is a summary table of the number of potential full acquisitions for the project. As shown in Table 6.B, while the project would result in acquisitions, due to the rapid growth of the areas and availability of vacant land and existing relocation facilities, it was determined that there was an adequate supply of relocation stock available to handle the displacements without going outside of the communities or constructing new housing.

Full Parcel Acquisitions	Alternative 9 Modified with SJRB DV
Residential acquisitions	99
Nonresidential acquisitions	100
Total Full Acquisitions	199

Table 6.B: Project Full Parcel Acquisitions

Source: Final Relocation Impact Report, November 2014.

#### iii. Airspace Lease Areas

Based upon the preliminary nature of the design, there does not appear to be any significant potential for future airspace leases at this time. Once the project is completed, the project agency and its engineering, environmental, R/W, and traffic safety teams will review any potential excess land for possible airspace leases. Typically, airspace projects are constructed in more dense urban areas with little available vacant land for development. Airspace leases are driven by a lack of alternative sites outside of the project area. The rural portions of the transportation project generally have demands that are tied to potential cell site or communication facilities, or even traveler services or rest stops. These are limited many times by the lack of available utilities or service roads. The majority of the project traverses through rural areas except for the west portion of the project through the City of Perris. Land values along the project corridor are not high and there are sufficient undeveloped areas for private enterprise to acquire airspace lease from adjacent properties along the project corridor. The March Air Reserve Base (MARB) is located approximately 2.5 miles north of the MCP project. The MARB is currently the home to the Air Force Reserve Command's 4<sup>th</sup> Air Force Headquarters and the host to the 452d Air Mobility Wing. The MARB is also home to units from the Army Reserve, Navy Reserve, Marine Corps Reserve and the California Air National Guard. The status of the MARB should be reviewed at time of right of way purchase to make sure the use at the facility does not change conclusions on air space leases.

## E. Environmental Issues

The Final EIR/EIS has been prepared in accordance with Caltrans' environmental procedures, State and Federal environmental regulations, CEQA Guidelines Section 15088.5 and CEQ NEPA Regulation 42 CFR 1502.9 "Draft, final, and supplemental statements." The attached Final EIR/EIS is the appropriate document for the proposal and was signed on April 15, 2015.

## i. Biological Resources

A Natural Environment Study (NES) (July 31, 2008), a Supplemental NES (December 2011), a Multiple Species Habitat Conservation Plan (MSHCP) Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis (September 2014), and a Determination of Biologically Equivalent

or Superior Preservation Analysis Addendum (October 2014) were prepared for the MCP project. The project would result in direct and indirect impacts on biological resources as summarized below. Impacts within the project footprint have been calculated entirely as permanent impacts, with the exception of areas spanned by bridges that have resulted in reduced or avoided impacts. Impacts to riparian habitats and jurisdictional areas at the bridged areas have been calculated as temporary and permanent impacts (permanent impact calculations were estimated conservatively).

**Potential Impacts to Critical Habitat Areas.** The project would affect final designated critical habitat areas for San Bernardino Kangaroo Rat (SBKR) and spreading navarretia. The project would affect approximately 1.5 acres of final SBKR critical habitat and 18.6 acres of final spreading navarretia critical habitat of which 1.09 consists of primary constituent elements for the species.

**Riparian/Riverine Areas and Vernal Pools.** There will be permanent and temporary impacts to riparian/riverine areas. The project will not affect vernal pools as defined under the Western Riverside County MSHCP.

**MSHCP Plant Survey Species.** The project would affect areas of long-term conservation value for smooth tarplant, Coulter's goldfields, spreading navarretia, and San Jacinto Valley crownscale. The project would potentially affect approximately 1.09 acres of spreading navarretia occupied habitat, 2.72 acres of smooth tarplant occupied habitat, and 2.25 acres of Coulter's goldfields occupied habitat. The project would also affect 0.36 acres of San Jacinto Valley crownscale occupied habitat.

**Burrowing Owl.** Suitable burrowing owl habitat was determined to be present within the MCP Biological Study Area (BSA). A single burrowing owl was observed within the BSA. There is suitable habitat in the project footprint that burrowing owl may subsequently occupy due to the transitory nature of the species. Pre-construction presence/absence surveys for burrowing owl within suitable habitat will be conducted within 120 days and 30 days prior to ground disturbance.

**Least Bell's Vireo (LBV) and Southwestern Willow Flycatcher (SWWF).** There are 3.66 acres of occupied LBV habitat located within the project at the San Jacinto River and SR-79. The project study area will not affect SWWF breeding habitat.

Los Angeles Pocket Mouse (LAPM) and San Bernardino Kangaroo Rat (SBKR). LAPM were captured within the BSA southwest of the San Jacinto River and Lake Perris, and northeast of the San Jacinto River and Sanderson Avenue. The project will potentially affect approximately 20.85 acres of LAPM-occupied habitat suitable for longterm conservation. The Project will affect approximately 1.29 acres of occupied SBKR habitat. **Bat Species.** The project will directly impact the edges of existing bridges and larger culverts that may provide maternity roosts and foraging roosts for bat species. Those bridges and culverts will be impacted by extending the existing structures to accommodate the MCP project improvements. The existing bridges and culverts will not be removed; therefore, only a small part of bat roosting habitat may be permanently altered by the MCP Build Alternatives. Bat maternity roosts change seasonally; therefore, maternity roosting surveys will be conducted between May 1 and August 31 prior to construction at larger culverts and bridges to determine the location of active maternity roosts.

**Western Riverside County MSHCP.** The project will result in impacts to the MSHCP Conservation Area east of Lake Perris. Specifically, the project would traverse Existing Constrained Linkage C, Proposed Extension of Existing Core 4, Proposed Constrained Linkage 20, and Proposed Noncontiguous Habitat Block 5 of the MSHCP Conservation Area and would traverse Cells 2442, 2347, 2348, 2251, 2252, 2253, 2349, 2258, 2259, 2355, 2357, 2261, 2358, 2266, 2363, 2267, and 2364 within the MSHCP Conservation Area. Detailed discussion of the MCP project's effect on the MSHCP Conservation Area is presented in the report titled *Mid County Parkway MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis* (Dudek, February 2014, revised in September 2014, DBESP Addendum October 2014).

## ii. Mitigation

In order to avoid and minimize impacts to biological resources during construction of the project, the following measures, where applicable, will be implemented:

- Removal of vegetation will be confined to approved limits by erecting barrier fencing (or other appropriate means of demarcating construction limits) at project limits in the area adjacent to habitat with long-term conservation value.
- Notes will be placed on project construction plans informing contractors that areas designated with long-term conservation value outside the project footprint are environmentally sensitive and that construction activity is excluded from those areas.
- A biological monitor will ensure that disturbance outside the footprint is avoided and seasonal restrictions are observed.
- Removal of riparian vegetation prior to construction and between September 16 and February 14 will avoid the nesting season.
- Avoidance and minimization measures specified in the MSHCP Guidelines Pertaining to Urban Wildlands Interface will be followed, as applicable.

A determination of biologically equivalent or superior preservation (DBESP) as set forth in MSHCP Section 4.1 through 4.6 was prepared to ensure that mitigation for unavoidable impacts to riparian/riverine areas will be sufficient (mitigated to replace the lost functions and values as they relate to covered species).

Mitigation for permanent impacts to USACE jurisdictional non-wetland waters of the U.S. and wetlands waters of the U.S. and CDFW jurisdictional areas will be implemented at a minimum replacement ratio of 2:1. This will occur through habitat restoration and/or enhancement of on-site areas along the length of the MCP to the extent practical. If it is infeasible to mitigate entirely on site, alternative off-site mitigation, such as enhancement, creation, and restoration, would occur through coordination with USACE and CDFW. USACE/EPA wetland mitigation regulations include a stated preference for mitigation bank and in lieu fee programs over permittee-responsible mitigation, if appropriate credits are available. However, Federal policies for replacement of resource function and area in the same watershed generally take precedence over the mitigation mechanism. Therefore, mitigation for impacts to waters/wetlands will be within the San Jacinto River watershed and will be at a minimum 1:1 replacement ratio through establishment or reestablishment of both State and federal jurisdictional areas within the San Jacinto River watershed. This will mitigate for the replacement of area and function of both State and federal jurisdictional areas within the San Jacinto River watershed. The project will comply with the Federal policy to achieve "no net loss" of wetlands.

The Habitat Mitigation and Monitoring Plan (HMMP) for USACE Jurisdictional Waters (Appendix P in the Environmental Impact Report [EIR]/Environmental Impact Statement [EIS]) describes the approach and specific concepts for mitigation of impacts to waters of the United States and wetlands. This HMMP for USACE Jurisdictional Waters was prepared in coordination with the USACE, the United States Fish and Wildlife Service (USFWS) and the United States Environmental Protection Agency (USEPA). It is RCTC's intent that mitigation sites identified in the HMMP for USACE Jurisdictional Waters will also address project effects on State jurisdictional areas.

Additional mitigation to achieve the remainder of the 2:1 mitigation ratio may occur outside of the San Jacinto River watershed.

If there are any temporary impacts to USACE and/or CDFW jurisdictional areas, the RCTC Resident Engineer will require the Construction Contractor to revegetate those on site areas at a minimum 1:1 replacement ratio.

Should an in-lieu fee program for mitigating impacts to waters of the United States be developed and become available within the San Jacinto River watershed with an appropriate service area that encompasses the MCP project area, the RCTC shall consult with the USACE and the USEPA to determine if a third-party mitigation option would be preferable rather than the permittee-responsible mitigation described in the HMMP for USACE Jurisdictional Waters.

As a permittee under the Western Riverside County MSHCP, RCTC has committed to a number of measures addressing impacts of the MCP project on biological resources. Those measures are documented in the Mid County Parkway MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior

Preservation Analysis (September 2014) and the Determination of Biologically Equivalent or Superior Preservation Analysis Addendum (October 2014) provided in Appendix T in the Final EIR/EIS. RCTC will comply with the commitments in those measures throughout the design, construction, and operation of the MCP project.

Mitigation for impacts to smooth tarplant, Coulter's goldfields, spreading navarretia, San Jacinto Valley crownscale, LBV, LAPM, and SBKR will be achieved through project consistency with the MSHCP. In order for MCP to be consistent with the MSHCP, a DBESP was made because 90 percent or more of those portions of the site that provide for long-term conservation value for these species are affected, and if achievement of overall MSHCP conservation goals for the particular species has not yet been demonstrated. A DBESP (as set forth in MSHCP Sections 4.1 through 4.6) ensures that there is sufficient mitigation to provide benefits with respect to MSHCP Conservation Area design and configuration. USFWS issued a streamlined Biological Opinion on the federally listed species (San Jacinto Valley crownscale, least Bell's vireo, San Bernardino kangaroo rat, spreading navarretia, and California gnatcatcher) based on the project's consistency with the MSHCP consistency Determination and DBESP for MCP). Take of these federally listed species is authorized for MCP through the Section 10(a)(1)(B) permit for the MSHCP.

For the project to be in compliance with the MSHCP, impacts to burrowing owls within the project footprint will be mitigated by passive relocation (use of one-way doors and collapse of burrows) outside of nesting season. A pre-construction presence/absence survey for burrowing owl within suitable habitat will be conducted within 120 days prior to disturbance due to the transitory nature of the species, which may subsequently occupy the project footprint or leave the project footprint. Should any owls be found within the project footprint, any owls remaining in the Perris Valley Storm Drain portion of the project alignment or elsewhere in the construction footprint 30 days prior to construction that would be impacted by the project will be conserved through avoidance measures and relocation efforts as described in a burrowing owl relocation plan. If burrowing owls are identified during the preconstruction surveys and cannot be avoided between 60 and 90 days prior to any ground-disturbing activities, the relocation plan will be submitted to the CDFW and the Regional Conservation Authority 60–90 days prior to ground disturbing activities.

Environmental mitigation costs are included in the project cost estimate and include specific considerations for impacts to biological, aquatic, cultural, paleontological, and visual resources.

## iii. Wetlands and Flood Plains

The 2008 Jurisdictional Delineation and Assessment Report was updated in December 2013. A Preliminary Jurisdictional Determination was issued by the USACE on December 18, 2013.

Table 6.C shows the acreage of direct impacts to CDFW jurisdictional riparian habitat and streambeds, and wetlands and non-wetland waters under USACE jurisdiction.

	Impacts (acres)							
	CDFW		USACE					
			Non-Wetlands		Wetlands		Total	
	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
MCP	3.63	7.94	1.99	4.36	4.69	0.64	6.68	5.00

Table 6.C: Impacts to Wetlands and Other Jurisdictional Areas\*

\* Excludes impacts to jurisdictional areas that are within the MCP/SR-79 interchange footprint, but are wholly attributable to the SR-79 EA 494000 (PN 0800000784) realignment project (i.e., jurisdictional areas that will be impacted by the SR-79 project prior to construction of MCP).

USACE = U.S. Army Corps of Engineers

CDFW = California Department of Fish and WildlifeSJRB = San Jacinto River BridgeAlt = AlternativeDV = Design VariationMod = Modified

#### iv. Cultural Resources

A Historic Property Survey Report (HPSR) (LSA Associates, Inc., June 2012), a Supplemental HPSR (LSA Associates, Inc. July 2014), and Findings of Effect (FOE) (LSA Associates, Inc., November 2012), Memorandum of Agreement (MOA) (LSA Associates, Inc. August 2014) and Discovery and Monitoring Plan (DMP) (LSA Associates, Inc. August 2014) were prepared for the project. The documents were completed in accordance with the Section 106 Programmatic Agreement (PA) and the Caltrans Environmental Handbook, Volume 2, Cultural Resources (February 2012). As such, this project is designed to meet the requirements of reporting cultural resource investigations as required under both CEQA and 36 CFR 800 of the National Historic Preservation Act (NHPA).

The studies found that one property (Site 33-16598) in the MCP Area of Potential Effects (APE) is eligible for the National Register of Historic Places (National Register), five properties (33-3653, 33-19862, 33-19863, 33-19864, and 33-19866) are assumed eligible for the National Register for the project. Seven resources are considered Historical Resources for the purposes of CEQA (Sites 33-16598, 33-3653, 33-19862, 33-19863, 33-19864, 33-19866 and CBJ Dairy). Based on the Finding of Effect (FOE) (LSA Associates, Inc., November 2012), the MCP project will result in an adverse effect under NHPA Section 106 for Sites 33-16598, 33-19862, 33-19863, 33-19864, and 33-19866.

In order to complete Section 106/CEQA historical resources compliance, a MOA has been developed for Sites 33-16598, 33-19862, 33-19863, 33-19864, and 33-19866 to document the required mitigation measures in consultation with the Native American Tribes and the State Historic Preservation Officer (SHPO). The Native American Tribes that have been involved in consultation for the MCP project were invited to participate in

the development of the MOA for the MCP project including a DMP and a Burial Treatment Plan. A Final MOA was submitted to SHPO on September 23, 2014 and SHPO concurred on October 30, 2014. The stipulations in the MOA will be complied with throughout the PS&E and construction phases of the project.

#### v. Growth Inducement

A Community Impact Assessment (CIA) was prepared for the project (LSA Associates, Inc., January 2012). As a designated CETAP Corridor planned as part of the RCIP, one of the purposes of the project is to accommodate planned growth by providing a transportation facility that will effectively and efficiently accommodate regional west-east movement of people and goods between and through San Jacinto and Perris. Specifically, the proposed project would provide increased capacity to support the forecast travel demand generated by planned land uses for the 2040 design year.

The growth analysis conducted for the MCP project concluded that implementation of the proposed MCP project is expected to have little influence on location, amount, rate, or type of growth in the area. The basis for this conclusion is threefold:

- (1) The area has undergone rapid development since well before the MCP project planning (and prior to CETAP corridor planning) had begun.
- (2) The MCP project has been integrated into the overall planning of the area based on the inclusion of the CETAP corridor overlay in the Riverside County General Plan Circulation Element.
- (3) Based on RCTC monthly review meetings with local land use authorities, there has been no indication of developers intensifying or substantially modifying their development proposals in response to the proposed MCP project.

Therefore, the MCP project will meet the purpose and need of the project to accommodate regional west-east movement of people and goods without resulting in adverse growth-related effects due to unplanned growth within the study area.

#### vi. Noise

A Vehicular Traffic Noise Impact Analysis was prepared for the project (LSA Associates, Inc., January 2012). Short-term noise levels were measured at 63 representative locations to document the existing noise environment. Twenty-five out of the 63 short-term noise level measurements were used to calibrate the noise prediction model with concurrent traffic counts and measured vehicle speeds. No calibration factors for the remaining 38 short-term noise level measurements were applied to the monitoring locations due to one or more of the following reasons: no existing roadways, very little traffic volumes or slow travel speeds identified during the noise monitoring work, or substantially altered alignments and profiles of an existing highway under 2040 build conditions.

A total of 355 receptors were modeled and evaluated for potential noise impacts resulting from vehicular traffic for the project. The results of the existing and the predicted future worst-case noise levels are shown in Noise Study Report (LSA Associates, Inc., January 2012). When traffic noise impacts were identified, noise abatement measures were considered.

Traffic noise impacts result from one or both of the following occurrences: (1) an increase of 12 dB or more over existing noise levels; or (2) predicted noise levels approach or exceed the Noise Abatement Criteria (NAC).

Implementation of the project Variation would result in potential short-term noise impacts during construction and long-term noise impacts from use of the completed project. Of the 355 modeled receptors under the project traffic noise conditions, 66 receptors approach or exceed the 67 dBA  $L_{eq}$  NAC, and 150 receptors would experience a substantial increase in noise of 12 dB or more over their corresponding modeled existing noise level for Activity Categories B and C.

Noise abatement measures were evaluated for frequent outdoor use areas within the project limits that would be or would continue to be exposed to traffic noise levels approaching or exceeding the NAC or would experience a substantial noise increase of 12 dB over their corresponding modeled existing noise level. A total of 23 of 24 noise barriers evaluated for the project were capable of reducing noise levels by 5 dB or more as required to be considered feasible. Two or three combined barriers that are evaluated to shield the same group of impacted receptors are counted as one barrier because they overlap one another. Noise Barrier Alt9-NB-4 was determined to be not feasible because they would not reduce noise levels by 5 dB or more. The overall reasonableness of noise abatement for each noise barrier is determined by considering a minimum noise reduction of 7 dB for at least one of the benefited receptor locations based on the Traffic Noise Analysis Protocol (Caltrans 2011). Noise barriers Alt9-NB-29 could provide a 7 dB insertion loss to satisfy the design goal with a barrier of 18 ft. Noise barriers Alt9-NB-52/53/54 was determined to be not reasonable because it would not reduce noise levels by 7 dB or more for at least one of the benefited receptor locations. Detailed information on noise barriers are provided in Tables C-1 through C-8 of the Noise Study Report (LSA Associates, Inc., January 2012).

## F. Air Quality Conformity

An Air Quality Analysis for the project was prepared (LSA Associates, Inc., March 2012). The proposed project will help to improve traffic flow and reduce congestion on roadway links in the project vicinity. The project is located in an attainment/maintenance area for Federal carbon monoxide (CO) standards. Using the Caltrans Transportation Project-Level Carbon Monoxide Protocol, a screening analysis was conducted to determine whether the proposed project would result in any CO hot spots. It was determined that the proposed project will not result in any exceedances of the one-hour or eight-hour CO standards.

The proposed project is within a nonattainment area for federal standards for particulate matter (PM) less than 2.5 microns ( $PM_{2.5}$ ) and within a federal attainment/maintenance area for PM less than 10 microns ( $PM_{10}$ ) in size. Therefore, per 40 Code of Federal Regulations (CFR) Part 93, PM analyses are required for conformity purposes. However, the Environmental Protection Agency (EPA) does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. As the MCP project will be constructing a new roadway, it is potentially a project of air quality concern. A detailed  $PM_{2.5}$  and  $PM_{10}$  hot-spot analysis was submitted to and reviewed by the Transportation Conformity Working Group (TCWG) on June 14, 2011, and June 28, 2011, respectively. This project was approved and concurred upon by Interagency Consultation by the TCWG as a project not having adverse impacts on air quality and that meets the requirements of the CAA and 40 CFR 93.116.

Compliance with South Coast Air Quality Management District (SCAQMD) Rules and regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. To reduce fugitive dust emissions, the construction contractor shall adhere to the requirements of SCAQMD Rule 403. The Best Available Control Measures (BACM) specified in SCAQMD Rule 403 shall be incorporated into the project construction. Because the proposed highway construction project does not generate new regional vehicular trips, no new regional vehicular emissions would occur as a result of project operation.

The MCP project is listed in the 2012 RTP ISCS Amendment No.1, which was found to conform to the State Implementation Plan (SIP) by the Southern California Association of Governments (SCAG) on June 6, 2013, and the FHWA and the Federal Transit Administration (FTA) made a regional conformity finding on July 15, 2013. The project is also included in the financially constrained 2015 Federal Transportation Improvement Program (FTIP) (Project ID: RIV031218). The 2015 FTIP was determined to conform to the SIP by the FHWA and the FTA on December 15, 2014. Regional PM<sub>10</sub> State Implementation Plan (SIP) budget compliance was accounted for during the currently approved RTP and FTIP conformity determination. Therefore, as the proposed project is consistent with the FTIP description, it is in conformance with the SIP.

## G. Title VI Considerations

A Community Impact Assessment (CIA) (LSA, January 2012) and a Final Relocation Impact Report (FRIR) (Epic, November 2014) were prepared for the proposed modified project. The project will involve the construction of a new highway through communities within the City of Perris that have a higher number of minority groups, a higher number of persons below the poverty line, and lower median income than the County and the cities within the study area. The establishment of a facility will result in a large number of property acquisitions, temporary construction detours, temporary air quality impacts, permanent noise impacts, permanent aesthetic impacts, and temporary and permanent changes in travel patterns throughout the study area, including the Perris area.

Impacts to minority and low-income populations will be avoided or minimized through a variety of measures. Air quality impacts would be avoided or minimized by adhering to SCAQMD rules and regulations and to Caltrans Standard Construction Specifications for equipment emissions and fugitive dust. Temporary noise impacts would be avoided or minimized through implementation of Caltrans Standard Construction Specifications for noise. Long-term noise impacts would be minimized by implementing abatement measures such as noise barrier construction. These barriers reduce noise levels to within noise abatement criteria, an improvement in many cases over existing and future No Build conditions. For property acquisitions, standard relocation assistance will be provided to all displacees, in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. As indicated in the Final Relocation Impact Report (2014), there is adequate replacement housing for those residents being displaced. Appropriate signage and detours for both pedestrian and vehicular traffic will reduce impacts to access and circulation.

The project is not considered to have disproportionate impacts to environmental justice populations because measures such as depressing the alignment below grade and providing a local roadway connections across the new freeway would help maintain the cohesiveness of this community. Also, there is an ample supply of existing housing stock in the immediate area that will facilitate the ability to relocate residents within their existing communities.

# 7. OTHER CONSIDERATIONS AS APPROPRIATE

## A. Public Hearing Process

In January 2013, after approval of the Revised Draft Project Report, the Recirculated Draft EIR/Supplemental Draft EIS was circulated to the public. A public hearing to present the developed viable alternatives for public comment was held within the 45 day public review period and 57 people attended. A public hearing is recommended after the approval of this document.

## B. Route Matters

RCTC anticipates recommending the MCP facility for route adoption as a new State Route alignment on or near Ramona Expressway. Upon adoption of MCP as a state route, SR-74 from generally the same limits as MCP (from I-215 to SR-79) may be relinquished to the local agencies, subject to a future, formal agreement. The relinquishment would be an action of CTC resolution. SR-74 is an existing, west-east state highway located approximately 6 miles south of MCP.

This proposal is a Category 1 project (see Attachment AA-2, Project Category Assignment Memorandum) as defined in the Project Development Procedures Manual

(7<sup>th</sup> Edition, Chapter 8, and Section 5) requiring access control, new alignment, new R/W, and adoption of a new route by the California Transportation Commission (CTC).

## C. Permits

The project meets the thresholds required for consideration in the NEPA/Section 404 integration process. Pursuant to the NEPA/Section 404 Memorandum of Understanding (MOU), the resource agencies each participated in the project development process at an appropriate level depending on the quality and quantity of the resource involved. Checkpoint meetings were held when it was time to make a checkpoint decision. Caltrans on behalf of RCTC and FHWA transmitted the appropriate checkpoint decision items to the resource agencies for agree/disagree, comment/no comment, and concur/non-concur and sent the checkpoint closure letters as defined in the MOU. A Section 408 permit from the USACE is not required for the project.

The permits, reviews, and approvals listed in Table 7.A are anticipated to be required for the proposed MCP project:

Agency	Permit/Approval	Status/Timeline
U.S. Fish and Wildlife Service (USFWS)	<ul> <li>Section 7 consultation for Threatened and Endangered Species</li> <li>Review Riverside County Transportation Commission (RCTC) Multiple Species Habitat Conservation Plan (MSHCP) Consistency Determination</li> <li>Concurrence on Determination of Biologically Equivalent or Superior Preservation (DBESP)</li> </ul>	<ol> <li>The USFWS issued the Biological Opinion on February 11, 2015.</li> <li>The MSHCP Consistency Determination and DBESP were reviewed by USFWS, and the DBESP was concurred on November 14, 2014.</li> </ol>
U.S. Army Corps of Engineers (USACE)	<ul> <li>Section 404 Permit for the discharge of dredged or fill material into waters of the United States; a Section 408 permit will not be required.</li> </ul>	Application was submitted by RCTC to USACE on February 11, 2015. USACE approval will occur after FHWA approves the Record of Decision (ROD), and USACE will issue its own ROD for the permit decision based on the Final EIR/EIS.
California Department of Fish and Wildlife (CDFW)	<ul> <li>Section 1602 Lake and Streambed Alteration Agreement</li> <li>Review RCTC's MSHCP Consistency Determination</li> <li>Concurrence on DBESP</li> </ul>	<ol> <li>Section 1602 Notification is to be submitted and agreement obtained prior to the start of construction.</li> <li>The MSHCP Consistency Determination and DBESP were reviewed by CDFW, and the DBESP was concurred on November 14, 2014.</li> </ol>

Table 7.A:Permits and Approvals Needed

Agency	Permit/Approval	Status/Timeline		
California Department of Transportation (Caltrans) District 8	<ul> <li>Route Adoption</li> <li>Freeway Agreements with County of Riverside, Cities of Perris and San Jacinto</li> <li>Construction Encroachment Permit</li> <li>Freeway Maintenance Agreement</li> <li>PS&amp;E and Construction Cooperative</li> </ul>	<ol> <li>RCTC will submit a request to Caltrans for Route Adoption prior to the MCP project being operational.</li> <li>Freeway Agreements would be executed following Route Adoption</li> <li>Construction Encroachment Permit will be obtained prior to start of construction.</li> <li>Freeway Maintenance Agreement will be executed following Route Adoption.</li> <li>PS&amp;E and Construction Cooperative Agreement will be executed prior to start of PS&amp;E and construction, respectively.</li> </ol>		
State Water Resources Control Board (SWRCB)	<ul> <li>Water Discharge Permit, approval of Notice of Intent to comply with General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit.</li> </ul>	Application to be submitted prior to construction.		
Western Riverside County Regional Conservation Authority (RCA)	<ul> <li>Concur on and approve RCTC's MSHCP Consistency Determination</li> <li>Concur on and approve RCTC's DBESP</li> <li>Concur on and approve RCTC's Public/ Quasi-Public Equivalency Determination (per MSHCP, Section 3.2.1)</li> </ul>	The MSHCP Consistency Determination, DBESP, and Public/ Quasi-Public Equivalency Determination were concurred on August 20, 2014 by RCA.		
Region 8, Santa Ana Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality certification	Application to be submitted following FHWA Record of Decision.		
County of Riverside, City of Perris and City of San Jacinto	<ul> <li>Freeway Agreement with Caltrans should the project be adopted as a State Highway by the California Transportation Commission (CTC)</li> <li>Approval of encroachment permits and street construction permits, street closures and re-routing, and associated improvements in the public right of way</li> <li>General Plan Amendment</li> </ul>	Actions/permits would be issued prior to start of construction.		
Riverside County Flood Control and Water Conservation District (RCFCD)	<ul> <li>Encroachment permits and/or cooperative agreements for improvements in District Rights of Way or easements affecting RCFCD facilities</li> </ul>	Application(s) to be submitted prior to construction.		
Riverside County Environmental Health Department and California Department of Transportation (Caltrans)	<ul> <li>Aboveground Storage Tank (AST)/Underground Storage Tank (UST)Permits</li> <li>Caltrans Statewide permit (Order No. 99- 06-DWQ), NPDES NO. CAS000003</li> </ul>	Permit to be requested if project acquires parcels with ASTs or USTs on site.		
State Historic Preservation Officer (SHPO)	<ul> <li>Approval of a Memorandum of Agreement (MOA) with FHWA</li> </ul>	SHPO approval of the MOA occurred on October 30, 2014.		

# Table 7.A:Permits and Approvals Needed

Agency	Permit/Approval	Status/Timeline		
Interested Native American Tribes	<ul> <li>Required consultation under Section 106 of the National Historic Preservation Act (NHPA) on the overall project cultural work, including (but not limited to) determinations of eligibility, findings of effect, and future work that includes involvement with the MOA, Archaeological Monitoring Plan, and Data Recovery Plan.</li> </ul>	Native American consultation for the MCP is ongoing and will continue through project design and construction as described in the MOA.		
Utilities	<ul> <li>Approvals to relocate, protect in place, or remove utility facilities</li> </ul>	Prior to any construction activities that would affect utility facilities.		
Burlington Northern Santa Fe (BNSF) Railroad Company	<ul> <li>Memorandum of Understanding and a Construction and Maintenance Agreement between RCTC and BNSF</li> <li>Approval of the proposed action, based on review of the Construction and Maintenance Agreement between RCTC and BNSF.</li> </ul>	Prior to any construction within or above railroad right of way.		
California Public Utilities Commission (CPUC)	<ul> <li>General Order 131-D for relocation of electrical transmission lines between 50 to 200 kilowatts</li> <li>Certificate of Public Convenience and Necessity for relocations to electrical transmission lines and gas lines</li> </ul>	<ol> <li>Prior to any construction within or above railroad right of way.</li> <li>After certification of EIR/EIS and the filing of a Notice of Determination to complete the CEQA process.</li> </ol>		

Table 7.A:Permits and Approvals Needed

In addition, the FEIR/FEIS may be used by Responsible Agencies under CEQA for related discretionary actions, including General Plan Circulation and Land Use Element Amendments by the County of Riverside, City of Perris, and City of San Jacinto.

## D. Cooperative Agreements

It is anticipated that a Cooperative Agreement between Caltrans and RCTC will be needed for the PS&E/Right of Way and Construction phases of the project.

## E. Other Agreements

If the MCP becomes a new state freeway, New Freeway Agreements will be required with the City of Perris, City of San Jacinto and County of Riverside for their respective jurisdictions along the MCP. Superseding Freeway Agreements will be required with the City of Perris and the County of Riverside for the new interchanges of MCP and Placentia Avenue on I-215 and for the modification of the Ramona Expressway/Cajalco Road interchange. If the SR-79 becomes a freeway, it would cover the MCP/SR-79 interchange in the Freeway Agreement with the City of San Jacinto.

If the MCP is adopted as a state route, a Freeway Maintenance Agreement will be needed with the City of Perris, City of San Jacinto and County of Riverside. A construction and maintenance agreement with BNSF will be needed for the widening of the Placentia Overhead Bridge and the Cajalco Overhead Bridge. A maintenance agreement for shared R/W with Metropolitan Water District will also be needed.

## F. Navigable Rivers

None of the alternatives considered would require construction of a new bridge over a navigable river and thus would not disrupt public access to any navigable river.

## G. Public Boat Ramps

The project is located adjacent to the Lake Perris Park. The park contains public boat ramps. The existing access at Bernasconi Road will be replaced with a service interchange at the same location. During construction, activities will be coordinated with the Park so as not to impact access to the public boat ramps.

## H. Transportation Management Plan for Use During Construction

## Overview:

The Transportation Management Plans (TMPs) will employ the following strategies to mitigate the traffic impact during construction to the region: a Public Information/Public Awareness Campaign (PAC), Traveler Information Strategies, Incident Management, Construction Strategies, Demand Management (DM), Alternate Route Strategies and other strategies. See K-1 to K-6, Attachment K, Transportation Management Plan Data Sheets.

According to Deputy Directive DD-60-R1, the policy objective for creating the TMP is to minimize motorist delays when implementing projects or performing other activities on the California State highway and freeway systems. This should be accomplished without compromising public or worker safety or the quality of the work being performed.

TMPs, including contingency plans, are required for all construction, maintenance, encroachment permits, planned emergency restoration, locally or specially-funded, or other activities on the State highway system. Where several consecutive or linking projects or activities within a region or corridor create a cumulative need for a TMP, Caltrans coordinates individual TMPs or develops a single interregional TMP. TMPs are considered during the project initiation or planning stage.

A TMP will be implemented for the project in a cost-efficient and timely manner with minimal interference to the traveling public. The TMP, when implemented, results in minimized project-related traffic delay and accidents by the effective application of traditional traffic mitigation strategies and innovative combinations of public and motorist information, demand management, incident management, system management, alternate route strategies, construction strategies, and other strategies.

The following construction impacts are anticipated for the project:
### I-215 and Mainline Area

- It is anticipated that traffic will be maintained in both directions along I-215 as MCP connections are made and as the median lanes are added. However, over the course of construction, a total of 40 nighttime temporary lane closures are anticipated on I-215 for restriping and the placement of temporary railing.
- It is anticipated that the existing ramps at Ramona Expressway will be temporarily closed for 12 nights for restriping to accommodate the construction of the new ramps.
- It is anticipated that 12 nighttime temporary lane closures on Placentia Avenue will be required for construction of the new ramps at Placentia Avenue.
- It is anticipated that Placentia Avenue will be reduced to one lane in each direction at I-215 for 180 days during construction for widening of the existing I-215 overcrossing and widening of the existing railroad overhead west of I-215.
- It is anticipated that Cajalco Road/Ramona Expressway will be reduced to one lane in each direction west of I-215 for 180 days during construction for widening of the existing railroad overhead and tieback walls.
- It is anticipated that East Frontage Road will be temporarily closed for 60 days for reconstruction from Orange Avenue to West Morgan Street.
- It is anticipated that Nevada Avenue will be temporarily closed for 40 days for reconstruction north and south of Ramona Expressway.
- It is anticipated that Indian Street will remain open as the mainline bridge structure is constructed over Indian Street. However, construction false work and restriping may require nighttime closures for 12 nights and reduction in lanes for 180 days.
- It is anticipated that Placentia Avenue will be temporarily closed for the construction of the proposed overcrossings at the MCP (west of Redlands Avenue) for approximately 160 days. The detour will use Harvill Avenue and Ramona Expressway.
- It is anticipated that Perris Boulevard will be temporarily closed, from Placentia Avenue to Gallant Fox Road, for approximately 160 days to construct the proposed Perris Boulevard overcrossing. The detour will use Redlands Avenue.
- It is anticipated that Redlands Avenue will be temporarily closed, from Placentia Avenue to south of Rider Street, for approximately 160 days to construct the proposed Redlands Avenue overcrossing. The detour will use Perris Boulevard.

### SR-79 Interchange Area

• It is anticipated that traffic will be maintained in both directions along Ramona Expressway as MCP connections are made to the existing Ramona Expressway alignment. However, traffic lanes will be closed temporarily for 30 nights, along

Ramona Expressway when the lanes will be restriped in stages as the MCP connections are made.

During the second stage of construction:

• It is anticipated that construction of the remaining connections will have little or no effect on the surrounding roadway system. Construction false work and restriping may require nighttime closures for 24 nights and/or reduction in lanes for 30 months.

### I. Stage Construction

In an effort to minimize impacts to freeway and local street operations, construction of the project will occur in multiple stages as described below.

#### I-215 and Perris Area

In this area the project constructs two new mixed-flow lanes in the existing I-215 median from south of Nuevo Road to Van Buren Boulevard, a new 6-lane MCP freeway between I-215 and west of Bernasconi Road, and a new freeway-to-freeway system interchange between MCP and I-215. The project also modifies the existing interchange at Cajalco/Ramona Expressway on I-215, constructs a new interchange at the existing Placentia Avenue overcrossing on I-215, and constructs the new MCP local service interchanges at Redlands Avenue, Evans Road, and Ramona Expressway/Antelope Road. Additionally, the project adds 1 auxiliary lane each direction from Nuevo Road interchange to I-215/MCP systems interchange and from I-215/MCP systems interchange. See L-1 to L-3, Attachment L, Stage Construction.

The entire I-215 mainline widening and the freeway-to-freeway systems interchange can be constructed with minimal impact to the I-215 and local street operations. This section of the MCP will be constructed in two stages.

- I-215 inside median widening will be constructed from 0.4 mile south of the Nuevo Road overcrossing to the Van Buren Boulevard overcrossing (Sta 1460+00 to Sta 1809+50). The freeway will be re-striped to allow the three lanes of traffic to be shifted to the outside, allowing the contractor to construct pavement in the median for the length of the project. The inside shoulder in both directions will be 1 foot wide. There are no anticipated long-term closures or detours.
- The following streets will be reconstructed:
  - East Frontage Road will be reconstructed just north and south of Orange Avenue and from Placentia Avenue to West Morgan Street.

- Patterson Avenue and Nevada Avenue will be reconstructed just north and south of Ramona Expressway.
- The following improvements will be made to bridges and ramps: See H-B-13 to H-B-17 and H-B-30 to H-B-032, Attachment H, Cost Estimates.
  - The Perris Boulevard overcrossing over the proposed MCP will be constructed
  - The Placentia Avenue overcrossing over the proposed MCP will be constructed
  - The Redlands Avenue overcrossing over the proposed MCP and ramps will be constructed
  - The MCP bridge at the Perris Valley Storm Drain undercrossing will be constructed
  - The MCP bridges at Evans Road undercrossing and ramps will be constructed
  - The MCP bridges at Ramona Expressway / Antelope Road undercrossing and ramps will be constructed
- The 6-lane MCP mainline will be constructed from I-215 to west of Bernasconi Road, 3-lanes in the eastbound direction and 3-lanes in the westbound directions. This portion of MCP is predominantly on new roadway. Any detail relating to local road closures or detours is not discussed at this time and will be outlined in the final design phase.

- I-215 outside widening will be constructed from 0.3 mile north of the Nuevo Road overcrossing to 0.6 mile south of the Placentia Avenue overcrossing (Sta 1492+00 to Sta 1527+00) and from 0.5 mile north of the Placentia Avenue overcrossing to just north of the Ramona Expressway overcrossing (Sta 1586+00 to Sta 1641+50). The freeway will be re-striped to push the traffic toward the median to utilize the newly constructed pavement in the median. The contractor would begin to work on the widening toward the outside of the freeway. There will be bridge widening, retaining walls, drainage structures, and other items being constructed during this stage of the project. There are no long-term closures or detours anticipated during this stage.
- The following I-215/MCP connectors will be constructed:
  - I-215 southbound to MCP eastbound direct connector
  - I-215 northbound to MCP eastbound connector
  - MCP westbound to I-215 southbound direct connector
  - MCP westbound to I-215 northbound connector

- The following improvements will be made to bridges and ramps:
  - At Cajalco/Ramona Expressway, the ramps connecting to I-215 will be realigned to tie into the new construction.
  - At the existing Placentia Avenue overcrossing, new ramps will be constructed connecting to the I-215 new construction.
  - The existing Ramona Expressway railroad overhead just west of I-215 will be widened to the outside.
  - Tieback walls will be constructed for the existing Ramona Expressway overcrossing at I-215.
  - The existing Placentia Avenue overcrossing at I-215 and railroad overhead just west of I-215 will be widened to the outside.

#### Lakeview/Nuevo Area

This section of the project constructs a new 6-lane MCP freeway, 3-lanes in the eastbound direction and 3-lanes in the westbound directions, from west of Bernasconi Road to west of Warren Road including the local service interchanges at Bernasconi Road, Reservoir Avenue, Town Center Boulevard, and Park Center Boulevard. This section of MCP will be constructed in two stages. See L-4 to L-8, Attachment L, Stage Construction Plans.

#### Stage 1

• The three-lane MCP eastbound will be constructed from west of Bernasconi Road to west of Warren Road to the south of the existing Ramona Expressway. The project will leave the existing Ramona expressway in place to carry traffic.

- Once the three new MCP lanes are constructed the traffic from Ramona expressway will be shifted to utilize the newly constructed pavement to carry traffic in both the west bound and east bound directions. The contractor will begin to construct the three-lanes of MCP westbound on what used to be the existing Ramona expressway.
- The following MCP bridges and interchanges will be constructed: See H-B-33, H-B-36, and H-B-37, Attachment H, Cost Estimates.
  - The Bernasconi Road overcrossing over the proposed MCP and ramps will be constructed
  - The Reservoir Avenue overcrossing over the proposed MCP and ramps will be constructed
  - The Town Center Boulevard overcrossing over the proposed MCP and ramps will be constructed

 $\circ~$  The Park Center Boulevard overcrossing over the proposed MCP and ramps will be constructed

### San Jacinto River Bridges (within Lakeview Nuevo Area)

This subsection of the Lakeview Nuevo MCP mainline section constructs the Martin St undercrossing and San Jacinto River Bridge. It assumes that mainline MCP has been constructed to the west of this area and to the east of Reservoir Avenue with a connection remaining to existing Ramona Expressway. A section of existing Ramona Expressway remains in the area for local access form Martin Street across the San Jacinto River to Reservoir interchange under the final project conditions. See L-6 to L-8, Attachment L, Stage Construction Plan.

### Stage 1

• Existing Ramona Expressway is extended with a detour from west of the proposed Martin Street bridge to join the newly built MCP westbound and eastbound lanes to the west of this area. Existing Ramona Expressway carries eastbound and westbound traffic to and from the newly constructed MCP on either sides of this section.

#### Stage 2

• The three new MCP eastbound lanes and bridges are constructed.

### Stage 3

- The traffic from Ramona expressway will be shifted to utilize the newly constructed MCP eastbound pavement and bridges to carry traffic in both the west bound and east bound directions.
- The contractor will construct the three-lanes of MCP westbound and bridges, with portions overlapping existing Ramona Expressway.
- The contractor will construct the realigned portion of existing Ramona Expressway and connection to Martin Street.
- Traffic moved to utilize eastbound and westbound MCP, as well as Ramona Expressway for local access from Martin Street to Reservoir Avenue interchange.

#### SR-79 Interchange Area

This section of the project constructs a new 6-lane MCP freeway, 3-lanes in the eastbound direction and 3-lanes in the westbound direction between west of Warren Road and SR-79, and a new freeway-to-freeway interchange between MCP and SR-79. The project also modifies the existing ramps at the SR-79/Gilman Springs Road interchange, constructs new local interchanges at SR-79 and Warren Road, and reconfigures SR-79 from Gilman Springs Road interchange to south of the new MCP / SR-79 freeway-to-freeway interchange. The freeway-to-freeway interchange will be constructed with minimal impact to the SR-79 and Ramona Expressway. This section of MCP will be constructed in two stages as detailed below.

### Stage 1

- The project will leave the existing SR-79 in place to carry both northbound and southbound traffic and will construct the new southbound SR-79 lanes to the west of existing SR-79 from Ramona Expressway to the south of the Gilman Springs Road interchange. Once the new southbound SR-79 lanes are constructed, southbound traffic can be moved from existing SR-79 to the new southbound section. If the construction of this area for both projects - SR-79 Realignment and MCP, is within a short time frame, the area of SR-79 from the San Jacinto River Bridge to south of the proposed MCP/SR-79 freeway-tofreeway interchange would be constructed to match proposed MCP plans to reduce any throwaway. If the duration between the construction of the SR-79 realignment and the construction of MCP in this area is lengthy, after new southbound SR-79 constructed, traffic in both the southbound and northbound directions would be shifted from exist SR-79 to new southbound SR-79. The new northbound SR-79 lanes would be constructed and replace the existing SR-79 lanes.
- The following SR-79 bridge widening will be constructed:
  - San Jacinto River Bridge at SR-79

- The new six-lane MCP freeway between west of Warren Road and SR-79 and the new freeway-to-freeway interchange will be constructed. The freeway-tofreeway interchange can be constructed with minimal impact to the existing SR-79 traffic operations and local road circulation. The staging will utilize the existing Ramona Expressway while the MCP Extension Road is constructed from Warren Road to Ramona Expressway and utilize the new MCP Extension Road when constructing the systems interchange over existing Ramona Expressway.
- The following connections and ramps will be constructed:
  - MCP eastbound and westbound from Warren Road to Ramona Expressway with intersections at Sanderson Avenue and Ramona Expressway.
  - SR-79/Ramona Expressway single-point diamond interchange (via newly constructed MCP eastbound and westbound extension).
  - Southbound SR-79 on-ramps and off-ramps at MCP eastbound and westbound MCP extension to Ramona Expressway.
  - Northbound SR-79 on-ramps and off-ramps at MCP eastbound and westbound MCP extension to Ramona Expressway.
  - Warren Road interchange at MCP.
- Ramona Expressway realignment at Warren Road.
- The following connectors and bridges will be constructed: See H-B-43 to H-B-47, Attachment H, Cost Estimate.

- MCP eastbound to SR-79 northbound direct connector (with bridge structure over Ramona Expressway westbound to MCP westbound on-ramp).
- MCP eastbound to SR-79 southbound connector (with bridge structure over MCP eastbound off-ramp to Ramona Expressway eastbound).
- SR-79 northbound to MCP westbound direct connector (with bridge structure over Ramona Expressway westbound to MCP westbound on-ramp).
- SR-79 southbound to MCP westbound connector (with bridge structure over Ramona Expressway westbound to MCP westbound on-ramp).

### J. Potential Phasing

The MCP from I-215 to SR-79 has been cleared by the Final EIR/Final EIS and is ready to move forward into the Plans, Specifications, and Estimates (PS&E) and Construction phases for the entire 16-mile facility. It is RCTC's intent that full funding will be identified following the ROD, and that RCTC would proceed to construction of the entire MCP facility so that it would be opened to the public at the same time.

Both this document and the approved Final EIR/Final EIS assume the project will be constructed in its entirety at one time and have conducted their analyses as such. However, RCTC received several comments on the Draft EIR/EIS that circulated in October 2008 for the 32-mile MCP, requesting additional information on when the "west" segment (I-15 to I-215) versus the "east" segment (I-215 to SR-79) would be constructed and what interim effects on traffic conditions might result from constructing the project in phases. In response to public comments, in the event that funding is not available for construction of the entire project at one time, RCTC developed a potential construction phasing plan that could provide traffic benefits to the traveling public during the interim condition of each phase. As an FHWA Major Project, if the project is constructed in phases, the MCP project must meet FHWA Major Project Guidance for operational independence, nonconcurrent construction, and advancing the Purpose and Need. Coordination with FHWA will be required prior to each phase to determine that the FHWA Major Project Guidance is being met.

This Final Project Report and the Final EIR/Final EIS include a description of this potential phasing plan. The FEIR/FEIS also includes a traffic phasing analysis for 2020 and 2030 conditions in addition to the traffic analysis for the build and no build conditions in 2040. The purpose of the traffic phasing analysis is to provide general information on the expected traffic forecasts and roadway improvements that would be provided should the MCP project be built in phases. All other impact discussions in the FEIR/FEIS assume construction of the project at one time.

It is noted that this is a "potential" phasing plan, one of many scenarios that could be done if the project is phased. If the project is phased, a phasing plan will be reviewed with FHWA for approval.

### Potential Phasing Plan

The following summarizes the potential phasing plan for all MCP Build Alternatives. Each phase consists of improvements that would provide independent utility, logical termini, and advance the Purpose and Need should funding not be available to construct the project at one time; (see M-1 through M-3, Attachment M, Phasing). Each phase assumes local and regional roadway improvements in the project study area to have been completed by other projects if they are included in local and regional plans including, but not limited to, SCAG Regional Transportation plan and City/County five-year capital improvement programs.

Initial Phase (Opening Day): The initial phase of the project could be built by 2020 and would include the following improvements: (1) a service interchange at I-215/Placentia Avenue providing access to I-215 to and from Placentia Avenue: (2) one additional lane in each direction on I-215 from Nuevo Road to Van Buren Boulevard; and (3) a four-lane arterial from west of Bernasconi Road to Reservoir Avenue, including an intersection with Bernasconi Road, and a four-lane MCP freeway from west of Reservoir Avenue to west of Warren Road, including service interchanges at Reservoir Avenue, Town Center Boulevard, and Park Center Boulevard (these improvements would likely be built in conjunction with Riverside County and other local land development projects with County conditions). The fourlane facility from Bernasconi Road to Warren Road, would leave the existing twolane Ramona Expressway in place and add two lanes to the south of the existing Ramona Expressway. The existing Ramona Expressway lanes would carry westbound traffic and the two new lanes of eastbound traffic. The two new lanes would be constructed at the location and elevation of the ultimate MCP. Existing Ramona Expressway is four or more through lanes from I-215 to west of Bernasconi Road and four lanes from west of Warren Road to the future SR-79 alignment. The existing Ramona Expressway between Bernasconi Road and Warren Road is two lanes.

**Second Phase:** The second phase of the project could be built by 2030 and would include the following improvements: (1) the MCP systems interchange at I-215 that would include only the southbound I-215 to eastbound MCP and the westbound MCP to northbound I-215 ramps; (2) a four-lane MCP freeway from I 215 to west of Bernasconi Road, including service interchanges at Perris Boulevard or Redlands Avenue, Evans Avenue, Ramona Expressway/Antelope Road, and Bernasconi Road (locations differ by MCP Build Alternative); and (3) a four-lane MCP freeway from west of Warren Road to SR-79, including a service interchange at Warren Road, an intersection with Sanderson Avenue, and a service interchange with SR-79. This phase would differ by MCP Build Alternative regarding the location where the system interchange would be constructed along I 215 and the completion of the four-lane freeway through the city of Perris.

**Final Phase (Horizon Year):** The final phase of the project could be built by 2040 and would include: (1) the addition of northbound I-215 to eastbound MCP and the westbound MCP to southbound I-215 ramps at the I 215/MCP interchange; (2) widening of the MCP facility to a six-lane freeway from I-215 to SR-79; and (3) a system interchange at SR-79 and MCP. The widening of the MCP from four to six lanes, from I-215 to Bernasconi Road and from Warren Road to SR-79, involves constructing an additional lane on the inside of the two existing lanes in each direction of travel. The widening of the MCP from four lanes to six lanes in the section between Bernasconi Road and Warren Road would involve adding one lane to the inside of the two eastbound lanes built in the initial phase. It would also include removing the two westbound lanes, which are the original Ramona Expressway, and constructing three westbound lanes at the location and elevation of the MCP.

Although the MCP project is currently fully funded in the 2015 FTIP, if a decision is made after project approval to construct the MCP project in phases, then RCTC would identify the impacts and needed mitigation measures of a first phase and would compare these to the impacts and mitigation measures addressed and committed to in the Final EIR/EIS through an Environmental Revalidation, which would determine whether an EIR Addendum, Supplemental EIR, or Subsequent EIR would be required under CEQA, and whether a Supplemental EIS would be required under NEPA. If new adverse impacts or mitigation are identified for the first phase or a subsequent phase, then RCTC would prepare supplemental environmental documentation for approval of that project phase. In addition, the MCP project is considered a "major project" under FHWA guidelines, and it is not unusual for major projects to be constructed in phases due to the size of such a project. If the project is to be constructed in phases, the MCP project phases must meet FHWA Major Project Guidance for operational independence, nonconcurrent construction, and advancing the project purpose and need. This guidance is used to determine if a project can be divided from the scope of work in the NEPA decision document (the Final EIS and Record of Decision) into phases. This determination is made by the FHWA Division Office and the FHWA Project Delivery team prior to initiation of phased construction. Per the Major Project Deliverable Timeline, the Cost Estimate Review, Financial Plan, and Project Management Plan would be re-submitted, approved, and/or updated.

The Supplemental New Connection Report (NCR) Conceptual Acceptability was granted on August 17, 2012, from FHWA for the full build out of the new connection of the MCP at I-215, including a new Placentia Avenue interchange and improvements to I-215 from Nuevo Road to Van Buren Boulevard. The NCR Conceptual Acceptability was required before the approval of the Revised Draft Project Report and circulation of the Recirculated Draft EIR/Supplemental Draft EIS. FHWA approval of an NCR is required after the federal Record of Decision. If a decision is made to construct the MCP project in phases, after project approval, RCTC certification of the Final EIR, and FHWA approval of a Record of Decision, the RCTC will submit the phase of the NCR to be constructed to FHWA for NCR final approval. As subsequent phases are constructed, the process will be repeated, similar to the Cost Estimate Review (CER), Financial Plan, and Project Management Plan.

The regulatory permitting could be authorized for all of the phases under one permit/ agreement/certification from each regulatory agency (USACE, CDFW, and RWQCB). Implementation of the mitigation may also be phased, as would be identified in the permit/agreement/certification. Regulatory agencies may require updated information if phasing is to occur and may also require higher mitigation ratios than if all mitigation obligations were met at the beginning of the construction. Alternatively, the permits could be phased as described above, with acknowledgment by the agencies that each phase is part of a larger project.

Supplemental New Connection Report (NCR) Conceptual Acceptability was granted on August 17, 2012 from FHWA for the full build of the new connection of MCP at I-215, including a new Placentia Avenue Interchange and improvements to the I-215 from Nuevo Road to Van Buren Boulevard. The NCR Conceptual Acceptability was required before the approval of the Revised Draft Project Report and circulation of the RDEIR/SDEIS. FHWA approval of an NCR is required after the federal Record of Decision. If a decision is made to construct the MCP project in phases, after project approval, RCTC certification of the Final EIR, and FHWA approval of a Record of Decision, the RCTC will submit the phase of the NCR to be constructed to FHWA for NCR final approval. As subsequent phases are constructed, the process will be repeated, similar to the Cost Estimate Review (CER), Financial Plan, and Project Management Plan.

### K. Accommodation of Oversize Loads

The project freeway-to-freeway interchange ramp construction at I-215 and SR-79 maintains standard vertical clearances. Modifications to existing interchange at Ramona Expressway also maintains standard vertical clearances. Consequently, the project will not affect the ability of the I-215 freeway mainline and ramps to transport oversized loads. The I-215 is a designated Extra Legal Network (ELLN) route.

There is also a need for the project to accommodate truck traffic, which will be integral to future job growth in the area. For this reason, the design of the project considers the potential to serve large trucks. The Surface Transportation Assistance Act (STAA) of 1982 allows large trucks to operate on the Interstate and certain primary routes (called collectively the National Network). Roadway design to accommodate these trucks, referred to as STAA trucks, must accommodate turning movements characterized by the rear tires following a shorter tracking path than the front tires. Ramp local street intersections will be designed to accommodate STAA trucks. Currently, I-215 and SR-79 north of the study area and south of State Route 74 (SR-74) are included in the STAA network. The project, is designed to meet STAA standards and will provide another east-west link for goods movement.

### L. Graffiti Control

Development of a graffiti removal specification is anticipated as parts of the project site are in an urbanized area of Riverside County and are therefore considered graffiti-prone. In addition, design features will be proposed to prevent vandals from accessing bridges, signs, walls, and other features. Furthermore, vines and/or aesthetic architectural treatment will be provided wherever large vertical surfaces (e.g., retaining walls and sound walls) are accessible to discourage graffiti, minimize adverse impacts, and allow for easy maintenance.

### 8. FUNDING/PROGRAMMING

MCP is currently included in Amendment No. 1 of the 2012 RTP adopted June 6, 2013, listed as New Mid County Parkway (RIV031218). The FTIP Project ID number is also RIV031218.

The following is the description for the project, adopted in June 2013:

"CONS 6 THRU LN (3 LNS IN EA DIR) APPROX 16-MI BTWN I-215 IN PERRIS EAST TO SR-79 IN SAN JACINTO, INC CONS/RECONS OF 13 ICS, ADD OF AUX LN REDLANDS – EVANS AND EB AUXILIARY LN EVANS – ANTELOPE. I-215 IMP: ADD 1 MF LN IN EA DIR NUEVO RD – VAN BUREN BLVD, & ONE AUX LN IN EA DIR MID CO PKWY – CAJALCO/RAMONA EXP AND FROM MID CO PKWY – NUEVO."

Funding for the Project Approval/Environmental Document (PA/ED) phase of the project, including preparation of the Recirculated FEIR/FEIS, was provided from the western Riverside County Transportation Uniform Mitigation Fees (TUMF) and from a Federal Streamlining Fund Allocation. Measure A designates funding to CETAP corridors; Mid County Parkway is one of four CETAP Corridors. Funding for the PS&E and right of way phases is provided from local Measure A, bond, and TUMF revenues. The project is scheduled for start of construction in February 2018. The project is eligible for federal-aid funding, and funding for the construction phase is included in the FTIP window from FY 2012/13 to FY 2019/20. It is anticipated that a combination of the State Transportation Improvement Program (STIP), local Measure "A" 0.5 cent sales tax, local TUMF fees, and Federal dollars would be pursued. The Mid County Parkway is recognized by Caltrans as a possible future State Highway and will be considered for adoption as such. It is anticipated the project will be eligible for STIP funding if it is included in the State Highway System.

Table 8.A shows the Capital Outlay Support and Project Estimates.

Fund Source				Fiscal Ye	ear Estim	ate		
Measure A	Prior	2014/15	2015/16	2016/17	2017/18	2018/19	Future	Total
Component		-	In the	ousands o	f dollars	(\$1,000)		
PA&ED Support	38,000	7,083						45,083
PS&E Support			75,000	80,000	11,899			166,899
Right-of-Way Support			6,000	7,000	1,446			14,446
Construction Support					40,000	50,000	65,773	155,773
Right-of-Way			30,000	150,000	56,630			236,630
Construction					250,000	350,000	512,662	1,112,662
Total	38,000	7,083	111,000	237,000	359,975	400,000	578,435	1.732B

# Table 8.A:

### **Capital Outlay Support and Project Estimates**

The current project cost estimate of \$1.732B, which was updated in late 2014, slightly exceeds the current FTIP programmed amount of \$1.691B. Prior to this update, the cost estimate had been less than the FTIP programmed amount. RCTC will request an amendment to the FTIP in the next programming update to amend the programmed funds to match or exceed the cost estimate amount. The support cost ratio is 28.3%.

### 9. SCHEDULE

Project Milestones		Scheduled Delivery Date (Month Year)
PROGRAM PROJECT	M015	2004
BEGIN ENVIRONMENTAL	M020	2004
NOTICE OF PREPARATION (NOP)	M030	November 2004
NOTICE OF INTENT (NOI)	M035	November 2004
CIRCULATE DPR & DED EXTERNALLY	M120	November 2008
CIRCULATE SDPR & RDED EXTERNALLY		January 2013
PA & ED	M200	April 2015
DRAFT STRUCTURES PS&E (1 <sup>st</sup> Segment)	M378	August 2016
PROJECT PS&E	M380	July 2017
RIGHT OF WAY CERTIFICATION	M410	August 2017
READY TO LIST	M460	October 2017
AWARD	M495	December 2017
APPROVE CONTRACT	M500	January 2018
CONTRACT ACCEPTANCE	M600	December 2020
END PROJECT	M800	December 2020

M030 and M035 are only required if the environmental document is an EIR/EIS, M120 is only required if there is a draft environmental document that will be released to the public, and M378 is not required, but optional if there are structures involved, delete rows as needed.

### 10.RISKS

A Risk Register was created to identify and manage the major project risks that may have a potential to adversely affect the project cost and/or schedule. At the Major Project Cost Estimate Review (CER) workshop conducted by FHWA and Caltrans in April 2014, the risk items in the Risk Register were further analyzed with each risk quantified by dollars and schedule delay using a probabilistic model and input from the subject matter experts present at the CER. The results of the risk analysis performed at the CER workshop are tabulated in the Risk Register N-1 to N-3, Attachment N, Risk Register.

The major project risks consist of, but are not limited to, the following::

- Geotechnical
  - MCP alignment embankment stress on the MWD Colorado River Aqueduct (CRA)
  - o Groundwater table at depressed MCP segment in city of Perris
  - Uncertainty of soil conditions along project corridor as geotechnical soil sampling only performed at bridge locations and a few other specific locations
- Earthwork and Pavement
  - Uncertainty in pavement structural section, contingent upon whether MCP is adopted as a state route
  - Earthwork balance dependent on construction sequencing
- Right-of-Way Acquisition
  - Large number of acquisitions with some likely requiring eminent domain
  - Market conditions with potential for property value increase
- Utility Relocation
- Railroad Coordination
- Connection with SR-79
  - MCP project assumes SR-79 will be constructed prior to MCP construction
- Environmental Issues
  - Unanticipated Cultural/Archaeological Findings
  - Section 4(f) Resources
  - Floodplain Impact
- Coordination with local developers

### 11. FHWA COORDINATION

FHWA has been involved with the MCP project since it was identified as a key west-east regional transportation corridor in Riverside County's RCIP, and more specifically, in the CETAP planning efforts, which began in 1999. CETAP study efforts were jointly undertaken by RCTC and the County in coordination with Caltrans and FHWA. FHWA has participated in the planning process through RCIP, CETAP, and now the PA/ED of the MCP.

The MCP is an Executive Order 13274 Project, signed September 18, 2002, with CETAP selected as a priority project in October 31, 2002. MCP, as a CETAP corridor, meets criteria qualifications of Joint Stewardship and Oversight as a High Profile Project (HPP). Per the current Joint Stewardship and Oversight Agreement between Caltrans and FHWA, signed September 4, 2007 and the subsequent update signed October 14, 2010, this project is considered to be an HPP.

FHWA "Engineering and Operational Conceptual Acceptability Determination", in the form of the New Connection Report for the I-215/MCP systems interchange, was received in September 2011. "Final Approval" is expected to be received after the Record of Decision in early 2015.

### **12.PROJECT REVIEWS**

Per the current Joint Stewardship and Oversight Agreement (Agreement) between the California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA), signed September 4, 2007 and the subsequent update signed October 14, 2010, this project is considered to be a High Profile Project. The MCP is an Executive Order 13274 Project, signed September 18, 2002, with CETAP selected as priority project October 31, 2002. Therefore, MCP, as a CETAP corridor, meets criteria qualifications of Joint Stewardship and Oversight as a High Profile Project. However, should any future situation/circumstance that will potentially declassify the project as a High Profile Project arise, Caltrans shall notify FHWA and reassess this project using the High Profile Project selection outlined in the Agreement.

The project requires approval of the following engineering technical studies and reports from Caltrans and/or FHWA: Design Exception Fact Sheets, New Connection Report (NCR), Geometric Approval Drawings (GAD), and the Project Report. The six Design Exception Fact Sheets have all been approved and consist of the following: I-215 Mandatory, I-215 Mandatory Supplemental, I-215 Advisory, MCP Mainline Mandatory, MCP Mainline Advisory, and the SR-79 Mandatory. The I-215 Supplemental NCR obtained conceptual approval (operational and engineering acceptability) in August 2012 and is awaiting final approval following the approval of this Project Report. The GAD was approved in February 2015. The Draft Project Report was approved in January 2013.

The following is a list of the FHWA and Caltrans personnel who have provided review and the engineering studies/reports they have reviewed.

<u>Name</u>	<u>Title</u>	<u>Phone</u>	Date(s) of Review
Tay Dam	FHWA Senior Transportation Engineer	(213) 202-3954	<ul> <li>Supplemental NCR: I-215, 2011</li> </ul>
Jeff Holm	FHWA Design/Traffic Ops Engineer	(916) 498-5021	<ul> <li>NCR: I-215, 04/2008</li> <li>Supplemental NCR: I-215, 2011</li> </ul>
Bren George	FHWA Field Operations Engineer	(916) 498-5890	• NCR: I-215, 04/2008
Luis Betancourt	Caltrans HQ Design Coordinator, Division of Design	(916) 651-6551	<ul> <li>Mandatory Fact Sheets: I-215 and SR- 79, 08/2007</li> <li>Supplemental Mandatory Fact Sheets: I-215, 09/2011</li> <li>NCR: I-215, 08/2007</li> <li>Supplemental NCR: I-215, 09/2011</li> </ul>
Brian Frazer	Caltrans HQ Design Reviewer	(916) 651-6775	<ul> <li>Fact Sheets: I-215 and SR-79, 08/2007</li> <li>Supplemental Mandatory Fact Sheets: I-215, 09/2011</li> <li>NCR: I-215, 08/2007</li> <li>Supplemental NCR: I-215, 09/2011</li> </ul>

<u>Name</u>	<u>Title</u>	Phone	Date(s) of Review
Christy Connors	Caltrans Deputy District Director, Design	(909) 383-7582	<ul> <li>Mandatory Fact Sheets: I-215 and SR- 79, 08/2007</li> </ul>
			<ul> <li>Supplemental Mandatory Fact Sheets: I-215, 09/2011</li> </ul>
			• NCR: I-215, 08/2007
			<ul> <li>Supplemental NCR: I-215, 09/2011</li> </ul>
			Mandatory Fact Sheet: MCP Mainline, 03/2014
			Advisory Fact Sheet: I-215, 02/2014
			<ul> <li>Advisory Fact Sheet: MCP Mainline, 10/2014</li> </ul>
			Draft Project Report: MCP, 12/2012
Nassim Elias	Caltrans Project Manager	(909) 383-6713	<ul> <li>Mandatory Fact Sheets: I-215 and SR- 79, 08/2007</li> </ul>
			<ul> <li>Supplemental Mandatory Fact Sheet: I-215, 09/2011</li> </ul>
			• NCR: I-215, 08/2007
			• Supplemental NCR: I-215, 09/2011
			Mandatory Fact Sheet: MCP Mainline, 03/2014
			<ul> <li>Advisory Fact Sheet: I-215, 02/2014</li> </ul>
			<ul> <li>Advisory Fact Sheet: MCP Mainline, 03/2014, 10/2014</li> </ul>
			Draft Project Report: MCP, 12/2012
			• GAD, 2011-2014

<u>Name</u>	<u>Title</u>	<u>Phone</u>	Date(s) of Review
Anthony Ng	Caltrans FHWA Liaison/Design Reviewer	(909) 383-4952	<ul> <li>Supplemental Mandatory Fact Sheets: I-215, 09/2011</li> <li>Supplemental NCR: I-215, 09/2011</li> <li>Advisory Fact Sheet: I-215, 02/2014</li> <li>Mandatory and Advisory Fact Sheets: MCP Mainline, 03/2014</li> <li>GAD, 2011-2014</li> </ul>
Jon Bumps	Caltrans Design Oversight Manager	(909) 383-4616	<ul> <li>Supplemental Mandatory Fact Sheet: I-215, 09/2011</li> <li>Supplemental NCR: I-215, 09/2011</li> <li>Mandatory Fact Sheet: MCP Mainline, 03/2014</li> <li>Advisory Fact Sheet: I-215, 02/2014</li> <li>Advisory Fact Sheet: MCP Mainline, 03/2014, 10/2014</li> <li>Draft Project Report: MCP, 2012</li> <li>GAD, 2011-2014</li> </ul>
Mark Pertile	Caltrans (Former) Design Oversight Manager	(909) 383-4243	<ul> <li>Mandatory Fact Sheets: I-215 and SR- 79, 08/2007</li> <li>NCR: I-215, 08/2007</li> </ul>
Manuel Jabson	Caltrans Traffic Operations Senior	(909) 383-4226	<ul> <li>Traffic Technical Report, 02/2012</li> <li>GAD, 2011-2014</li> </ul>

### **13. PROJECT PERSONNEL**

The following individuals may be contacted for information or questions regarding this Project Report:

Name	Affiliation	<u>Phone</u>
Nassim Elias	Caltrans Project Manager	(909) 383-6713
Jon Bumps	Caltrans Design Oversight Manager	(909) 383-4616
Mainul Khan	Caltrans Project Oversight Engineer	(909) 388-7307
Marie Petry	Caltrans Senior Environmental Planner, Special Projects "B"	(909) 383-6379
Alex Menor	RCTC Capital Project Manager	(951) 787-7970
Gustavo Quintero	Bechtel/RCTC Project Coordinator	(951) 787-7935
Merideth Cann	Jacobs Project Manager	(949) 224-7810
Chao Chen	Jacobs Engineering Task Lead	(909) 974-2702
Rob McCann	LSA Associates Inc. Environmental Task Lead	(949) 553-0666
Frank Lara	Jacobs Drainage and Utility Task Lead	(909) 974-2726

Erik Ruehr

VRPA Traffic Task Lead (858) 566-1766

George Hsu

CH2M Hill Drainage Task Lead (714) 435-6205

### 14. ATTACHMENTS

LIST OF ATTACHMENTS

- ATTACHMENT AA: Final EIR / Final EIS Cover Page and Signature and Project Category Assignment Memorandum
- ATTACHMENT A: Vicinity Map
- ATTACHMENT B: Purpose and Need Exhibits
- ATTACHMENT C: 2040 ADT Forecasts, and Directional ADT and Peak Hour Horizon Year 2040 and Capacity and Level of Service Horizon Year 2040
- ATTACHMENT D: Peak Hour Traffic Forecasts 2040 Systems (Freeway to Freeway) Interchanges
- ATTACHMENT E: Peak Hour Traffic Forecasts 2040 Service (Local) Interchanges
- ATTACHMENT F: Layout Plans
- ATTACHMENT G: Typical Sections, Life Cycle Cost Analyses, Traffic Index Memorandum, Park and Ride Locations, and Maintenance Facility Locations
- ATTACHMENT H: Cost Estimates
- ATTACHMENT I: Right of Way Data Sheets
- ATTACHMENT J: Agency Letters
- ATTACHMENT K: Transportation Management Plan Data Sheets
- ATTACHMENT L: Stage Construction
- ATTACHMENT M: Phasing
- ATTACHMENT N: Risk Register

FINAL PROJECT REPORT ATTACHMENTS



MID COUNTY PARKWAY BETWEEN I-215 AND SR-79 IN THE VICINITY OF RAMONA EXPRESSWAY

April 2015

08 - RIV - MCP - PM 0.0/16.3 08 - RIV - 215 - PM 28.0/34.3 EA 08-0F3200 - PN 0800000125 Program Code 800.100 / HE14 April/2015

# LIST OF ATTACHMENTS

ATTACHMENT AA: F	inal EIR/Final EIS Cover Page and	C-14	I-215
	Signature and Project Category Assignment Memorandum	C-15	MCP
AA-1	FEIR / FEIS Cover Page and Signature	C-16	Existing (2010) Int
AA-2	Project Category Assignment Memorandum	C-17	No Build Intersecti
		C-18	Intersections (MCI
ATTACHMENTA: VIC	ппту мар	ATTACHMENT D: Pea	k Hour Traffic Forecas
A-1	Vicinity Map		Interchanges
ATTACHMENT B: Pu	rpose and Need Exhibits	D-1	MCP/ I-215
B-1	Circulation Element	D-2	MCP/ SR-79
B-2	Hemet to Corona / Lake Elsinore Study Area		
B-3	Freeways and Other State Highways	ATTACHMENTE: Pear	A Hour Traffic Forecas
B-4	Jurisdictional Boundaries	E-1	MCP at Redlands
		E-2	MCP at Evans Ro
ATTACHMENT C: 204	O ADT Forecasts, Directional ADT and Peak Hour Horizon Year 2040,	E-3	MCP at Ramona E
	and Capacity and Level of Service Horizon Year 2040	E-4	MCP at Bernascor
2040 Average Daily	Traffic Forecasts	E-5	MCP at Reservoir
C-1 to C-2	No Build	E-6	MCP at Town Cen
C-3 to C-4	MCP	E-7	MCP at Park Cent
		E-8	MCP at Warren Re
Directional ADT and	d Peak Hour Horizon Year 2040	E-9	SR-79 at MCP Ext
C-5	Existing (2010) I-215	E-10	I-215 at Placentia
C-6	No Build I-215	E-11	I-215 at Cajalco / I
C-7	I-215		ut Plane
C-8	MCP		
		F-1	Layout Sheets Ke
Capacity and Level	of Service Horizon year 2040	F-2 to F-9	I-215
C-9	Existing (2010) I-15	F-10 to F-20	MCP
C-10	Existing (2010) I-215	F-21 to F-23	SR-79
C-11	No Build I-15		
C-12	No Build I-215		
C-13	I-15		

tersections

tions

P)

sts Year 2040 – Systems (Freeway to Freeway)

sts Year 2040 – Service (Local) Interchanges

Ave

bad

Expressway / Antelope Road

oni Road

Avenue

nter Boulevard

ter Boulevard

Road

ktension

Ave

Ramona Expwy

ey Map

ATTACHMENT G: Typical Sections, Life Cycle Cost Analyses, Traffic Index Memorandum,		ATTACHMENT M: Phasing	
	Park and Ride Locations, and Maintenance Facility Locations	M-1 to M-3	Potential Phasing
G-1 to G-3	I-215 Typical Sections		
G-4	MCP Typical Section	ATTACHMENT N: Ris	k Register
G-5	MCP Typical Sections (Depressed and at Bridge)	N-1 to N-3	Risk Register Mat
G-6	SR-79 Typical Section		
G-7	LCCA – MCP Mainline, Preliminary Draft		
G-8	LCCA – Ramp A (Typical Ramp), Preliminary Draft		
G-9	LCCA – Ramp B (High Truck Traffic), Preliminary Draft		
G-10	Traffic Index Memorandum		

### **ATTACHMENT H: Cost Estimates**

G-11

H-1 to H-8	Project Cost Estimate Summary Sheets
H-9	Bridge APS List
H-10	Bridge APS Key Map
H-B-1 to H-B-48	APS General Plan Sheets with Bridge Cost Estimates

Park and Ride & Maintenance Facility Locations

### ATTACHMENT I: Right of Way Data Sheets

I-1 to I-4	MCP

### **ATTACHMENT J: Agency Letters**

J-1 to J-3	MWD 05/13/05
J-4	DWR 06/08/05
J-5	DWR 08/19/05

### ATTACHMENT K: Transportation Management Plan Data Sheets

K-1 to K-6 TMP Data Sheets

### ATTACHMENT L: Stage Construction

L-1 to L-3	I-215 Stages 1-2
L-4	Lakeview Nuevo Area Stage 1
L-5	Lakeview Nuevo Area Stage 2
L-6	San Jacinto River Bridges Stage 1
L-7	San Jacinto River Bridges Stage 2
L-8	San Jacinto River Bridges Stage 3

Plan

atrix

# **ATTACHMENT AA**

# FINAL ENVIRONMENTAL IMPACT REPORT/ FINAL ENVIRONMENTAL IMPACT STATEMENT **COVER PAGE AND SIGNATURE** AND **PROJECT CATEGORY ASSIGNMENT MEMORANDUM**

### **FINAL EIR / FINAL EIS COVER PAGE AND SIGNATURE** AND PROJECT CATEGORY ASSIGNMENT MEMORANDUM

**ATTACHMENT AA** 

Mid County Parkway, a new freeway from the City of Perris in the west to the City of San Jacinto in the east.

#### FINAL ENVIRONMENTAL IMPACT REPORT/FINAL ENVIRONMENTAL IMPACT STATEMENT AND FINAL SECTION 4(F) EVALUATION

Submitted Pursuant to: (State) Division 13, California Public Resources Code (Federal) 42 USC 4332(2)(C) and 49 USC 303

U.S. DEPARTMENT OF TRANSPORTATION Federal Highway Administration, and THE STATE OF CALIFORNIA Department of Transportation, and THE RIVERSIDE COUNTY TRANSPORTATION COMMISSION

COOPERATING AGENCY: United States Army Corps of Engineers RESPONSIBLE AGENCIES: California Department of Fish and Wildlife, California Public Utilities Commission, County of Riverside, City of Perris, and City of San Jacinto

4/8/15 Date of Approval

<17 For John Bulinski

The following persons may be contacted for additional information concerning this document:

Mr. Alex Menor Riverside County Transportation Commission 4080 Lemon Street, 3rd Floor Riverside, CA 92501 (951) 787-7141

Mr. Tay Dam Federal Highway Administration 888 South Figueroa Street, Suite 1850 Los Angeles, CA 90017-5467 3337 (916) 498-5001

Abstract: The Mid County Parkway project will provide a new freeway that will effectively and efficiently accommodate regional west-east movement of people and goods between and through the cities of San Jacinto and Perris. Potential benefits from future implementation include increased accessibility for residents and businesses and the relief of traffic congestion on the regional and local transportation network. Key issues include impacts to community character and cohesion, growth-related effects, biological resources, aquatic resources, cultural resources, aesthetics, residential relocations, business relocations, traffic noise, and temporary construction effects.

FHWA will not issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141 Stat. 405, Section 1319(b) because FHWA has determined that practicability considerations (no identification of a preferred alternative in the Draft Environmental Impact Statement or Supplemental Draft Environmental Impact Statement) preclude issuance of a combined document pursuant to Section 1319.

FHWA is the lead agency under the National Environmental Policy Act (NEPA), in cooperation with Caltrans. 1

SCH# 2004111103 FHWA EIS# 08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3 EA 08-0F3200 (PN 0800000125)

Anne Mayer

Executive Director Riverside County Transportation Commission CEQA Lead Agency

R

Interim District 8 Director California Department of Transportation

am in Vincent Mammano" **Division Administrator** 

Federal Highway Administration NEPA Lead Agency

### **FINAL EIR/EIS COVER PAGE AND SIGNATURE AA-1**

State of California DEPARTMENT OF TRANSPORTATION

Memorandum

LUIS BETANCOURT To: Deputy District Director Design, MS 1267

JON BUMPS Office Chief

Subject: Project Category Assignment

Design H, MS 1164

From:

80

Manual.

The project proposes a new divided highway with access control and with grade separations at local interchanges. RCTC proposes to recommend this facility for adoption as a new State Route alignment on or near Cajalco Road and Ramona Expressway.

This project requires access control, new alignment, new right-of-way, and adoption of a new route by the California Transportation Commission (CTC).

Approved by

7/17/08

LUIS BETANCOURT Deputy District Director Design

Date

c: NElias, Project Manager, MS 1229 File

Jim Sun / is

Business, Transportation and Housing Agency

Flex your power! Be energy efficient!

Date: July 17, 2008

File: 08-Riv-Mid County Parkway KP 0.0/51.0 (PM 0.0/31.7) Construct New Freeway On Mid County Parkway From I-15 to SR-79 08250-0F3200

Approval is requested for assignment of the above-referenced projects to Category 1, in accordance with requirements in Chapter 8, Section 5 of the Project Development Procedures

PROJECT CATEGORY ASSIGNMENT MEMORANDUM **AA-2** "Caltrans improves mobility across California"

ATTACHMENT A

VICINITY MAP

# ATTACHMENT A

VICINITY MAP





Mid County Parkway Study Area

SOURCE: ESRI (2008); TBM (2010), Jacobs Engineering (02/2011)

7.5 MILES 3.75

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08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3 EA 08-0F3200 (PN 0800000125)



**Regional Location** 

**VICINITY MAP** A-1

# ATTACHMENT B

# PURPOSE AND NEED EXHIBITS

### ATTACHMENT B

### PURPOSE AND NEED EXHIBITS



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### **CIRCULATION ELEMENT B-1**



SOURCE: ESRI (2006); TBM (2006); Jacobs Engineering (02/2011)

8 MILES

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Hemet to Corona/Lake Elsinore Study Area 08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3 EA 08-0F3200 (PN 0800000125)





**HEMET TO CORONA /** LAKE ELSINORE STUDY AREA **B-2** 



SOURCE: ESRI (2006); DOT (2010); Jacobs Engineering (12/2011)



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8 Miles

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3 EA 08-0F3200 (PN 0800000125)

**FREEWAYS AND OTHER STATE HIGHWAYS ATTACHMENT B-3** 



I:\JCV531\GIS\_Mod\EIR\_EIS\Recirculated\_Draft\Jurisdictional\_Boundaries\_8x11\_2.mxd (2/28/2011)

JURISDICTIONAL BOUNDARIES **B-4** 

# **ATTACHMENT C**

# 2040 AVERAGE DAILY TRAFFIC FORECASTS,

# **DIRECTIONAL ADT AND PEAK HOUR HORIZON YEAR 2040,**

AND

CAPACITY AND LEVEL OF SERVICE (HORIZON YEAR 2040)

### **ATTACHMENT C**

### 2040 AVERAGE DAILY TRAFFIC FORECASTS **DIRECTIONAL ADT AND PEAK HOUR HORIZON YEAR 2040 CAPCITY AND LEVEL OF SERVICE HORIZON YEAR 2040**



2040 AVERAGE DAILY TRAFFIC FORECASTS NO BUILD - SHEET 1 OF 2 C-1

# MID COUNTY PARKWAY - NO BUILD 2040 Average Daily Traffic East of I-215 to SR 79 February, 2012



28,200



od Ave

#### 2040 AVERAGE DAILY TRAFFIC FORECASTS NO BUILD - SHEET 2 OF 2 C-2


MID COUNTY PARKWAY 2040 Average Daily Traffic East of I-215 to SR 79 February, 2012





00	Ramona Expwy
10	

Placentia Ave























C-9 Existing (2010) Freeway Capacity Analysis (1) Interstate 15

		Peak Hour Tr	raffic (veh/hr)						
Northbound		0.14	DM	Number of Lance	Freeway	AM Pe	eak Hour	PM Peak Hour	
Location	Facility	Alvi	FIVI	Number of Lanes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)
I - 15 Mainline									
South of Temescal Canyon Rd	Freeway	5635	5264	3	6470	D	33.8	D	30.5
Temescal Canyon Rd On Ramp to Weirick Road Off Ramp	Freeway	5111	5559	3	6470	D	29.4	D	33.1
Weirick Road On Ramp to Cajalco Road Off Ramp	Freeway	5964	6030	3	6470	E	37.4	Е	38.2
Cajalco Road On Ramp to El Cerrito Road Off Ramp	Freeway	6820	6278	3	6470	F	47.4	E	41.6
El Cerrito Road On Ramp to Ontario Avenue Off Ramp	Freeway	7130	6352	3	6470	F	49.6	Е	42.8
Ontario Avenue On Ramp to Magnolia Avenue Off Ramp	Freeway	7095	6842	3	6470	F	49.3	F	47.6
North of Magnolia Avenue	Freeway	6900	7928	4	6470	D	29.3	E	36.6

(1) Capacity analysis is shown for freeway only. See separate page of C-9 for ramps.(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

(4) Density is expressed in passenger cars/mile/lane.

### C-9 (cont.) Existing (2010) Ramp Capacity Analysis (1) Interstate 15

			raffic (veh/hr)								
Northbound		AM		PM		Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Temescal Canyon Rd Off Ramp	Diverge	5635	849	5264	131	3		D	32.9	D	30.2
Temescal Canyon Rd On Ramp	Merge	4786	325	5133	426	3	1	D	28.9	D	31.5
Weirick Road Off Ramp	Diverge	5111	137	5559	88	3	1	D	29.6	D	31.5
Weirick Road On Ramp	Merge	4974	990	5471	559	3	1	E	35.2	D	34.2
Cajalco Road Off Ramp	Diverge	5964	157	6030	335	3	1	D	33.2	D	33.7
Cajalco Road On Ramp	Merge	5807	1013	5695	583	3	1	F	47.4	E	35.5
El Cerrito Road Off Ramp	Diverge	6820	393	6278	190	3	1	F	50.2	D	34.5
El Cerrito Road On Ramp	Merge	6427	703	6088	264	3	1	F	49.6	D	35.0
Ontario Avenue Off Ramp	Diverge	7130	970	6352	470	3	1	F	56.3	E	35.1
Ontario Avenue On Ramp	Merge	6160	935	5882	960	3	1	F	49.3	F	47.6
Magnolia Avenue Off Ramp	Diverge	7095	1078	6842	469	3	1	F	56.8	F	50.8
Magnolia Avenue On Ramp	Merge	6017	883	6373	1555	3	1	F	48.0	F	55.1

(1) Capacity analysis is shown for ramps only. See separate page of C-9 for freeway segments.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

### C-9 (cont.) Existing (2010) Freeway Capacity Analysis (1) Interstate 15

		Peak Hour Tr	affic (veh/hr)						
Southbound		<b>AN</b>	DM	Number of Lance	Freeway	AM Pe	eak Hour	PM Peak Hour	
Location	Facility	Aivi	FIVI	Number of Lanes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)
I - 15 Mainline									
North of Magnolia Avenue	Freeway	7911	8440	4	6470	E	36.4	E	41.8
Magnolia Avenue On Ramp to Ontario Avenue Off Ramp	Freeway	6356	7656	3	6470	Е	42.9	F	53.2
Ontario Avenue On Ramp to El Cerrito Road Off Ramp	Freeway	5603	7607	3	6470	D	33.5	F	52.9
El Cerrito Road On Ramp to Cajalco Road Off Ramp	Freeway	5580	7673	3	6470	D	33.3	F	53.4
Cajalco Road On Ramp to Weirick Road Off Ramp	Freeway	5291	7519	3	6470	D	30.7	F	52.3
Weirick Road On Ramp to Temescal Canyon Off Ramp	Freeway	4882	6955	3	6470	D	27.7	F	48.4
South of Temescal Canyon Road	Freeway	4674	6768	3	6470	D	26.4	F	47.1

(1) Capacity analysis is shown for freeway only. See separate page of C-9 for ramps.(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

# C-9 (cont.)

#### C-9 (cont.) Existing (2010) Ramp Capacity Analysis (1) Interstate 15

		Peak Hour Traffic (veh/hr)									
Southbound		AM		PM		Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Magnolia Avenue Off Ramp	Diverge	7911	1888	8440	1401	3	1	F	41.9	F	49.0
Magnolia Avenue On Ramp	Merge	6023	333	7039	617	3	1	E	35.2	F	44.7
Ontario Avenue Off Ramp	Diverge	6356	1110	7656	812	3	1	E	36.2	F	47.6
Ontario Avenue On Ramp	Merge	5246	357	6844	763	3	1	D	31.5	F	42.3
El Cerrito Road Off Ramp	Diverge	5603	305	7607	510	3	1	D	31.9	F	49.4
El Cerrito Road On Ramp	Merge	5298	282	7097	576	3	1	D	31.1	F	45.4
Cajalco Road Off Ramp	Diverge	5580	457	7673	597	3	1	D	32.1	F	49.2
Cajalco Road On Ramp	Merge	5123	168	7076	443	3	1	D	29.4	F	46.1
Weirick Road Off Ramp	Diverge	5291	458	7519	715	3	1	D	30.8	F	47.3
Weirick Road On Ramp	Merge	4833	49	6804	151	3	1	С	26.9	F	46.3
Temescal Canyon Road Off Ramp	Diverge	4882	288	6955	430	3	1	D	28.8	F	45.4
Temescal Canyon Road On Ramp	Merge	4594	80	6525	243	3	1	С	26.0	F	43.7

(1) Capacity analysis is shown for ramps only. See separate page of C-9 for freeway segments.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

# C-9 (cont.)

# C-10 Existing (2010) Freeway Capacity Analysis (1) Interstate 215

		Peak Hour T	Peak Hour Traffic (veh/hr)						
Northbound		0.14	DM	Number of Lance	Freeway	AM P	eak Hour	PM Peak Hour	
Location	Facility	Aivi	FIVI	NUMBER OF Lattes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)
I - 215 Mainline									
Nuevo Road On Ramp to Ramona Expressway Off Ramp	Freeway	4559	4476	3	6470	С	25.7	С	25.2
Ramona Expressway On Ramp to Oleander Ave Off Ramp	Freeway	5238	4830	3	6470	D	30.3	D	27.4
Harley Knox Blvd On Ramp to Van Buren Blvd Off Ramp	Freeway	5456	5022	3	6470	D	32.1	D	28.7
Van Buren Blvd On Ramp to Cactus Ave Off Ramp	Freeway	5282	5247	3	6470	D	30.7	D	30.4
Cactus Ave On Ramp to Alessandro Blvd Off Ramp	Freeway	5151	5598	3	6470	D	29.6	D	33.4
North of Alessandro Blvd	Freeway	4631	5743	3	6470	D	26.1	D	34.9

(1) Capacity analysis is shown for freeway only. See separate page of C-10 for ramps.(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

(4) Density is expressed in passenger cars/mile/lane.

#### C-10 (cont.) Existing (2010) Ramp Capacity Analysis (1) Interstate 215

		Peak Hour Traffic (veh/hr)									
Northbound		AM		PM		Number	of Lanes	AM Peak Hour		PM Peak Hour	
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
D Street On Ramp to Nuevo Rd Off Ramp	Weave (4)	4308		4440		3		С	26.4	С	26.8
Nuevo Rd Off Ramp	Diverge (5)	4308	444	4440	425	3	1	С	26.3	С	26.9
Nuevo Road On Ramp	Merge	3864	695	4015	461	3	1	С	27.2	С	26.1
Ramona Expressway Off Ramp	Diverge	4559	551	4476	555	3	1	С	27.7	С	27.3
Ramona Expressway On Ramp	Merge	4008	1230	3921	909	3	1	D	32.2	D	29.2
Harley Knox Blvd Off Ramp	Diverge	5238	94	4830	91	3	1	D	30.1	D	28.2
Harley Knox Blvd On Ramp	Merge	5144	312	4739	283	3	1	D	30.6	D	28.3
Van Buren Blvd Blvd Off Ramp	Diverge	5456	819	5022	495	3	1	D	32.1	D	29.7
Van Buren Blvd On Ramp	Merge	4637	645	4527	720	3	1	D	30.7	D	30.8
Cactus Ave Off Ramp	Diverge	5282	872	5247	503	3	1	D	31.5	D	30.7
Cactus Ave On Ramp	Merge	4410	741	4744	854	3	1	D	30.4	D	32.9
Alessandro Blvd Off Ramp	Diverge	5151	826	5598	516	3	1	D	30.9	D	32.2
Alessandro Blvd On Ramp	Merge	4325	306	5082	661	3	1	С	26.5	D	33.1

(1) Capacity analysis is shown for ramps only. See separate page of C-10 for freeway segments.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.(4) For weaving volumes, see Figure C-5c. The ramp to ramp movement was assumed to be zero. The weaving length is 2,000 feet.

(5) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.

# C-10 (cont.)

#### C-10 (cont.) Existing (2010) Freeway Capacity Analysis (1) Interstate 215

		Peak Hour 1	raffic (veh/hr)						
Southbound		0.14	DM	Number of Lense	Freeway	AM F	eak Hour	PM Peak Hour	
Location	Facility	AW	PIVI	Number of Lanes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)
I - 215 Mainline									
North of Alessandro Blvd	Freeway	5134	6168	3	6470	D	29.5	E	40.0
Alessandro Blvd On Ramp to Cactus Avenue Off Ramp	Freeway	5040	6179	3	6470	D	28.8	E	40.2
Cactus Avenue On Ramp to Van Buren Blvd Off Ramp	Freeway	4786	6074	3	6470	D	27.1	E	38.7
Van Buren Blvd On Ramp to Oleander Road Off Ramp	Freeway	4464	6138	3	6470	С	25.1	E	39.6
Harley Knox Blvd On Ramp to Cajalco Road Off Ramp	Freeway	4286	5818	3	6470	С	24.1	E	35.7
Cajalco Road On Ramp to Nuevo Road Off Ramp	Freeway	4045	5334	3	6470	С	22.7	D	31.1

(1) Capacity analysis is shown for freeway only. See separate page of C-10 for ramps.

(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

(4) Density is expressed in passenger cars/mile/lane.

# C-10 (cont.)

#### C-10 (cont.) Existing (2010) Ramp Capacity Analysis (1) Interstate 215

		Peak Hour Traffic (veh/hr)									
Southbound		AM		PM		Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Freeway Ramp		Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
Alessandro Blvd Off Ramp	Diverge	5134	415	6168	655	3	1	D	30.1	D	34.7
Alessandro Blvd On Ramp	Merge	4719	321	5513	666	3	1	D	28.6	E	35.3
Cactus Avenue Off ramp	Diverge	5040	623	6179	771	3	1	D	30.0	D	34.9
Cactus Avenue On Ramp	Merge	4417	369	5408	666	3	1	С	27.4	D	34.8
Van Buren Blvd Off Ramp	Diverge	4786	811	6074	651	3	1	D	29.2	D	34.3
Van Buren Blvd On Ramp	Merge	3975	489	5423	715	3	1	С	26.2	E	35.2
Harley Knox Blvd Off Ramp	Diverge	4464	262	6138	416	3	1	С	26.8	D	34.2
Harley Knox Blvd On Ramp	Merge	4202	84	5722	96	3	1	С	24.1	D	31.8
Cajalco Expwy Off Ramp	Diverge	4286	714	5818	1003	3	1	С	26.7	D	33.9
Cajalco Expwy On Ramp	Merge	3572	473	4815	519	3	1	С	24.0	D	30.6
Nuevo Road Off Ramp	Diverge	4045	345	5334	861	3	1	С	24.9	D	31.7
Nuevo Rd On Ramp	Merge (4)	3700	351	4473	468	3	1	С	23.7	D	28.5
Nuevo Rd On Ramp to D Street Off Ramp	Weave (5)	4051		4941		3		С	25.7	D	33.9

(1) Capacity analysis is shown for ramps only. See separate page of C-10 for freeway segments.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.
(4) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.
(5) For weaving volumes, see Figure C-5c. The ramp to ramp movement was assumed to be zero. The weaving length is 2,000 feet.

#### C-11 Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 15 - No Build

			Peak Hour T	raffic (veh/hr)				Fr	eeway Mainlii	ne and HOV Leve	el of Service (2	2)
Northbound		A	М	P	М	Number	of Lanes	Freeway	AM F	eak Hour	PM Peak Hour	
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 15 Mainline												
South of Temescal Canyon Rd	Freeway	7533		7617		4		8690	D	33.4	D	34.0
South of Temescal Canyon Rd	HOV		2904		2693		2		С	25.0	С	23.2
Temescal Canyon Rd On Ramp to Weirick Rd Off Ramp	Freeway	7912		7802		4		8690	Е	36.4	E	35.5
Temescal Canyon Rd On Ramp to Weirick Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
Weirick Rd On Ramp to Cajalco Rd Off Ramp	Freeway	8688		8369		4		8690	Е	44.9	E	41.0
Weirick Rd On Ramp to Cajalco Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
Cajalco Rd On Ramp to El Cerrito Rd Off Ramp	Freeway	9521		8763		4		8690	F	49.3	F	45.4
Cajalco Rd On Ramp to El Cerrito Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
El Cerrito Rd On Ramp to Ontario Ave Off Ramp	Freeway	9143		7809		4		8690	F	47.3	E	35.5
El Cerrito Rd On Ramp to Ontario Ave Off Ramp	HOV		3600		3600		2		D	32.2	D	32.2
Ontario Ave On Ramp to Magnolia Ave Off Ramp	Freeway	9282		8011		4		8690	F	48.1	E	37.3
Ontario Ave On Ramp to Magnolia Ave Off Ramp	HOV		3600		3600		2		D	32.2	D	32.2
North of Magnolia Ave to SR-91	Freeway	9836		8416		4		8690	F	50.9	E	41.5
North of Magnolia Ave to SR-91	HOV		3600		3600		2		D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-11 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

#### C-11 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 15 - No Build

			Peak Hour T	raffic (veh/hr)					Ramp Leve	evel of Service	
Northbound		AM		Р	M	Number	of Lanes	AM P	eak Hour	PM Peak Hour	
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Temescal Canyon Rd Off Ramp	Diverge	7533	360	7617	495	4	1	D	32.3	D	33.4
Temescal Canyon Rd On Ramp	Merge	7173	2904	7122	2693	4	2	С	25.1	С	24.9
Weirick Rd Off Ramp	Diverge	7912	324	7802	446	4	1	D	33.7	D	33.9
Weirick Rd On Ramp	Merge	7588	2904	7356	2693	4	2	С	25.8	С	25.4
Cajalco Rd Off Ramp	Diverge	8688	821	8369	1129	4	1	F	45.0	F	45.0
Cajalco Rd EB On Ramp	Merge	7867	2904	7240	2693	4	2	С	26.8	С	25.3
Cajalco Rd WB On Ramp	Merge	8483	1038	7807	956	4	1	F	49.3	С	26.3
El Cerrito Rd Off Ramp	Diverge	9521	2904	8763	2693	4	2	F	49.3	F	45.4
El Cerrito Rd On Ramp	Merge	9024	815	8080	656	4	1	F	47.3	С	27.3
Ontario Ave Off Ramp	Diverge	9143	3600	7809	3600	4	2	F	47.3	E	36.3
Ontario Ave On Ramp	Merge	8157	1125	6902	1109	4	1	F	48.1	С	24.4
Magnolia Ave Off Ramp	Diverge	9282	3600	8011	3600	4	2	F	48.1	F	45.0
Magnolia Ave EB On Ramp	Merge	8032	1203	6990	951	4	1	F	50.9	С	24.6
Magnolia Ave WB On Ramp	Merge	9235	3600	7941	3600	4	2	F	50.9	С	27.2

(1) Capacity analysis shown for ramps only. See separate page of C-11 for freeway mainline and HOV lanes.

(2) LOS = Level of Service

(3) Density is expressed in passenger cars/mile per lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

#### C-11 (cont.) Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 15 - No Build

			Peak Hour T	raffic (veh/hr)				Fre	eeway Mainlir	ne and HOV Leve	el of Service (2	2)
Southbound		АМ		PI	М	Number	of Lanes	Freeway	AM P	eak Hour	PM Peak Hour	
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 15 Mainline												
SR-91 to Magnolia Ave	Freeway	9001		10833		4		8690	F	46.6	F	56.1
SR-91 to Magnolia Ave	HOV		2918		3600		2		С	25.2	D	32.2
Magnolia Ave On Ramp to Ontario Ave Off Ramp	Freeway	7718		10455		4		8690	D	34.8	F	54.1
Magnolia Ave On Ramp to Ontario Ave Off Ramp	HOV		2918		3600		2		С	25.2	D	32.2
Ontario Ave On Ramp to El Cerrito Rd Off Ramp	Freeway	7765		10955		4		8690	Е	35.2	F	56.7
Ontario Ave On Ramp to El Cerrito Rd Off Ramp	HOV		2918		3600		2		С	25.2	D	32.2
El Cerrito Rd On Ramp to Cajalco Rd Off Ramp	Freeway	7789		10712		4		8690	Е	35.4	F	55.5
El Cerrito Rd On Ramp to Cajalco Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
Cajalco Rd On Ramp to Weirick Rd Off Ramp	Freeway	7438		9774		4		8690	D	32.7	F	50.6
Cajalco Rd On Ramp to Weirick Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
Weirick Rd On Ramp to Temescal Canyon Rd Off Ramp	Freeway	6934		8901		4		8690	D	29.5	F	46.1
Weirick Rd On Ramp to Temescal Canyon Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
South of Temescal Canyon Rd	Freeway	6769		8474		4		8690	D	28.6	Е	42.2
South of Temescal Canyon Rd	HOV		2376		3267		2		С	20.5	D	28.4

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-11 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

# C-11 (cont.)

#### C-11 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 15 - No Build

			Peak Hour T	raffic (veh/hr)					Ramp Leve	el of Service	
Southbound		A	М	Р	М	Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Magnolia Ave Off Ramp	Diverge	9001	2190	10833	1625	4	1	F	46.6	F	56.1
Magnolia Ave On Ramp	Merge	6811	2904	9208	2693	4	2	С	24.2	F	45.0
Ontario Ave Off Ramp	Diverge	7718	1289	10455	942	4	1	F	45.0	F	54.1
Ontario Ave On Ramp	Merge	6429	2904	9513	2693	4	2	С	23.3	F	56.7
El Cerrito Rd Off Ramp	Diverge	7765	583	10955	802	4	1	D	34.5	F	56.7
El Cerrito Rd On Ramp	Merge	7182	2904	10153	2693	4	2	С	25.1	F	55.5
Cajalco Rd Off Ramp	Diverge	7789	1354	10712	1861	4	1	F	45.0	F	55.5
Cajalco Rd On Ramp	Merge	6435	2904	8851	2693	4	2	С	23.5	F	45.0
Weirick Rd Off Ramp	Diverge	7438	900	9774	1238	4	1	D	34.8	F	45.0
Weirick Rd On Ramp	Merge	6538	3600	8536	3600	4	2	С	23.4	F	45.0
Temescal Canyon Rd Off Ramp	Diverge	6934	605	8901	832	4	1	D	31.2	F	45.0
Temescal Canyon Rd On Ramp	Merge	6329	3600	8069	3600	4	2	С	22.9	С	27.6

(1) Capacity analysis shown for ramps only. See separate page of C-11 for freeway mainline and HOV lanes.

(2) LOS = Level of Service

(3) Density is expressed in passenger cars/mile per lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

# C-11 (cont.)

### C-12 Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 215 - No Build

			Peak Hour T	raffic (veh/hr)		]		Fr	eeway Mainli	ne and HOV Leve	el of Service (2	2)
Northbound		A	Μ	P	M	Number	of Lanes	Freeway	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 215 Mainline												
Nuevo Rd On Ramp to Cajalco/Ramona Expwy Off Ramp	Freeway	6261		5620		3		6470	E	41.4	D	33.6
Nuevo Rd On Ramp to Cajalco/Ramona Expwy Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cajalco/Ramona Expwy On Ramp to Harley Knox Blvd Off Ramp	Freeway	7101		6129		3		6470	F	49.4	E	39.5
Cajalco/Ramona Expwy On Ramp to Harley Knox Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Harley Knox Blvd On Ramp to Van Buren Blvd Off Ramp	Freeway	7554		6810		3		6470	F	52.5	F	47.4
Harley Knox Blvd On Ramp to Van Buren Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Van Buren Blvd On Ramp to Cactus Ave Off Ramp	Freeway	7458		6721		3		6470	F	51.9	F	46.7
Van Buren Blvd On Ramp to Cactus Ave Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cactus Ave On Ramp to Alessandro Blvd Off Ramp	Freeway	7317		6592		3		6470	F	50.9	F	45.8
Cactus Ave On Ramp to Alessandro Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
North of Alessandro Blvd	Freeway	7026		6324		3		6470	F	48.9	E	42.4
North of Alessandro Blvd	HOV		1800		1800		1		D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-12 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

### C-12 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 215 - No Build

			Peak Hour T	raffic (veh/hr)					Ramp Leve	el of Service	
Northbound		A	M	PI	M	Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
D Street On Ramp to Nuevo Rd Off Ramp	Weave (4)	7834		7459		4		E	36.1	D	34.9
Nuevo Rd Off Ramp	Diverge (5)	7834	547	7459	752	4	2	В	13.6	В	14.1
Nuevo Rd On Ramp	Merge	7287	774	6707	713	3	1	F	56.1	F	51.6
Cajalco/Ramona Expwy Off Ramp	Diverge	6261	576	5620	792	3	1	D	34.9	D	32.8
Cajalco/Ramona Expwy On Ramp	Merge	5685	1416	4828	1301	3	1	F	49.4	E	36.9
Harley Knox Blvd Off Ramp	Diverge	7101	519	6129	478	3	1	F	49.4	D	34.3
Harley Knox Blvd On Ramp	Merge	6582	972	5651	1159	3	1	F	52.5	F	47.4
Van Buren Blvd Off Ramp	Diverge	7554	958	6810	883	3	2	F	52.5	F	47.4
Van Buren Blvd EB On Ramp	Merge	6596	616	5927	567	3	1	F	50.2	E	36.6
Van Buren Blvd WB On Ramp	Merge	7212	246	6494	227	3	1	F	51.9	F	46.7
Cactus Ave Off Ramp	Diverge	7458	910	6721	769	3	1	F	51.9	F	46.7
Cactus Ave EB On Ramp	Merge	6548	316	5952	226	3	1	F	47.7	D	34.0
Cactus Ave WB On Ramp	Merge	6864	453	6178	414	3	1	F	50.9	E	36.6
Alessandro Blvd Off Ramp	Diverge	7317	824	6592	1001	3	1	F	50.9	E	36.8
Alessandro Blvd On Ramp	Merge	6493	533	5591	733	3	1	F	48.9	E	36.2

(1) Capacity analysis shown for ramps only. See separate page of C-12 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that

would occur if all demand could be accomodated based on capacity of the adjacent freeway segment.

(4) For weaving volumes, see Figure C-6c. The ramp to ramp movement was assumed to be zero. Weaving length is 2,000 feet per the I-215 widening project.

(5) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.

### C-12 (cont.) Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 215 - No Build

			Peak Hour T	raffic (veh/hr)		]		Fr	eeway Mainlir	ne and HOV Leve	el of Service (2	2)
Southbound		A	М	Р	М	Number	of Lanes	Freeway	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 215 Mainline												
North of Alessandro Blvd	Freeway	5422		8130		3		6470	D	31.8	F	56.5
North of Alessandro Blvd	HOV		1800		1800		1		D	32.2	D	32.2
Alessandro Blvd On Ramp to Cactus Ave Off Ramp	Freeway	5659		8456		3		6470	D	34.0	F	58.8
Alessandro Blvd On Ramp to Cactus Ave Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cactus Ave On Ramp to Van Buren Blvd Off Ramp	Freeway	5774		8615		3		6470	E	35.2	F	59.9
Cactus Ave On Ramp to Van Buren Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Van Buren Blvd On Ramp to Harley Knox Blvd Off Ramp	Freeway	5854		8724		3		6470	E	36.1	F	60.7
Van Buren Blvd On Ramp to Harley Knox Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Harley Knox Blvd On Ramp to Cajalco/Ramona Expwy Off Ramp	Freeway	5382		8204		3		6470	D	31.5	F	57.1
Harley Knox Blvd On Ramp to Cajalco/Ramona Expwy Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cajalco/Ramona Expwy On Ramp to Nuevo Rd Off Ramp	Freeway	4795		7268		3		6470	D	27.2	F	50.6
Cajalco/Ramona Expwy On Ramp to Nuevo Rd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-12 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

# C-12 (cont.)

### C-12 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 215 - No Build

			Peak Hour T	raffic (veh/hr)					Ramp Leve	l of Service	
Southbound		A	М	Р	M	Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
Alessandro Blvd Off Ramp	Diverge	5422	652	8130	599	3	1	D	31.7	F	56.5
Alessandro Blvd WB On Ramp	Merge	4770	241	7531	251	3	1	D	28.2	F	54.1
Alessandro Blvd EB On Ramp	Merge	5011	648	7782	674	3	1	D	32.6	F	58.8
Cactus Ave WB Off Ramp	Diverge	5659	431	8456	485	3	1	D	32.3	F	58.8
Cactus Ave EB Off Ramp	Diverge	5228	264	7971	297	3	1	D	30.3	F	55.4
Cactus Ave On Ramp	Merge	4964	810	7674	941	3	1	D	33.7	F	59.9
Van Buren Blvd Off Ramp	Diverge	5774	706	8615	970	3	1	D	33.2	F	59.9
Van Buren Blvd On Ramp	Merge	5068	786	7645	1079	3	1	D	34.0	F	60.7
Harley Knox Blvd Off Ramp	Diverge	5854	897	8724	1104	3	1	D	33.9	F	60.7
Harley Knox Blvd On Ramp	Merge	4957	425	7620	584	3	1	D	30.6	F	57.1
Cajalco/Ramona Expwy Off Ramp	Diverge	5382	1291	8204	1584	3	1	D	32.8	F	57.1
Cajalco/Ramona Expwy On Ramp	Merge	4091	704	6620	648	3	1	D	28.5	F	50.6
Nuevo Rd Off Ramp	Diverge	6595	634	9068	871	3	1	E	36.3	F	63.1
Nuevo Rd On Ramp	Merge (4)	5961	669	8197	616	3	1	F	46.1	F	61.3
Nuevo Rd On Ramp to D Street Off Ramp	Weave (5)	6303		8009		4		D	34.0	E	47.7

(1) Capacity analysis shown for ramps only. See separate page of C-12 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

(4) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.

(5) For weaving volumes, see Figure C-6c. The ramp to ramp movement was assumed to be zero. Weaving length is 2,000 feet per the I-215 widening project.

# C-12 (cont.)

### C-13 Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 15

			Peak Hour T	raffic (veh/hr)		]		Fr	eeway Mainli	ne and HOV Leve	el of Service (2	2)
Northbound		A	М	Р	M	Number	of Lanes	Freeway	AM F	Peak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 15 Mainline												
South of Temescal Canyon Rd	Freeway	7533		7617		4		8690	D	33.4	D	34.0
South of Temescal Canyon Rd	HOV		2904		2693		2		С	25.0	С	23.2
Temescal Canyon Rd On Ramp to Weirick Rd Off Ramp	Freeway	7912		7802		4		8690	Е	36.4	E	35.5
Temescal Canyon Rd On Ramp to Weirick Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
Weirick Rd On Ramp to Cajalco Rd Off Ramp	Freeway	8688		8369		4		8690	E	44.9	E	41.0
Weirick Rd On Ramp to Cajalco Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
Cajalco Rd On Ramp to El Cerrito Rd Off Ramp	Freeway	9571		8812		4		8690	F	49.6	F	45.6
Cajalco Rd On Ramp to El Cerrito Rd Off Ramp	HOV		2904		2693		2		С	25.0	С	23.2
El Cerrito Rd On Ramp to Ontario Ave Off Ramp	Freeway	9193		7858		4		8690	F	47.6	E	35.9
El Cerrito Rd On Ramp to Ontario Ave Off Ramp	HOV		3600		3600		2		D	32.2	D	32.2
Ontario Ave On Ramp to Magnolia Ave Off Ramp	Freeway	9332		8060		4		8690	F	48.3	E	37.8
Ontario Ave On Ramp to Magnolia Ave Off Ramp	HOV		3600		3600		2		D	32.2	D	32.2
North of Magnolia Ave to SR-91	Freeway	9886		8465		4		8690	F	51.2	E	42.1
North of Magnolia Ave to SR-91	HOV		3600		3600		2		D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-13 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

### C-13 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 15

			Peak Hour T	raffic (veh/hr)					Ramp Leve	l of Service	
Northbound		A	М	Р	М	Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Temescal Canyon Rd Off Ramp	Diverge	7533	360	7617	495	4	1	D	32.3	D	33.4
Temescal Canyon Rd On Ramp	Merge	7173	739	7122	680	4	1	С	25.1	С	24.9
Weirick Rd Off Ramp	Diverge	7912	324	7802	446	4	1	D	33.7	D	33.9
Weirick Rd On Ramp	Merge	7588	1100	7356	1013	4	1	С	25.8	С	25.4
Cajalco Rd Off Ramp	Diverge	8688	821	8369	1129	4	1	F	45.0	F	45.0
Cajalco Rd EB On Ramp	Merge	7867	616	7240	567	4	1	С	26.8	С	25.3
Cajalco Rd WB On Ramp	Merge	8483	1088	7807	1005	4	1	F	49.6	С	26.3
El Cerrito Rd Off Ramp	Diverge	9571	497	8812	683	4	1	F	49.6	F	45.6
El Cerrito Rd On Ramp	Merge	9074	815	8129	656	4	1	F	47.6	С	27.4
Ontario Ave Off Ramp	Diverge	9193	986	7858	907	4	1	F	47.6	E	36.5
Ontario Ave On Ramp	Merge	8207	1125	6951	1109	4	1	F	48.3	С	24.5
Magnolia Ave Off Ramp	Diverge	9332	1250	8060	1021	4	1	F	48.3	F	45.0
Magnolia Ave EB On Ramp	Merge	8082	1203	7039	951	4	1	F	51.2	С	24.7
Magnolia Ave WB On Ramp	Merge	9285	601	7990	475	4	1	F	51.2	С	27.3

(1) Capacity analysis shown for ramps only. See separate page of C-13 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated based on capacity of the adjacent freeway segment.

### C-13 (cont.) Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 15

			Peak Hour T	raffic (veh/hr)		]		Fr	eeway Mainlir	ne and HOV Leve	I of Service (2	2)
Southbound		A	M	PI	M	Number	of Lanes	Freeway	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 15 Mainline												
SR-91 to Magnolia Ave	Freeway	9033		10892		4		8690	F	46.8	F	56.4
SR-91 to Magnolia Ave	HOV		2918		3600		2		С	25.2	D	32.2
Magnolia Ave On Ramp to Ontario Ave Off Ramp	Freeway	7750		10514		4		8690	E	35.1	F	54.4
Magnolia Ave On Ramp to Ontario Ave Off Ramp	HOV		2918		3600		2		С	25.2	D	32.2
Ontario Ave On Ramp to El Cerrito Rd Off Ramp	Freeway	7809		11014		4		8690	E	35.5	F	57.0
Ontario Ave On Ramp to El Cerrito Rd Off Ramp	HOV		2918		3600		2		С	25.2	D	32.2
El Cerrito Rd On Ramp to Cajalco Rd Off Ramp	Freeway	7833		10771		4		8690	E	35.7	F	55.8
El Cerrito Rd On Ramp to Cajalco Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
Cajalco Rd On Ramp to Weirick Rd Off Ramp	Freeway	7440		9774		4		8690	D	32.7	F	50.6
Cajalco Rd On Ramp to Weirick Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
Weirick Rd On Ramp to Temescal Canyon Rd Off Ramp	Freeway	6936		8901		4		8690	D	29.5	F	46.1
Weirick Rd On Ramp to Temescal Canyon Rd Off Ramp	HOV		2376		3267		2		С	20.5	D	28.4
South of Temescal Canyon Rd	Freeway	6771		8474		4		8690	D	28.6	E	42.2
South of Temescal Canyon Rd	HOV		2376		3267		2		С	20.5	D	28.4

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-13 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

### C-13 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 15

			Peak Hour T	raffic (veh/hr)					Ramp Leve	l of Service	
Southbound		A	М	Р	M	Number	of Lanes	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 15 Mainline											
Magnolia Ave Off Ramp	Diverge	9033	2190	10892	1625	4	1	F	46.8	F	56.4
Magnolia Ave On Ramp	Merge	6843	907	9267	1247	4	1	С	24.3	F	54.4
Ontario Ave Off Ramp	Diverge	7750	1289	10514	942	4	1	F	45.0	F	54.4
Ontario Ave On Ramp	Merge	6461	806	9572	1109	4	1	С	23.4	F	57.0
El Cerrito Rd Off Ramp	Diverge	7809	583	11014	802	4	1	D	34.6	F	57.0
El Cerrito Rd On Ramp	Merge	7226	607	10212	559	4	1	С	25.2	F	55.8
Cajalco Rd Off Ramp	Diverge	7833	1396	10771	1920	4	1	F	45.0	F	55.8
Cajalco Rd On Ramp	Merge	6437	1003	8851	923	4	1	С	23.5	F	50.6
Weirick Rd Off Ramp	Diverge	7440	900	9774	1238	4	1	D	34.8	F	50.6
Weirick Rd On Ramp	Merge	6540	396	8536	365	4	1	С	23.4	F	46.1
Temescal Canyon Rd Off Ramp	Diverge	6936	605	8901	832	4	1	D	31.2	F	46.1
Temescal Canyon Rd On Ramp	Merge	6331	440	8069	405	4	1	С	22.9	С	27.6

(1) Capacity analysis shown for ramps only. See separate page of C-13 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated based on capacity of the adjacent freeway segment.

## C-13 (cont.)

#### C-14 Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 215

			Peak Hour T	raffic (veh/hr)				Fr	eeway Mainlin	e and HOV Leve	l of Service (2	)
Northbound		A	N	PI	N	Number of	Lanes (6)	Freeway	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 215 Mainline												
Nuevo Rd On Ramp to Mid County Parkway EB Off Ramp	Freeway	5286		5026		4		8690	С	21.8	С	20.7
Nuevo Rd On Ramp to Mid County Parkway EB Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Mid County Parkway EB Off Ramp to Placentia Ave Off Ramp	Freeway	5056		4709		3		6470	D	29.0	D	26.6
Mid County Parkway EB Off Ramp to Placentia Ave Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Placentia On Ramp to Mid County Parkway WB On Ramp	Freeway	5337		4769		3		6470	D	31.1	D	27.0
Placentia On Ramp to Mid County Parkway WB On Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Mid County Parkway WB On Ramp to Cajalco/Ramona Expwy Off Ramp	Freeway	8408		7596		5		10930	D	27.8	С	24.6
Mid County Parkway WB On Ramp to Cajalco/Ramona Expwy Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cajalco/Ramona Expwy On Ramp to Harley Knox Blvd Off Ramp	Freeway	8427		7456		4		8690	E	41.7	D	32.8
Cajalco/Ramona Expwy On Ramp to Harley Knox Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Harley Knox Blvd On Ramp to Van Buren Blvd Off Ramp	Freeway	8497		7809		4		8690	E	42.5	E	35.5
Van Buren Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Harley Knox On Ramp to Van Buren Blvd On Ramp to Cactus Ave Off Ramp	Freeway	7906		7134		3		6470	F	55.0	F	49.6
Van Buren Blvd On Ramp to Cactus Ave Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
Cactus Ave On Ramp to Alessandro Blvd Off Ramp	Freeway	7722		6964		3		6470	F	53.7	F	48.4
Cactus Ave On Ramp to Alessandro Blvd Off Ramp	HOV		1800		1800		1		D	32.2	D	32.2
North of Alessandro Blvd	Freeway	7370		6640		3		6470	F	51.3	F	46.2
North of Alessandro Blvd	HOV		1800		1800		1		D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-14 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.(6) Number of lanes per SCAG 2040 regional roadway network.

#### C-14 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 215

			Peak Hour T	raffic (veh/hr)					Ramp Leve	l of Service	
Northbound		A	Μ	Р	Μ	Number o	of Lanes (6)	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
D Street On Ramp to Nuevo Rd Off Ramp	Weave (4)	6820		6793		4		E	35.3	D	33.8
Nuevo Rd Off Ramp	Diverge (5)	6820	518	6793	413	4	2	В	10.9	В	10.1
Nuevo Rd On Ramp	Merge (7)	6302	784	6380	446	3	1	С	21.8	С	20.7
Mid County Parkway EB Off Ramp	Diverge	5286	230	5026	317	3	1	D	30.5	D	29.4
Placentia Ave Off Ramp	Diverge	5056	439	4709	604	3	1	D	29.8	D	28.5
Placentia Ave On Ramp	Merge	4617	720	4105	664	3	1	D	31.2	D	28.2
Mid County Parkway WB On Ramp	Merge (7)	5337	3071	4769	2827	3	2	D	27.8	С	24.6
Cajalco/Ramona Expwy Off Ramp	Diverge	8408	871	7596	1198	5	2	В	13.1	В	13.8
Cajalco/Ramona Expwy On Ramp	Merge	7537	890	6398	1058	4	1	С	25.8	С	23.4
Harley Knox Blvd Off Ramp	Diverge	8427	558	7456	518	4	1	E	37.0	D	32.9
Harley Knox Blvd On Ramp	Merge	7869	628	6938	871	4	1	С	26.8	С	24.5
Van Buren Blvd Off Ramp	Diverge	8497	1286	7809	1315	4	2	С	20.3	В	18.8
Van Buren Blvd EB On Ramp	Merge	7211	572	6494	551	3	1	F	54.1	F	49.0
Van Buren Blvd WB On Ramp	Merge	7783	123	7045	89	3	1	F	55.0	F	49.6
Cactus Ave Off Ramp	Diverge	7906	746	7134	942	3	1	F	55.0	F	49.6
Cactus Ave EB On Ramp	Merge	7160	216	6192	297	3	1	F	53.7	F	48.4
Cactus Ave WB On Ramp	Merge	7376	346	6489	475	3	1	F	53.7	F	48.4
Alessandro Blvd Off Ramp	Diverge	7722	1021	6964	940	3	1	F	53.7	F	48.4
Alessandro Blvd On Ramp	Merge	6701	669	6024	616	3	1	F	51.3	F	46.2

(1) Capacity analysis shown for ramps only. See separate page of C-14 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

(4) For weaving volumes, see Figure C-7c. The ramp to ramp movement was assumed to be zero. Weaving length is 2,000 feet per the I-215 widening project.

(5) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.

(6) Number of lanes per SCAG 2040 regional roadway network.

(7) Level of service and density of downstream freeway assumed since lanes are added to freeway at this location.

### C-14 (cont)

#### C-14 (cont.) Horizon Year (2040) Freeway and HOV Lane Capacity Analysis (1) Interstate 215

			Peak Hour T	raffic (veh/hr)				Fr	reeway Mainlir	ne and HOV Leve	el of Service (2	2)
Southbound		A	Μ	Р	M	Number of	f Lanes (6)	Freeway	AM P	eak Hour	PM P	eak Hour
Location	Facility	Freeway	HOV	Freeway	HOV	Freeway	HOV	Capacity (3)	LOS (4)	Density (5)	LOS (4)	Density (5)
I - 215 Mainline												
North of Alessandro Blvd	Freeway	5702		8516		3		6470	D	34.5	F	59.2
North of Alessandro Blvd	HOV		1800		1800		1	6470	D	32.2	D	32.2
Alessandro Blvd On Ramp to Cactus Ave Off Ramp	Freeway	5990		8912		3		6470	E	37.7	F	62.0
Alessandro Blvd On Ramp to Cactus Ave Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Cactus Ave On Ramp to Van Buren Blvd Off Ramp	Freeway	6142		9120		3		6470	E	39.7	F	63.4
Cactus Ave On Ramp to Van Buren Blvd Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Van Buren Blvd On Ramp to Harley Knox Blvd Off Ramp	Freeway	6738		9783		4		8690	D	28.4	F	50.7
Van Buren Blvd On Ramp to Harley Knox Blvd Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Harley Knox Blvd On Ramp to Cajalco/Ramona Expwy Off Ramp	Freeway	6428		9704		4		8690	D	26.8	F	50.3
Harley Knox Blvd On Ramp to Cajalco/Ramona Expwy Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Cajalco/Ramona Expwy On Ramp to Mid County Parkway EB Off Ramp	Freeway	6552		9684		5		10930	С	21.1	D	34.5
Cajalco/Ramona Expwy On Ramp to Mid County Parkway EB Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Mid County Parkway EB Off Ramp to Placentia Off Ramp	Freeway	4039		6229		4		8690	В	16.6	С	25.8
Mid County Parkway EB Off Ramp to Placentia Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Placentia Off Ramp to Placentia On Ramp	Freeway	3446		5418		3		6470	С	19.3	D	31.8
Placentia Off Ramp to Placentia On Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Placentia Ave On Ramp to Mid County Parkway WB On Ramp	Freeway	3983		5912		3		6470	С	22.4	E	36.7
Placentia Ave On Ramp to Mid County Parkway WB On Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2
Mid County Parkway WB On Ramp to Nuevo Rd Off Ramp	Freeway	4265		6171		4		8690	В	17.5	С	25.6
Mid County Parkway WB On Ramp to Nuevo Rd Off Ramp	HOV		1800		1800		1	6470	D	32.2	D	32.2

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-14 for ramps.

(2) One-lane HOV Lane density and level of service calculated using conditions for two freeway lanes and doubling the peak hour traffic.

(3) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(4) LOS = Level of Service.

(5) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

(6) Number of lanes per SCAG 2040 regional roadway network.

#### C-14 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Interstate 215

		Peak Hour Traffic (veh/hr)						Ramp Level of Service			
Southbound		AM		PM		Number of Lanes (6)		AM Peak Hour		PM Peak Hour	
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
I - 215 Mainline											
Alessandro Blvd Off Ramp	Diverge	5702	554	8516	752	3	1	D	32.7	F	59.2
Alessandro Blvd WB On Ramp	Merge	5148	254	7764	346	3	1	D	30.2	F	56.4
Alessandro Blvd EB On Ramp	Merge	5402	588	8110	802	3	1	D	34.1	F	62.0
Cactus Ave WB Off Ramp	Diverge	5990	422	8912	389	3	1	D	33.7	F	62.0
Cactus Ave EB Off Ramp	Diverge	5568	264	8523	243	3	1	D	31.7	F	59.3
Cactus Ave On Ramp	Merge	5304	838	8280	840	3	1	E	35.6	F	63.4
Van Buren Blvd Off Ramp	Diverge	6142	569	9120	782	3	1	D	34.5	F	63.4
Van Buren Blvd On Ramp	Merge (4)	5573	1165	8338	1445	3	1	D	28.4	F	50.7
Harley Knox Blvd Off Ramp	Diverge	6738	766	9783	713	4	1	D	31.2	F	50.7
Harley Knox Blvd On Ramp	Merge	5972	456	9070	634	4	1	С	21.9	F	50.3
Cajalco/Ramona Expwy Off Ramp	Diverge	6428	941	9704	1000	4	1	D	30.9	F	50.3
Cajalco/Ramona Expwy On Ramp	Merge (4)	5487	1065	8704	980	4	2	С	21.1	D	34.5
Mid County Parkway EB Off Ramp	Diverge (5)	6552	2513	9684	3455	5	2	С	21.1	D	34.5
Placentia Ave Off Ramp	Diverge	4039	593	6229	811	4	1	В	19.3	D	29.4
Placentia Ave On Ramp	Merge	3446	537	5418	494	3	1	С	23.9	D	33.4
Mid County Parkway WB On Ramp	Merge (4)	3983	282	5912	259	3	1	В	17.5	С	25.6
Nuevo Rd Off Ramp	Diverge (7)	6065	396	7971	545	3	1	В	17.5	С	25.6
Nuevo Rd On Ramp	Merge (8)	5669	634	7426	583	3	1	E	35.8	F	55.7
Nuevo Rd On Ramp to D Street Off Ramp	Weave (9)	6303		8009		4		D	32.2	E	42.8

(1) Capacity analysis shown for ramps only. See separate page of C-14 for freeway mainline and HOV lanes.

(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

(4) Level of service and density of downstream freeway since lanes are added to the freeway at this point.

(5) Major diverge area. Level of service and density assumed to be the same as upstream freeway segment.

(6) Number of lanes per SCAG 2040 regional roadway network.

(7) Off ramp removes one lane at this location. LOS and density of upstream freeway assumed.

(8) Ramp capacity analysis shown for information only, since this is technically part of a weaving section.

(9) For weaving volumes, see Figure C-7c. The ramp to ramp movement was assumed to be zero. Weaving length is 2,000 feet per the I-215 widening project.

### C-15 Horizon Year (2040) Freeway Capacity Analysis (1) Mid County Parkway

					Freeway Mainline Level of Service					
Eastbound		Peak Hour Traffic (veh/hr)			Freeway	AM Peak Hour		PM Peak Hour		
Location	Facility	AM	PM	Number of Lanes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)	
Mid County Parkway										
I-215 to Redlands Ave Off Ramp	Freeway	2743	3772	3	6470	В	15.4	С	21.2	
Redlands Ave On Ramp to Evans Rd Off Ramp	Freeway	3008	4049	3	6470	В	16.9	С	22.7	
Evans Rd On Ramp to Ramona Expwy Off Ramp	Freeway	2866	3940	3	6470	В	16.1	С	22.1	
Ramona Expwy On Ramp to Bernasconi Rd Off Ramp	Freeway	3377	4643	3	6470	С	19.0	D	26.2	
Bernasconi Rd On Ramp to Reservoir Ave Off Ramp	Freeway	3424	4562	3	6470	С	19.2	С	25.7	
Reservoir Ave On Ramp to Town Center Blvd Off Ramp	Freeway	3197	4396	3	6470	В	18.0	С	24.7	
Town Center Blvd On Ramp to Park Center Blvd Off Ramp	Freeway	2425	3413	3	6470	В	13.6	С	19.2	
Park Center Blvd On Ramp to Warren Rd Off Ramp	Freeway	2684	3517	3	6470	В	15.1	С	19.8	
Warren Rd On Ramp to SR-79	Freeway	1955	2753	3	6470	A	11.0	В	15.5	

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-15 for ramps.

(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

(4) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

### C-15 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Mid County Parkway

		Peak Hour Traffic (veh/hr)				1		Ramp Level of Service			
Eastbound		AM		PM		Number of Lanes		AM Peak Hour		PM Peak Hour	
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
Mid County Parkway											
MCP Northbound/Southbound On Ramps	Merge	2513	230	3455	317	2	1	В	15.4	С	21.2
Redlands Ave Off Ramp	Diverge	2743	392	3772	545	3	1	В	18.0	С	23.8
Redlands Ave On Ramp	Merge	2351	657	3227	822	3	1	В	19.4	С	25.1
Evans Rd Off Ramp	Diverge	3008	483	4049	563	3	1	В	19.7	С	25.3
Evans Rd On Ramp	Merge	2526	340	3486	454	3	1	В	17.7	С	23.4
Ramona Expwy Off Ramp	Diverge	2866	230	3940	317	3	1	В	18.4	С	24.3
Ramona Expwy On Ramp	Merge	2636	741	3623	1020	3	1	С	21.5	D	28.6
Bernasconi Rd Off Ramp	Diverge	3377	274	4643	376	3	1	С	21.3	С	27.8
Bernasconi Rd On Ramp	Merge	3103	321	4267	295	3	1	С	20.5	С	26.1
Reservoir Ave Off Ramp	Diverge	3424	517	4562	533	3	1	С	22.0	С	27.7
Reservoir Ave On Ramp	Merge	2907	290	4029	367	3	1	В	19.2	С	25.5
Town Center Blvd Off Ramp	Diverge	3197	974	4396	1169	3	1	С	21.8	D	28.2
Town Center Blvd On Ramp	Merge	2223	202	3227	186	3	1	В	15.1	В	20.0
Park Center Blvd Off Ramp	Diverge	2425	295	3413	406	3	1	В	16.0	С	21.7
Park Center Blvd On Ramp	Merge	2130	554	3007	510	3	1	В	17.4	С	21.5
Warren Rd Off Ramp	Diverge	2684	975	3517	1191	3	1	В	19.1	С	24.0
Warren Rd On Ramp	Merge	1709	247	2326	427	3	1	В	12.9	В	17.4

(1) Capacity analysis shown for ramps only. See separate page of C-15 for freeway mainline and HOV lanes.
(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

# C-15 (cont.)
### C-15 (cont.) Horizon Year (2040) Freeway Capacity Analysis (1) Mid County Parkway

				Freeway Mainline Level of Service					
Westbound		Peak Hour T	raffic (veh/hr)		Capacity (2)	AM Peak Hour		PM Peak Hour	
Location	Facility	AM	PM	Number of Lanes	Capacity (2)	LOS (3)	Density (4)	LOS (3)	Density (4)
Mid County Parkway									
SR-79 to Warren Rd Off Ramp	Freeway	2356	2250	3	6470	В	13.2	В	12.6
Warren Rd On Ramp to Park Center Blvd Off Ramp	Freeway	3017	3085	3	6470	В	16.9	В	17.3
Park Center Blvd On Ramp to Town Center Blvd Off Ramp	Freeway	2928	2793	3	6470	В	16.4	В	15.7
Town Center Blvd On Ramp to Reservoir Ave Off Ramp	Freeway	3906	3596	3	6470	С	21.9	С	20.2
Reservoir Ave On Ramp to Bernasconi Rd Off Ramp	Freeway	4075	3855	3	6470	С	22.9	С	21.6
Bernasconi Rd On Ramp to Ramona Expwy Off Ramp	Freeway	4126	3799	3	6470	С	23.2	С	21.3
Ramona Expwy On Ramp to Evans Rd Off Ramp	Freeway	3501	3224	3	6470	С	19.7	С	18.1
Evans Rd On Ramp to Redlands Ave Off Ramp	Freeway	3693	3388	3	6470	С	20.7	С	19.0
Redlands Ave On Ramp to I-215	Freeway	3353	3086	3	6470	С	18.8	В	17.3

(1) Capacity Analysis shown for freeway mainline and HOV lanes. See separate page of C-15 for ramps.

(2) Freeway capacity is defined as the capacity at level of service E, expressed in vehicles per hour.

(3) LOS = Level of Service.

(4) Density is expressed in passenger cars/mile/lane. For facilities at level of service F, the density shown is the theoretical density that would occur if all demand could be accomodated.

## C-15 (cont.)

### C-15 (cont.) Horizon Year (2040) Ramp Capacity Analysis (1) Mid County Parkway

			Peak Hour T	raffic (veh/hr)		1			Ramp Leve	el of Service	
Westbound		AM PM		Number of Lanes		AM Peak Hour		PM Peak Hour			
Location	Facility	Freeway	Ramp	Freeway	Ramp	Freeway	Ramp	LOS (2)	Density (3)	LOS (2)	Density (3)
Mid County Parkway											
Warren Rd Off Ramp	Diverge	2356	202	2250	277	3	1	В	15.4	В	15.0
Warren Rd On Ramp	Merge	2154	861	1973	1112	3	1	В	18.5	В	19.1
Park Center Blvd Off Ramp	Diverge	3017	454	3085	624	3	1	В	19.7	С	20.4
Park Center Blvd On Ramp	Merge	2563	362	2461	332	3	1	В	17.4	В	17.3
Town Center Blvd Off Ramp	Diverge	2925	166	2793	228	3	1	В	18.6	В	18.0
Town Center Blvd On Ramp	Merge	2759	1147	2565	1031	3	1	С	25.3	С	23.4
Reservoir Ave Off Ramp	Diverge	3906	238	3596	327	3	1	С	24.0	С	22.5
Reservoir Ave On Ramp	Merge	3668	407	3269	586	3	1	С	24.0	С	23.4
Bernasconi Rd Off Ramp	Diverge	4075	283	3855	364	3	1	С	24.9	С	23.9
Bernasconi Rd On Ramp	Merge	3792	334	3491	308	3	1	С	24.0	С	22.3
Ramona Expwy Off Ramp	Diverge	4126	907	3799	834	3	1	С	26.3	С	24.6
Ramona Expwy On Ramp	Merge	3219	282	2965	259	3	1	С	20.1	В	19.3
Evans Rd Off Ramp	Diverge	3501	403	3224	554	3	1	С	22.2	С	21.0
Evans Rd On Ramp	Merge	3098	595	2670	718	3	1	С	21.6	С	21.4
Redlands Ave Off Ramp	Diverge	3693	724	3388	747	3	1	С	23.8	С	22.3
Redlands Ave On Ramp	Merge	2969	384	2641	445	3	1	С	20.3	В	19.1
MCP Northbound/Southbound Off Ramps	Diverge	282	3071	259	2827	1	2	С	18.8	В	17.3

(1) Capacity analysis shown for ramps only. See separate page of C-15 for freeway mainline and HOV lanes.
(2) LOS = Level of Service.

(3) Density is expressed in passenger cars/mile/lane.

## C-15 (cont.)

### C-16 Existing (2010) Intersection Capacity Analysis I-15 Area

	AM	Peak Hour	PM	Peak Hour
Intersection		Average Delay		Average Delay
	LOS	(sec)	LOS	(sec)
Magnolia Avenue and El Sobrante Road	D	45.1	D	54.7
Magnolia Avenue and I-15 Southbound Ramps	F	>80.0	E	73.1
Magnolia Avenue and I-15 Northbound Ramps	С	20.3	В	12.4
Magnolia Avenue and El Camino Avenue	В	13.3	В	14.7
Ontario Avenue and California Avenue	С	25.5	С	34.2
Ontario Avenue and I-15 Southbound Ramps	С	23.4	В	18.0
Ontario Avenue and I-15 Northbound Ramps	D	36.2	С	28.1
Ontario Avenue and State Street	E	44.8	E	46.8
El Cerrito Road and Bedford Canyon Road	В	15.3	В	18.3
El Cerrito Road and I-15 Southbound Ramps	В	10.6	А	6.5
El Cerrito Road and I-15 Northbound Ramps	D	35.1	С	25.4
El Cerrito Road and Temescal Canyon Road	E	49.7	D	27.7
Cajalco Road and Bedford Canyon Road	А	7.1	В	13.2
Cajalco Road and I-15 Southbound Ramps	С	22.4	С	27.3
Cajalco Road and I-15 Northbound Ramps	В	17.5	В	15.6
Cajalco Road and Temescal Canyon Road	С	28.1	С	27.5
Cajalco Road and Eagle Valley Rd	В	13.2	В	12.6
Weirick Road and Knabe Road	В	10.4	В	13.2
Weirick Road and I-15 Southbound Ramps	В	12.5	В	15.1
Weirick Road and I-15 Northbound Ramps	В	16.3	В	17.2
Weirick Road and Temescal Canyon Road	В	12.4	В	11.8
Temescal Canyon Road and Lawson Drive	С	17.8	С	18.0
Temescal Canyon Road and I-15 Southbound Ramps	В	12.4	В	15.9
Temescal Canyon Road and I-15 Northbound Ramps	С	32.7	С	27.5

Intersection Capacity Analysis Cajalco Road, I-15 to I-215									
	AM	Peak Hour	PM Peak Hour						
Intersection		Average Delay		Average Delay					
	LOS	(sec)	LOS	(sec)					
rra Avenue	В	16.3	В	14.7					
Aatthew Road	С	15.1	В	12.9					
rante Road	В	11	С	20.2					
n Road	В	10.5	В	14.6					
John Road	С	25.9	С	25.5					
Road	С	21.8	В	13.8					
ider Street	F	F >80.0		72.8					
Street	D	D 35.6		26.0					
1 Avenue	F	>50.0	F	>50.0					

	AM	Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Cajalco Road and La Sierra Avenue	В	16.3	В	14.7	
Cajalco Road and Lake Matthew Road	С	15.1	В	12.9	
Cajalco Road and El Sobrante Road	В	11	С	20.2	
Cajalco Road and Gavilan Road	В	10.5	В	14.6	
Cajalco Road and Harley John Road	С	25.9	С	25.5	
Cajalco Road and Wood Road	С	21.8	В	13.8	
Cajalco Road and Alexander Street	F	>80.0	F	72.8	
Cajalco Road and Clark Street	D	35.6	С	26.0	
Cajalco Road and Seaton Avenue	F	>50.0	F	>50.0	

Notes:

">50" – Exceeds 50 seconds, the threshold for level of service F at an unsignalized intersection. ">80" – Exceeds 80 seconds, the threshold for level of service F at a signalized intersection.

### Notes:

">50" – Exceeds 50 seconds, the threshold for level of service F at an unsignalized intersection.">80" – Exceeds 80 seconds, the threshold for level of service F at a signalized intersection.

C-16 (Cont.) Existing (2010)

### C-16 (Cont.) Existing (2010) Intersection Capacity Analysis I-215 Area

	AM	Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Alessandro Blvd and Meridian Parkway	В	19.0	В	11.1	
Alessandro Blvd and I-215 Southbound Ramps	В	10.1	В	10.2	
Alessandro Blvd and I-215 Northbound Ramps	С	24.8	С	23.2	
Alessandro Blvd and Valley Springs Parkway	А	9.4	В	10.4	
Cactus Avenue and Innovation Drive	С	19.5	В	12.8	
Cactus Avenue and I-215 Southbound Ramps	В	11.7	С	22.1	
Cactus Avenue and I-215 Northbound Ramps	В	10.2	А	3.0	
Cactus Avenue and Ellsworth Street	С	27.0	D	47.4	
Van Buren Boulevard and Harmon Street	В	13.6	С	25.9	
Van Buren Boulevard and I-215 Southbound Ramps	F	>50.0	F	>50.0	
Van Buren Boulevard and I-215 Northbound Ramps	E	76.1	С	22.0	
Harley Knox Boulevard and Harvill Avenue	А	9.9	В	12.0	
Harley Knox Boulevard and I-215 Southbound Ramps	С	26.6	С	28.5	
Harley Knox Boulevard and I-215 Northbound Ramps	В	12.1	А	9.2	
Harley Knox Boulevard and Western Way	В	10.8	В	10.4	
Cajalco Road and Harvill Avenue	С	22.1	С	23.8	
Cajalco Road and I-215 Southbound Ramps	С	31.0	D	50.9	
Cajalco Road and I-215 Northbound Ramps	С	22.6	В	17.0	
Ramona Expressway and Webster Avenue	С	20.7	С	21.9	
Placentia Avenue and Harvill Avenue	С	15.4	С	24.6	
Placentia Avenue and East Frontage Road	А	9.1	В	10.1	
Nuevo Road and A Street	E	39.2	D	27.2	
Nuevo Road and I-215 Southbound Ramps	С	29.3	D	38.2	
Nuevo Road and I-215 Northbound Ramps	В	11.9	В	17.7	
Nuevo Road and Old Nuevo Road	В	15.7	В	13.6	

Intersection Perris Boulevard and Markham Street Perris Boulevard and Ramona Expressway Perris Boulevard and Dawes Street Evans Boulevard and Marbella Gate Evans Road and Ramona Expressway Evans Boulevard and Morgan Street Rider Street and Ramona Expressway Lakeview Avenue and Ramona Expressway Reservoir Avenue and 9th Street Hansen Avenue and Ramona Expressway Bridge Street and Ramona Expressway Warren Road and Ramona Expressway Sanderson Avenue and Ramona Expressway Sanderson Avenue and Cottonwood Avenue Lyon Avenue and Ramona Expressway Gilman Springs Road and SR 79 Southbound Ramps Gilman Springs Road and SR 79 Northbound Ramps

Notes:

">50" – Exceeds 50 seconds, the threshold for level of service F at an unsignalized intersection. ">80" – Exceeds 80 seconds, the threshold for level of service F at a signalized intersection.

Notes:

">50" – Exceeds 50 seconds, the threshold for level of service F at an unsignalized intersection.

">80" – Exceeds 80 seconds, the threshold for level of service F at a signalized intersection.

### C-16 (Cont.) Existing (2010) Intersection Capacity Analysis Ramona Expressway, I-215 to SR 79

AM	Peak Hour	PM	Peak Hour
	Average Delay		Average Delay
LOS	(sec)	LOS	(sec)
E	44.3	С	17.8
D	35.6	D	36.4
А	3.4	А	3.3
F	>80.0	С	23.3
D	40.3	С	28.5
С	20.1	В	14.9
В	19.7	С	21.5
D	27.2	С	24.0
В	10.0	А	8.8
В	16.6	В	17.5
С	17.0	С	22.9
В	20.0	С	21.4
D	36.5	С	33.8
В	12.0	В	11.4
В	10.8	В	11.2
E	44.5	F	>80.0
E	49.2	F	>80.0

## C-16 (cont.)

### C-17 Horizon Year (2040) No Build / County General Plan Intersection Capacity Analysis I-15 Area

	AM	Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Magnolia Avenue and El Sobrante Road	F	>80.0	F	>80.0	
Magnolia Avenue and I-15 Southbound Ramps	F	>80.0	F	>80.0	
Magnolia Avenue and I-15 Northbound Ramps	В	18.0	С	23.9	
Magnolia Avenue and El Camino Ave	С	20.1	Е	70.6	
Ontario Avenue and California Avenue	D	51.0	F	>80.0	
Ontario Avenue and I-15 Southbound Ramps	С	23.4	В	15.2	
Ontario Avenue and I-15 Northbound Ramps	С	29.3	С	33.3	
Ontario Avenue and State Street	В	13.0	В	13.2	
El Cerrito Road and Bedford Canyon Road	С	26.7	С	28.0	
El Cerrito Road and I-15 Southbound Ramps	В	17.5	С	22.7	
El Cerrito Road and I-15 Northbound Ramps	D	35.6	С	20.8	
El Cerrito Road and Temescal Canyon Road	С	31.4	С	30.7	
Cajalco Road and Bedford Canyon Road	С	20.1	С	31.1	
Cajalco Road and I-15 Southbound Ramps	С	23.9	С	23.8	
Cajalco Road and I-15 Northbound Ramps	В	10.5	В	14.8	
Cajalco Road and Temescal Canyon Road	E	61.4	F	>80.0	
Weirick Road and Knabe Road	D	39.5	С	31.1	
Weirick Road and I-15 Southbound Ramps	С	22.6	В	16.2	
Weirick Road and I-15 Northbound Ramps	А	9.4	В	11.0	
Weirick Road and Temescal Canyon Road	С	22.2	С	29.3	
Temescal Canyon Road and Lawson Drive	С	20.4	В	18.8	
Temescal Canyon Road and I-15 Southbound Ramps	В	15.5	D	38.4	
Temescal Canyon Road and I-15 Northbound Ramps	С	22.5	С	24.9	

C-17
Horizon `
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		Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Eagle Valley Road and Cajalco Road	С	20.2	В	19.5	
Lake Matthews Road and Cajalco Road	В	11.4	В	18.0	
El Sobrante Road and Calalco Road	В	18.7	В	15.6	
Wood Road and Cajalco Road	С	22.7	С	31.2	
Alexander Street and Cajalco Road	В	18.5	В	17.7	
Clark Street and Cajalco Road	С	30.7	D	38.5	

Notes:

">80" – Exceeds 80 seconds

Notes:

">80" – Exceeds 80 seconds

17 (cont.) n Year (2040) ounty General Plan Capacity Analysis oad, I-15 to I-215

C-17 (cont.) Horizon Year (2040) No Build / County General Plan Intersection Capacity Analysis Ramona Expressway, I-215 to SR 79

# C-17 (cont.) Horizon Year (2040) No Build / County General Plan Intersection Capacity Analysis I-215 Area

	AM	Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Alessandro Blvd and Meridian Parkway	F	>80.0	F	>80.0	
Alessandro Blvd and I-215 Southbound Ramps	E	61.4	F	>80.0	
Alessandro Blvd and I-215 Northbound Ramps	D	53.5	F	>80.0	
Alessandro Blvd and Valley Springs Pkwy	E	74.8	F	>80.0	
Cactus Avenue and Innovation Drive	С	29.9	F	>80.0	
Cactus Avenue and I-215 Southbound Ramps	В	17.4	С	22.4	
Cactus Avenue and I-215 Northbound Ramps	С	26.6	С	33.7	
Cactus Avenue and Ellsworth Street	D	43.5	D	38.7	
Van Buren Boulevard and Meridian Parkway	С	27.2	E	63.8	
Van Buren Boulevard and I-215 Southbound Ramps	В	12.6	В	14.6	
Van Buren Boulevard and I-215 Northbound Ramps	С	21.5	В	15.0	
Harley Knox Blvd and Harvill Avenue	С	20.8	С	21.8	
Harley Knox Blvd and I-215 Southbound Ramps	В	19.6	D	48.8	
Harley Knox Blvd and I-215 Northbound Ramps	В	18.5	В	14.9	
Harley Knox Blvd and Western Way	В	18.7	В	12.2	
Cajalco Road and Harvill Avenue	D	37.4	D	38.3	
Cajalco Road and I-215 Southbound Ramps	С	21.3	С	24.8	
Cajalco Road and I-215 Northbound Ramps	В	19.6	С	24.5	
Cajalco Road and Webster Avenue	С	31.5	D	42.4	
Placentia Avenue and Harvill Avenue	D	36.6	D	38.7	
Placentia Avenue and East Frontage Road	В	18.5	В	18.3	
Nuevo Road and A Street	В	17.4	С	23.1	
Nuevo Road and I-215 Southbound Ramps	С	24.5	С	24.0	
Nuevo Road and I-215 Northbound Ramps	А	8.3	В	15.1	
Nuevo Road and Old Nuevo Road	D	42.8	D	38.4	

Notes:

">80" – Exceeds 80 seconds

		Peak Hour	PM Peak Hour		
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Perris Boulevard and Markham Street	В	20.0	С	20.9	
Perris Boulevard and Ramona Expressway	D	41.5	D	42.2	
Perris Boulevard and Morgan Street	С	28.0	С	29.8	
Redlands Avenue and Ramona Expressway	D	50.0	E	71.8	
Evans Road and Marbella Gate	А	2.9	А	2.0	
Evans Road and Ramona Expressway	E	62.5	E	58.3	
Evans Road and Morgan Street	А	8.6	А	7.6	
Bernasconi Road and New Street	В	14.4	В	15.4	
Bernasconi Road and Ramona Expressway	D	37.1	D	44.7	
Bernasconi Road and Orange Avenue	С	26.7	С	32.3	
Reservoir Avenue and Martin St	В	17.2	В	16.2	
Reservoir Avenue and Ramona Expressway	С	31.5	С	33.0	
Reservoir Avenue and 9th Street	В	14.4	В	13.9	
Town Center Boulevard and Frontage Rd	В	10.8	В	10.3	
Town Center Boulevard and Ramona Expressway	D	48.7	D	43.5	
Town Center Boulevard and 5th Street	С	28.1	С	30.2	
Park Center Boulevard and Marvin Road	С	31.7	С	29.4	
Park Center Boulevard and Ramona Expressway	С	32.6	С	31.3	
Park Center Boulevard and New Street	А	6.9	А	7.4	
Warren Road and Ramona Expressway	D	39.4	С	32.7	
Warren Road and Record Road	В	11.7	В	12.5	
Gilman Springs Road and SR 79 Southbound Ramps	В	17.7	С	22.1	
Gilman Springs Road and SR 79 Northbound Ramps	С	28.6	С	27.0	
Ramona Expressway and SR 79 Southbound Ramps	С	28.0	С	29.7	
Ramona Expressway and SR 79 Northbound Ramps	А	7.1	В	15.3	
Sanderson Avenue and SR 79 WB Ramps	С	20.1	С	24.8	
Sanderson Avenue and SR 79 EB Ramps	Α	8.7	А	9.8	
Sanderson Avenue and Cottonwood Avenue	D	38.0	D	37.7	

Notes:

">80" – Exceeds 80 seconds

### C-18 Horizon Year (2040) Intersection Capacity Analysis I-15 Area

		AM Peak Hour		PM Peak Hour	
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Magnolia Avenue and El Sobrante Road	F	>80.0	F	>80.0	
Magnolia Avenue and I-15 Southbound Ramps	F	>80.0	F	>80.0	
Magnolia Avenue and I-15 Northbound Ramps	В	18.0	С	23.9	
Magnolia Avenue and El Camino Avenue	С	20.1	Е	70.8	
Ontario Avenue and California Avenue	D	51.0	F	>80.0	
Ontario Avenue and I-15 Southbound Ramps	С	23.4	В	15.2	
Ontario Avenue and I-15 Northbound Ramps	С	29.3	С	33.3	
Ontario Avenue and State Street	В	13.0	В	13.2	
El Cerrito Road and Bedford Canyon Road	С	26.7	С	28.0	
El Cerrito Road and I-15 Southbound Ramps	В	17.5	С	22.7	
El Cerrito Road and I-15 Northbound Ramps	D	35.6	С	20.8	
El Cerrito Road and Temescal Canyon Road	С	31.4	С	30.7	
Cajalco Road and Bedford Canyon Road	С	20.1	С	30.9	
Cajalco Road and I-15 Southbound Ramps	С	24.2	С	24.0	
Cajalco Road and I-15 Northbound Ramps	В	10.8	В	15.2	
Cajalco Road and Temescal Canyon Road	E	61.4	F	>80.0	
Weirick Road and Knabe Road	С	26.7	С	28.9	
Weirick Road and I-15 Southbound Ramps	С	22.1	В	16.8	
Weirick Road and I-15 Northbound Ramps	А	9.3	В	11.3	
Weirick Road and Temescal Canyon Road	С	22.1	С	29.2	
Temescal Canyon Road and Lawson Drive	С	20.4	В	18.8	
Temescal Canyon Road and I-15 Southbound Ramps	В	15.5	D	38.8	
Temescal Canyon Road and I-15 Northbound Ramps	С	22.5	С	24.9	

	AM Peak Hour		PM Peak Hour	
Intersection		Average Delay		Average Delay
	LOS	(sec)	LOS	(sec)
Eagle Valley Road and Cajalco Road	С	20.3	В	16.6
ake Mathews Road and Cajalco Road	В	11.7	В	17.7
El Sobrante Road and Calalco Road	В	19.2	В	16.5
Nood Road and Cajalco Road	С	22.7	С	23.8
Alexander Street and Cajalco Road	В	19.4	В	15.1
Clark Street and Cajalco Road	С	26.3	D	42.5

Notes:

">80" – Exceeds 80 seconds

Notes:

">80" – Exceeds 80 seconds

### C-18 (cont.) con Year (2040) n Capacity Analysis Road, I-15 to I-215

# C-18 (cont.) Horizon Year (2040) Intersection Capacity Analysis Mid County Parkway, I-215 to SR 79

# C-18 (cont.) Horizon Year (2040) Intersection Capacity Analysis I-215 Area

		AM Peak Hour		PM Peak Hour	
Intersection		Average Delay		Average Delay	
	LOS	(sec)	LOS	(sec)	
Alessandro Blvd and Meridian Parkway	F	>80.0	F	>80.0	
Alessandro Blvd and I-215 Southbound Ramps	F	>80.0	F	>80.0	
Alessandro Blvd and I-215 Northbound Ramps	F	>80.0	F	>80.0	
Alessandro Blvd and Valley Springs Parkway	F	>80.0	F	>80.0	
Cactus Avenue and Innovation Drive	С	30.8	D	35.8	
Cactus Avenue and I-215 Southbound Ramps	В	17.4	В	19.9	
Cactus Avenue and I-215 Northbound Ramps	С	28.2	D	52.5	
Cactus Avenue and Ellsworth Street	D	40.1	D	36.0	
Van Buren Boulevard and Meridian Parkway	С	28.9	E	77.6	
Van Buren Boulevard and I-215 Southbound Ramps	В	12.4	В	14.0	
Van Buren Boulevard and I-215 Northbound Ramps	С	25.3	С	24.7	
Harley Knox Blvd and Harvill Avenue	С	21.3	С	24.5	
Harley Knox Blvd and I-215 Southbound Ramps	В	17.0	С	20.9	
Harley Knox Blvd and I-215 Northbound Ramps	В	19.6	В	16.3	
Harley Knox Blvd and Western Way	В	10.1	В	10.9	
Cajalco Road and Harvill Avenue	D	46.1	D	41.2	
Cajalco Road and I-215 Southbound Ramps	В	18.7	В	20.0	
Cajalco Road and I-215 Northbound Ramps	С	20.3	С	23.6	
Ramona Expressway and Patterson Avenue	В	18.0	С	26.9	
Ramona Expressway and Webster Avenue	D	40.1	С	34.9	
Placentia Avenue and Harvill Avenue	D	35.3	D	41.5	
Placentia Avenue and I-215 Southbound Ramps	В	15.5	В	17.2	
Placentia Avenue and I-215 Northbound Ramps	В	15.7	В	17.4	
Placentia Avenue and East Frontage Road	А	8.6	А	6.6	
Nuevo Road and A Street	В	19.5	С	21.3	
Nuevo Road and I-215 Southbound Ramps	С	20.3	С	20.6	
Nuevo Road and I-215 Northbound Ramps	А	8.4	А	6.7	
Nuevo Road and Old Nuevo Road	С	33.5	D	39.3	

Notes:

">80" – Exceeds 80 seconds

	AM Peak Hour		PM Peak Hour	
Intersection		Average Delay		Average Delay
	LOS	(sec)	LOS	(sec)
Redlands Ave and Rider Street	С	30.7	С	33.2
Redlands Ave and MCP Westbound Ramps	С	21.5	С	25.7
Redlanda Ave and MCP Eastbound Ramps	В	16.8	В	18.1
Redlands Ave and Placentia Avenue	С	27.2	С	29.7
Evans Road and Rider Street	С	27.4	С	24.6
Evans Road and MCP Westbound Ramps	А	7.9	А	9.7
Evans Road and MCP Eastbound Ramps	А	9.8	А	9.4
Evans Road and Orange Ave	С	34.8	D	42.4
Ramona Expressway and Rider Street	D	38.9	В	13.5
Ramona Expressway and MCP Westbound Ramps	В	13.1	А	8.2
Ramona Expressway and MCP Eastbound Ramps	В	12.6	В	17.4
Ramona Expressway and Orange Ave	С	29.1	D	37.4
Bernasconi Road and New St	В	12.6	В	12.9
Bernasconi Road and MCP Westbound Ramps	В	13.8	В	15.5
Bernasconi Road and MCP Eastbound Ramps	В	14.9	В	14.5
Bernasconi Road and Orange Avenue	С	33.6	D	35.5
Reservoir Avenue and Martin St	D	36.6	D	37.1
Reservoir Avenue and MCP Westbound Ramps	В	16.4	В	16.7
Reservoir Avenue and MCP Eastbound Ramps	В	10.7	В	11.2
Reservoir Avenue and 9th Street	В	16.0	В	16.8
Town Center Boulevard and Frontage Rd	В	12.0	В	13.2
Town Center Boulevard and MCP Westbound Ramps	А	5.9	А	5.4
Town Center Boulevard and MCP Eastbound Ramps	С	21.3	С	21.0
Town Center Boulevard and 5th Street	С	33.3	С	32.6
Park Center Boulevard and Marvin Road	С	33.7	С	32.3
Park Center Boulevard and MCP Westbound Ramps	В	13.5	В	16.1
Park Center Boulevard and MCP Eastbound Ramps	В	11.4	В	11.6
Park Center Boulevard and New Street	А	7.8	А	8.1
Warren Road and Ramona Expressway	С	24.3	С	21.8
Warren Road and MCP Westbound Ramps	А	5.4	А	6.3
Warren Road and MCP Eastbound Ramps	В	12.6	В	11.5
Warren Road and Record Road	В	10.1	В	11.0
Gilman Springs Road and SR 79 Southbound Ramps	В	19.0	В	17.4
Gilman Springs Road and SR 79 Northbound Ramps	В	17.8	С	25.1
Sanderson Ave and MCP	С	34.8	D	51.9
MCP and SR 79	С	25.9	С	33.9
Ramona Expressway and MCP	D	36.6	D	48.8
SR 79 Westbound Ramps and Sanderson Ave	С	24.3	С	26.4
SR 79 Eastbound Ramps and Sanderson Ave	A	9.5	В	12.0
Sanderson Ave and Cottonwood Avenue	D	48.6	D	41.9

Notes:

## C-18 (cont.)

# **ATTACHMENT D**

# PEAK HOUR TRAFFIC FORECASTS YEAR 2040 -

SYSTEMS (FREEWAY TO FREEWAY) INTERCHANGES

### ATTACHMENT D

### PEAK HOUR TRAFFIC FORECASTS YEAR 2040 SYSTEMS (FREEWAY TO FREEWAY) INTERCHANGES







<u>LEGEND</u> XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040







# **ATTACHMENT E**

# PEAK HOUR TRAFFIC FORECASTS YEAR 2040 -

# **SERVICE (LOCAL) INTERCHANGES**

### ATTACHMENT E

### PEAK HOUR TRAFFIC FORECASTS YEAR 2040 SERVICE (LOCAL) INTERCHANGES





<u>LEGEND</u> XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040











<u>LEGEND</u> XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040











LEGEND XXX/YYY - AM/PM PEAK HOUR VOLUMES Projected year - 2040



FOR DISCUSSION PURPOSES ONLY THIS MAP IS A DRAFT DOCLMENT ONLY AND HAS YET TO BE FINALIZED BY ROTO ON THEIR REPRESENTATIVE.



MID COUNTY PARKWAY W S AM / PM PEAK HOUR VOLUMES 800' AT RAMONA EXPWY / ANTELOPE RD 1∕8 MILE E-3



<u>LEGEND</u> XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040











LEGEND XXX/YYY - AM/PM PEAK HOUR VOLUMES Projected year - 2040



FOR DISCUSSION PURPOSES ONLY INIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.









<u>Legend</u> XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040











LEGEND XXX/YYY - Am/Pm Peak Hour Volumes Projected year - 2040



FOR DISCUSSION PURPOSES ONLY THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.











LEGEND XXX/YYY - AM/PM PEAK HOUR VOLUMES Projected year - 2040



FOR DISCUSSION PURPOSES ONLY // THIS MAP IS A DRAFT DOCUMENT ONLY AND WAS YET TO BE FINALIZED BY RECTC OR THEIR REPRESENTATIVE.







E-8







**LEGEND** XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040











**LEGEND** XXX/YYY - AM/PM PEAK HOUR VOLUMES PROJECTED YEAR - 2040







ATTACHMENT F

LAYOUT PLANS

# LAYOUT PLANS

ATTACHMENT F














































ATTACHMENT G TYPICAL SECTIONS, LIFE CYCLE COST ANALYSES, TRAFFIC INDEX MEMORANDUM, PARK AND RIDE LOCATIONS, AND

MAINTENANCE FACILITY LOCATIONS

### ATTACHMENT G

TYPICAL SECTIONS LIFE CYCLE COST ANALYSES TRAFFIC INDEX MEMORANDUM PARK AND RIDE LOCATIONS MAINTENANCE FACILITY LOCATIONS



RETAINING WALL WITH BARRIER

DESIGN DESIG	GNATIONS:
ADT(2010)=	103,000
ADT(2040)=	164,400
V(mph)=	75
DHV=	14,797
D%=	54.0
T%=	5.0

# Sta 1624+00 TO Sta 1641+50

JACOBS MID COUNTY PARKWAY Typical Section 1-215

G-1



**I-215 TYPICAL SECTION** Sta 1527+00.00 TO Sta 1586+50.00 Sta 1641+50.00 TO VAN BUREN Blvd



RCTC

<u>LEGEND</u> AUX Auxiliary -- Clear Recovery Zone CRZ MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

NO SCALE

FOR DISCUSSION PURPOSES ONLY THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.

### \* Applies only to Sta 1771+00 TO Sta 1787+00

**JACOBS** MID COUNTY PARKWAY Typical Section 1-215





**I-215 TYPICAL SECTION** Sta 1586+50.00 TO Sta 1624+00.00





LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed



NO SCALE

**JACOBS** MID COUNTY PARKWAY Typical Section I-215





DESIGN DESIGNATIONS:	
ADT(2010)= N/A	
ADT(2040)=93,800/55,00	0
V(mph)=75	
DHV= 8,769/4,311	
D%= 53.0/52.3	
T%= 5.0	

TABLE A R/W DISTANCE								
HEIGHT OF CUT SLOPE	MIN. DISTANCE							
30'-50'	20′							
50'-75'	25′							
>75′	1/3H & <50							



LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

NO SCALE

**PURPOSES ONLY** THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.











RCTC

<u>LEGEND</u> AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

NO SCALE







DESIGN DESIG	GNATIONS:
ADT(2010)=	N/A
ADT(2040)=	134,000
V(mph)=	75
(AM/PM)DHV=	10,720/12,060
D%=	51.0
Т%=	5.0



LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

FOR DISCUSSION **PURPOSES ONLY** THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.





### Mid County Parkway Project Life Cycle Cost Analysis Form - MCP Mainline

Alternative 1 (Preferred Alternative): Hot Mixed Asphalt (HMA)

Pavement Design Life:	20	Years			
Initial Construction Costs:		_	\$	210,428,811	
Initial Project Support Costs	S:		\$	42,085,762	
Future Maintenance & Reh	abilitatior	n Costs:**	\$	25,656,117	
TOTAL AGENCY COSTS:					\$278,170,690
USER COSTS:					\$1,707,940
TOTAL LIFE CYCLE COS	TS:			_	\$279,878,630

Alternative 2: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life:	20	Years			
Initial Construction Costs:			\$	212,535,776	
Initial Project Support Costs	:		\$	42,507,155	
Future Maintenance & Reha	bilitatio	n Costs:**	\$	21,660,909	
TOTAL AGENCY COSTS:			-		\$276,703,840
USER COSTS:					\$1,809,290
TOTAL LIFE CYCLE COST	S:				\$278,513,130

Reason that this is not Alternative 1:

The difference between Alternatives 1 and 2 is 0.5%, therefore either can be considered the lowest life cycle cost option. HMA was selected as the preferred alternative because it has the lowest initial cost.

Alternative 3: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life: 40	Years			
Initial Construction Costs:	_	\$	279,334,384	
Initial Project Support Costs:		\$	55,866,877	
Future Maintenance & Rehabilitation	n Costs:**	\$	15,784,929	
TOTAL AGENCY COSTS:		_		\$350,986,190
USER COSTS:			-	\$1,503,160
TOTAL LIFE CYCLE COSTS:			-	\$352,489,350

Reason that this is not Alternative 1:

The life-cycle costs for this alternative is 26% and 27% higher than the other alternatives.

\*\* Includes both future maintenance, construction, and project support costs.

NOTE: For analysis purposes, project alternatives whose life-cycle costs are within 10 percent of each other are considered to be equivalent.

### LIFE CYCLE COST ANALYSIS MCP MAINLINE G-7

### Mid County Parkway Project Life Cycle Cost Analysis Form - Ramp A (Typical Ramp)

Alternative 1 (Preferred Alternative): Hot Mixed Asphalt (HMA)

Pavement Design Life:	20	Years		
Initial Construction Costs:			\$ 1,040,669	
Initial Project Support Cost	s:		\$ 208,134	
Future Maintenance & Reh	abilitatio	n Costs:**	\$ 240,097	
TOTAL AGENCY COSTS:				\$1,488,900
USER COSTS:				\$11,120
TOTAL LIFE CYCLE COS	TS:			\$1,500,020

Alternative 2: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life:	20	Years		
Initial Construction Costs:		_	\$ 1,051,707	
Initial Project Support Costs:			\$ 210,341	
Future Maintenance & Rehal	oilitatior	n Costs:**	\$ 202,712	
TOTAL AGENCY COSTS:				\$1,464,760
USER COSTS:			-	\$7,110
TOTAL LIFE CYCLE COST	S:		-	\$1,471,870

Reason that this is not Alternative 1:

The difference between Alternatives 1 and 2 is 2%, therefore either can be considered the lowest life cycle cost option. HMA was selected as the preferred alternative because it has the lowest initial cost.

Alternative 3: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life: 40	Years		
Initial Construction Costs:		\$ 1,382,006	
Initial Project Support Costs:		\$ 276,401	
Future Maintenance & Rehabilita	tion Costs:**	\$ 146,963	
TOTAL AGENCY COSTS:			\$1,805,370
USER COSTS:		-	\$2,760
TOTAL LIFE CYCLE COSTS:		-	\$1,808,130

Reason that this is not Alternative 1:

The life-cycle costs for this alternative is 21% and 23% higher than the other alternatives.

\*\* Includes both future maintenance, construction, and project support costs.

NOTE: For analysis purposes, project alternatives whose life-cycle costs are within 10 percent of each other are considered to be equivalent.

### LIFE CYCLE COST ANALYSIS RAMP A (TYPICAL RAMP) G-8

### Mid County Parkway Project Life Cycle Cost Analysis Form - Ramp B (High Truck Traffic)

Alternative 1 (Preferred Alternative): Hot Mixed Asphalt (HMA)

Pavement Design Life: 20 Y	'ears	
Initial Construction Costs:	\$ 2,617,847	
Initial Project Support Costs:	\$ 523,569	
Future Maintenance & Rehabilitation C	Costs:** \$ 274,394	
TOTAL AGENCY COSTS:		\$3,415,810
USER COSTS:		\$13,260
TOTAL LIFE CYCLE COSTS:	—	\$3,429,070

Alternative 2: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life:	20	Years			
Initial Construction Costs:			\$	2,625,086	
Initial Project Support Costs:			\$	525,017	
Future Maintenance & Rehab	ilitatior	n Costs:**	\$	231,667	
TOTAL AGENCY COSTS:			_		\$ 3,381,770
USER COSTS:					\$6,500
TOTAL LIFE CYCLE COSTS	:			_	\$ 3,388,270

Reason that this is not Alternative 1:

The difference between Alternatives 1 and 2 is 1%, therefore either can be considered the lowest life cycle cost option. HMA was selected as the preferred alternative because it has the lowest initial cost.

Alternative 3: Hot Mixed Asphalt w/ Rubberized Hot Mixed Asphalt (HMA w/RHMA)

Pavement Design Life:	40	Years		
Initial Construction Costs:			\$ 2,841,707	
Initial Project Support Cost	is:		\$ 568,341	
Future Maintenance & Reh	nabilitatio	on Costs:**	\$ 168,822	
TOTAL AGENCY COSTS:				\$3,578,870
USER COSTS:			_	\$2,660
TOTAL LIFE CYCLE COS	STS:			\$3,581,530

Reason that this is not Alternative 1:

The difference between Alternatives 1 and 3 is 4%, therefore either can be considered as the lowest life cycle cost option. HMA was selected as the preferred alternative because it has the lowest initial cost.

Alternative 4: Jointed Plain Concrete Pavement (JPCP)

Pavement Design Life: 40 Years	
Initial Construction Costs:	\$ 2,666,205
Initial Project Support Costs:	\$ 533,241
Future Maintenance & Rehabilitation Costs:**	\$ 36,974
TOTAL AGENCY COSTS:	\$3,236,420
USER COSTS:	\$2,310
TOTAL LIFE CYCLE COSTS:	\$3,238,730

Reason that this is not Alternative 1:

The difference between Alternatives 1 and 4 is 6%, therefore either can be considered as the lowest life cycle cost option. HMA was selected as the preferred alternative because it has the lowest initial cost.

NOTE: For analysis purposes, project alternatives whose life-cycle costs are within 10 percent of each other are considered to be equivalent.

### LIFE CYCLE COST ANALYSIS RAMP B (HIGH TRUCK TRAFFIC) G-9

<sup>\*\*</sup> Includes both future maintenance, construction, and project support costs.

State of California DEPARTMENT OF TRANSPORTATION

### Business, Transportation and Housing Agency

Memorandum

NASSIM ELIAS To: Project Manager

Flex your power! Be energy efficient!

Date: April 9, 2012

08-RIV-MCP PM 0.0/16.3 File: 08-RIV-215- PM 28.0/34.3 Mid County Parkway Project EA: 0F3200 - Rev. Aug 8, 2012

From: MARIA "SOLE" ARANGUIZ Acting Office Chief Office of Transportation System Information, MS 726

Subject: Verification of Traffic Indices (TI) and AADT values for the proposed Mid County Parkway Project

Per your request, we reviewed the Traffic Indices (TI) calculations and AADT values Report for the proposed Mid County Parkway (MCP) project. The TI calculations submitted by Jacobs are based on the horizon years ADT and Truck 5% obtained from the Traffic Technical Report dated February 3, 2012. Therefore, the TI values are acceptable as follows:

MCP Mainline and Ramps Traffic Data:

	2020 AADT (Opening Year)	2030 AADT (10-yr Horizon)	2040 AADT (20-yr Horizon)	2060 AADT (40-yr Horizon)
MCP Mainline	63,600	78,700	93,800	114,500
Ramp A	6,600	9,600	12,600	15,400
Ramp B	3,500	8,400	13,300	16,200

MCP Mainline: Traffic Index (TI)

Lanes # 1, 2 & 3				
Traffic Index (TI) Year <sup>1</sup>	Mainline + first 2' of Shoulder	Outside Shoulder*		
TI <sub>20 =</sub> 10-Year	11.50	7.50		
10-Year (ESAL)	9,453,444	189,069		
$TI_{40} = 20$ -Year	13.00	8.00		

 Year refers to time passed since opening year, not design life
 TI notation defined in HDM 103.1 added for clarity since TI calculation is based on ESAL at design life midpoint per HDM 2. 613.2(2)

Page 2

20-Year (ESAL)	22,534,512	450,690
TI <sub>80</sub> = 40-Year	14.50	9.00
40-Year (ESAL)	54,992,774	1,099,855

\*Section 613.4(2), the TI shall be no less than 2 percent of the project ESALs of the adjacent traffic lane or a TI of 5, whichever is greater.

### Ramp A: Traffic Index (TI)

	Ramp Lanes			
Traffic Index (TI) Year	Ramp Lane + first 2' of Shoulder	Shoulder*		
TI <sub>20</sub> = 10-Year	10.00	6.50		
10-Year (ESAL)	2,882,880	57,658		
TI <sub>40</sub> = 20-Year	11.50	7.00		
20-Year (ESAL)	7,567,560	151,351		
TI <sub>80</sub> = 40-Year	13.00	8.00		
40-Year (ESAL)	18,467,723	369,354		

\*Section 613.4(2), the TI shall be no less than 2 percent of the project ESALs of the adjacent traffic lane or a TI of 5, whichever is greater.

### Ramp B: Traffic Index (TI)

	Ramp Lanes	
Traffic Index (TI) Year	Ramp Lane + first 2' of Shoulder	Shoulder*
$TI_{20} = 10$ -Year	10.00	6.50
10-Year (ESAL)	2,522,520	50,450
TI <sub>40</sub> = 20-Year	11.50	7.00
20-Year (ESAL)	7,987,980	159,760
$TI_{80} = 40$ -Year	13.00	8.00
40-Year (ESAL)	19,493,707	389,874

\*Section 613.4(2), the TI shall be no less than 2 percent of the project ESALs of the adjacent traffic lane or a TI of 5, whichever is greater.

If you have any questions regarding the information above, you may reach me at extension 7017 or Aung Naing at extension 5904.

C: Merideth Cann, Jacobs

### TRAFFIC INDEX MEMORANDUM G-10



ATTACHMENT H COST ESTIMATES

# ATTACHMENT H

### COST ESTIMATES

### MID COUNTY PARKWAY PROJECT COST ESTIMATE

### Project Report Cost Estimate

### PN: 0800000125 (EA: 08-0F3200)

Type of Estimate :	Project Report (PA/ED)
Program Code :	FTIP/STIP
Project Limits :	MCP: PM 0.0/16.3; I-215: PM 28.0/34.3
Description:	New "Mid County Parkway" Freeway from I-215 to SR-79 with freeway-to-freeway connectors at I-215 and SR-79
Scope :	New freeway construction and freeway improvements on I-215
Alternative :	Selected Alternative in the EIR/EIS

	Сι	urrent Cost (2014)	Esc	calated Cost (2019)
ROADWAY ITEMS	\$	587,074,000	\$	680,580,000
STRUCTURE ITEMS	\$	525,588,000	\$	609,301,000
SUBTOTAL CONSTRUCTION COST	\$	1,112,662,000	\$	1,289,881,000
RIGHT OF WAY	\$	236,630,000	\$	322,582,000
TOTAL CAPITAL OUTLAY COST	\$	1,349,292,000	\$	1,612,463,000
PR/ED SUPPORT	\$	45,083,000	\$	45,083,000
PS&E SUPPORT	\$	166,899,000	\$	193,482,000
RIGHT OF WAY SUPPORT	\$	14,446,000	\$	16,747,000
CONSTRUCTION SUPPORT	\$	155,773,000	\$	180,583,000
TOTAL CAPITAL OUTLAY SUPPORT COST*	\$	382,201,000	\$	435,895,000
TOTAL PROJECT COST	\$	1,732,000,000	\$	2,049,000,000

Date of Estimate (Month/Year)	9 / 2014
Estimated Date of Construction Start (Month/Year)	2 / 2018
Number of Working Days	750 Working Days
Number of Plant Establishment Days	125 Days
If Project has been programmed enter Programmed Amount	\$1.691B
Estimated Project Schedule	

### PID Approval December 2004 PA/ED Approval March 2015 PS&E July 2015 through July 2017 RTL October 2017 Begin Construction February 2018

				By sig
Approved by Project				а
Manager	Merideth Cann, P.E.	February 3, 2015	(949) 224-7810	
	Project Manager	Date	Phone	

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PRELIMINARY PROJECT COST ESTIMATE

# Section 1 Earthwork 2 Structural Section 3 Drainage 4 Specialty Items 5 Environmental 6 Traffic Items 7 Detours 8 Minor Items 9 Roadway Mobilization 10 Supplemental Work 11 State Furnished 12 Time-Related OH 13 Contingency

I. ROADWAY ITEMS SUMMARY

### TOTAL ROADWAY ITEMS

Estimate Prepared By :	Gene Ching, P.E., Engineer	February 3, 2015	(909) 974-2742
	Name and Title	Date	Phone
Estimate Reviewed By :	Chao Chen, P.E., Project Engineer	February 3, 2015	(909) 974-2702
	Name and Title	Date	Phone

### ning this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

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	Cost
\$	121,133,000
\$	105,716,000
\$	28,669,000
\$	59,023,000
\$	48,948,000
\$	34,600,000
\$	5,971,000
\$	13,738,000
\$	41,780,000
\$	29,743,000
\$	4,466,000
\$	16,712,000
\$	76,575,000
\$	587,074,000

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### SECTION 1: EARTHWORK

Cost
11,484,000
1,571,774
31,435,480
32,531,751
44,110,301

### TOTAL EARTHWORK SECTION ITEMS \$ 121,133,000

### SECTION 2: STRUCTURAL SECTION

	Unit	Quantity		Unit Price (¢)			Cost	
	Unit	Quantity		Unit Frice (\$)			0031	
Class 2 - Aggregate Subbase	CY	66,570	х	21	=	\$	1,397,970	
Class 2 Aggregate Base	CY	822,591	х	25	=	\$	20,564,775	
Lean Concrete Base	CY	60,075	х	100	=	\$	6,007,500	
Hot Mix Asphalt (Type A)	TON	537,175	х	80	=	\$	42,974,000	
Rubberized Hot Mix Asphalt (Gap Graded)	TON	164,600	х	90	=	\$	14,814,000	
Jointed Plain Concrete Pavement	CY	133,054	х	150	=	\$	19,958,100	
	Class 2 - Aggregate Subbase Class 2 Aggregate Base Lean Concrete Base Hot Mix Asphalt (Type A) Rubberized Hot Mix Asphalt (Gap Graded) Jointed Plain Concrete Pavement	UnitClass 2 - Aggregate SubbaseCYClass 2 Aggregate BaseCYLean Concrete BaseCYHot Mix Asphalt (Type A)TONRubberized Hot Mix Asphalt (Gap Graded)TONJointed Plain Concrete PavementCY	Unit         Quantity           Class 2 - Aggregate Subbase         CY         66,570           Class 2 Aggregate Base         CY         822,591           Lean Concrete Base         CY         60,075           Hot Mix Asphalt (Type A)         TON         537,175           Rubberized Hot Mix Asphalt (Gap Graded)         TON         164,600           Jointed Plain Concrete Pavement         CY         133,054	Unit         Quantity           Class 2 - Aggregate Subbase         CY         66,570         x           Class 2 Aggregate Base         CY         822,591         x           Lean Concrete Base         CY         60,075         x           Hot Mix Asphalt (Type A)         TON         537,175         x           Rubberized Hot Mix Asphalt (Gap Graded)         TON         164,600         x           Jointed Plain Concrete Pavement         CY         133,054         x	UnitQuantityUnit Price (\$)Class 2 - Aggregate SubbaseCY66,570x21Class 2 Aggregate BaseCY822,591x25Lean Concrete BaseCY60,075x100Hot Mix Asphalt (Type A)TON537,175x80Rubberized Hot Mix Asphalt (Gap Graded)TON164,600x90Jointed Plain Concrete PavementCY133,054x150	Unit         Quantity         Unit Price (\$)           Class 2 - Aggregate Subbase         CY         66,570         x         21         =           Class 2 Aggregate Base         CY         822,591         x         25         =           Lean Concrete Base         CY         60,075         x         100         =           Hot Mix Asphalt (Type A)         TON         537,175         x         80         =           Rubberized Hot Mix Asphalt (Gap Graded)         TON         164,600         x         90         =           Jointed Plain Concrete Pavement         CY         133,054         x         150         =	Unit         Quantity         Unit Price (\$)           Class 2 - Aggregate Subbase         CY         66,570         x         21         =         \$           Class 2 Aggregate Base         CY         822,591         x         25         =         \$           Lean Concrete Base         CY         60,075         x         100         =         \$           Hot Mix Asphalt (Type A)         TON         537,175         x         80         =         \$           Rubberized Hot Mix Asphalt (Gap Graded)         TON         164,600         x         90         =         \$           Jointed Plain Concrete Pavement         CY         133,054         x         150         =         \$	Unit         Quantity         Unit Price (\$)         Cost           Class 2 - Aggregate Subbase         CY         66,570         x         21         =         \$         1,397,970           Class 2 Aggregate Base         CY         822,591         x         25         =         \$         20,564,775           Lean Concrete Base         CY         60,075         x         100         =         \$         6,007,500           Hot Mix Asphalt (Type A)         TON         537,175         x         80         =         \$         42,974,000           Rubberized Hot Mix Asphalt (Gap Graded)         TON         164,600         x         90         =         \$         14,814,000           Jointed Plain Concrete Pavement         CY         133,054         x         150         =         \$         19,958,100

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# MCP Structural Section Used in Cost Est. Alternate Option

TOTAL STRUCTURAL SECTION ITEMS \$ 105,716,000

0.20' RHMA-G	0.85' JPCP
0.50' HMA	0.10' HMA BB
1.35' AB - CL2	0.50' LCB
	0.70' AS - CL2

I-215 Structural Section										
Used in Cost Est.	Alternate Option									
1.00' JPCP	0.20' RHMA-G									
0.10' HMA BB	0.40' HMA									
0.50' LCB	1.70' AB - CL2									
0.70' AS - CL2										

### SECTION 3: DRAINAGE

Item code	Unit	Quantity		Unit Price (\$)			Cost	
681103 Edge Drain	LF	29,000	х	25	=	\$	725,000	
XXXXXX Storm Drains (CMP up to 30")	LF	98,660	х	110	=	\$	10,852,600	
XXXXXX Storm Drains (CMP 36" to 60")	LF	19,421	х	200	=	\$	3,884,200	
XXXXXX Storm Drains (CMP over 60")	LF	655	х	700	=	\$	458,500	
XXXXXX Storm Drains (RCB single box)	LF	3,405	х	600	=	\$	2,043,000	
XXXXXX Storm Drains (RCB multiple box)	LF	2,981	х	2,500	=	\$	7,452,500	
XXXXXX Permanent BMP	LS	3,198,000	х	1	=	\$	3,198,000	
XXXXXX Pumping Plants	EA	1	х	55,000	=	\$	55,000	
				TOTAL	DR	AIN	AGE ITEMS	\$ 28,669,000
SECTION 4: SPECIALTY ITEMS								
Item code	Unit	Quantity		Unit Price (\$)			Cost	

Item code	Unit	Quantity
XXXXXX Retaining Walls	SF	519,334
XXXXXX Noise Barriers	SF	144,970
XXXXXX Barriers and Guardrails	LF	102,409

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PRELIMINARY PROJECT COST ESTIMATE

	Unit Price (\$)			Cost									
х	90	=	\$	46,740,060									
х	60	=	\$	8,698,200									
х	35	=	\$	3,584,315									
	TOTAL	\$	59,023,000										

PRELIMINARY PROJECT COST ESTIMATE

### SECTION 5: ENVIRONMENTAL

### SECTION 6: TRAFFIC ITEMS

5A - ENVIRONMENTAL MITIGATION							
Item code	Unit	Quantity		Unit Price (\$)		Cost	
XXXXXX Environmental Mitigation	LS	1	х	16,040,000	=	\$ 16,040,000	
190107 Hazardous Waste Mitigation (ADL)	CY	308,792	х	10	=	\$ 3,087,920	
				Sub	total	Environmental	\$ 19,127,920
5B - LANDSCAPE AND IRRIGATION							
Item code	Unit	Quantity		Unit Price (\$)		Cost	
200001 Highway Planting	AC	386	х	49,120	=	\$ 18,960,320	
				Subtotal Lands	cape	and Irrigation	\$ 18,960,320
5C - NPDES							
Item code	Unit	Quantity		Unit Price (\$)		Cost	
XXXXXX Construction Site BMP	LS	1	х	10,860,000	=	\$ 10,860,000	
Supplemental Work for NPDES							
XXXXXX Some Item	LS	1	х	\$0	=	\$0	
		Subto	otal I	NPDES (Without S	Supp	lemental Work)	\$ 10,860,000
*Applies to all SWPPPs and those WPCPs with sediment control	or soil stabili	zation BMPs.					

\*\*Applies to both SWPPPs and WPCP projects.

\*\*\* Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL \$ 48,948,000

6A - Traffic Electrical								
Item code	Unit	Quantity		Unit Price (\$)			Cost	
XXXXX Lighting	EA	195	х	6,500	=	\$	1,267,500	
XXXXX Traffic Signals	EA	28	х	200,000	=	\$	5,600,000	
XXXXX Ramp Metering	EA	35	х	45,000	=	\$	1,575,000	
XXXXX ITS Elements	LS	1	х	8,000,000	=	\$	8,000,000	
				Subtota	al Ti	affic	c Electrical	\$ 16,442,500
6B - Traffic Signing and Striping								
Item code	Unit	Quantity		Unit Price (\$)			Cost	
566012 Roadside Sign (Two Post)	EA	520	х	500.00	=	\$	260,000	
XXXXX Traffic Delineation Items	Ln-Mi	247	х	10,200	=	\$	2,519,400	
XXXXX Overhead Sign Structures	EA	56	х	250,000	=	\$ 1	14,000,000	
			Sı	ubtotal Traffic Sig	gnin	g al	nd Striping	\$ 16,779,400
6C - Stage Construction and Traffic Handling								
Item code	Unit	Quantity		Unit Price (\$)			Cost	
120100 Traffic Control System	LS	1	х	1,378,000.00	=	\$	1,378,000	
		Subtotal St	age	Construction an	d Ti	raffi	c Handling	\$ 1,378,000
				TOTAL	. TR	AF	FIC ITEMS	\$ 34,600,000

de	Unit	Quantity		Unit Price (\$)	Cost	
X Lighting	EA	195	х	6,500	= \$ 1,267,500	
X Traffic Signals	EA	28	х	200,000	= \$ 5,600,000	
X Ramp Metering	EA	35	х	45,000	= \$ 1,575,000	
X ITS Elements	LS	1	х	8,000,000	= \$ 8,000,000	
				Subtota	al Traffic Electrical	\$ 16,442,500
affic Signing and Striping						
de	Unit	Quantity		Unit Price (\$)	Cost	
2 Roadside Sign (Two Post)	EA	520	х	500.00	= \$ 260,000	
X Traffic Delineation Items	Ln-Mi	247	х	10,200	= \$ 2,519,400	
X Overhead Sign Structures	EA	56	х	250,000	= \$14,000,000	
			Su	ibtotal Traffic Sig	gning and Striping	\$ 16,779,400
age Construction and Traffic Handling						
de	Unit	Quantity		Unit Price (\$)	Cost	
0 Traffic Control System	LS	1	х	1,378,000.00	= \$ 1,378,000	
		Subtotal St	tage	Construction an	d Traffic Handling	\$ 1,378,000
				TOTAL	TRAFFIC ITEMS	\$ 34,600,000

code	Unit	Quantity		Unit Price (\$)		Cost	
XXX Lighting	EA	195	х	6,500	=	\$ 1,267,500	
XXX Traffic Signals	EA	28	х	200,000	=	\$ 5,600,000	
XXX Ramp Metering	EA	35	х	45,000	=	\$ 1,575,000	
XXX ITS Elements	LS	1	х	8,000,000	=	\$ 8,000,000	
				Subtota	al Tra	affic Electrical	\$ 16,442,500
Traffic Signing and Striping							
code	Unit	Quantity		Unit Price (\$)		Cost	
012 Roadside Sign (Two Post)	EA	520	х	500.00	=	\$ 260,000	
XXX Traffic Delineation Items	Ln-Mi	247	х	10,200	=	\$ 2,519,400	
XXX Overhead Sign Structures	EA	56	х	250,000	=	\$14,000,000	
			Sι	ubtotal Traffic Sig	gning	g and Striping	\$ 16,779,400
Stage Construction and Traffic Handling							
code	Unit	Quantity		Unit Price (\$)		Cost	
100 Traffic Control System	LS	1	х	1,378,000.00	=	\$ 1,378,000	
		Subtotal St	age	Construction and	d Tr	affic Handling	\$ 1,378,000
				TOTAL	. TR	AFFIC ITEMS	\$ 34,600,000

PRELIMINARY PROJECT COST ESTIMATE

SECTION 7: DETOURS					SECTION 11: STATE FURNISHED M	ATERIAL	S AND EXF	'E
Include constructing, maintaining, and removal Item code XXXXXX Detour (Assume 1.5% of sections 1 through 6 costs)	<b>Unit</b> LS	<b>Quantity</b> 1	Unit Price (\$) Cost x 5,971,000 = \$ 5,971,000		Item code XXXXXX Resident Engineer Office space	<i>Unit</i> LS	<b>Quantity</b> 1	1
			TOTAL DETOURS \$	5,971,000	Total Section 1-8	\$	417,798,000	
			SUBTOTAL SECTIONS 1-7 \$	404,060,000				
SECTION 8: MINOR ITEMS					SECTION 12: TIME-RELATED OVER	RHEAD		
8A - Americans with Disabilities Act Items ADA Items 8B - Bike Path Items			0.2% \$ 808,120		Estimated Time-Beleated Overhead (TB	O) Percentage	(0% to 10%)	_
Bike Path Items 8C - Other Minor Items Other Minor Items			0.2% \$ 808,120 3.0% \$12,121.800		Item code	Unit	Quantity	-
Total of Section 1-7	\$	404,060,000	x 3.4% = \$13,738,040		XXXXX Time-Related Overhead	\$	417,798,000	>
SECTIONS 9: MOBILIZATION								
Item code					SECTION 13: CONTINGENCY			
999990 Total Section 1-8	\$	417,798,000	x 10% = \$41,779,800	41,780,000	(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%,	, PR 15%, afte	er PR approv	al
SECTION 10: SUPPLEMENTAL WORK					Total Section 1-12	\$	510,499,000	
Item code XXXXXX Transportation Management Plan XXXXXX Supplemental Work Contingency (4% of sections 1 thru 8 costs) XXXXXX Some Item Cost of NPDES 5	Unit LS LS Suppleme	<b>Quantity</b> 1 1 ental Work spe	Unit Price (\$)       Cost         x       13,031,000.00       =       \$13,031,000         x       0.00       =       \$       -         x       =       \$       -					
Total Section 1-8	\$	417,798,000	4% = \$16,711,920					
			TOTAL SUPPLEMENTAL WORK \$	29.743.000				

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### NSES

x	Unit Price (\$) 288,000	=		<i>Cost</i> \$288,000	
	1%	=	\$	4,177,980	
	TOTAL	ST/	ATE F	URNISHED	\$4,466,000
=	4%				
	Unit Price (\$)			Cost	
х	4%	=	9	\$16,712,000	
T	OTAL TIME-RE	LA	TED	OVERHEAD	\$16,712,000

l 10%, Final PS&E 5%)

x 15% = \$76,575,000

TOTAL CONTINGENCY \$76,575,000

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### **II. STRUCTURE ITEMS**

	Bridge 1A - 1	Bridge 1A - 2	Bridge 1A- 3
DATE OF ESTIMATE Bridge Name Bridge Number Structure Type Width (Feet) [out to out] Total Bridge Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	08/01/11 PLACENTIA AVENUE OVERHEAD (WIDEN) 57-XXX CIP/PS CONCRETE SLAB 32.25 LF 125.00 LF 4031 SQFT 1'-9" LF CIDH \$484.85	08/01/11 PLACENTIA AVENUE OVERCROSSING (WIDEN) 57-XXX CIPI/PS CONCRETE BOX GIRDER 26.25 LF 217.00 LF 5696 SQFT 4'-6" LF CIDH \$387.90	06/27/11 MCP-WB / I-215 NB CONNECTOR 57-XXX CIP/PS CONCRETE BOX GIRDER 42.00 LF 1800.00 LF 1800.00 LF 75600 SQFT 7'-0" LF CIDH \$234.06
COST OF EACH STRUCTURE	\$1,955,000	\$2,210,000	\$17,695,000

	Bridge 1A - 4	Bridge 1A - 5	<u>Bridge 1A - 6</u>
DATE OF ESTIMATE Bridge Name Bridge Number Structure Type Width (Feet) [out to out] Total Bridge Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	09/29/11 MCP-WB / I-215 NB ON-RAMP CONNECTOR 57-XXX CIP/PS CONCRETE BOX GIRDER 42.00 LF 384.00 LF 16128 SQFT 6'-6" LF CIDH \$213.95	04/13/11 I-215 SB / MCP-EB CONNECTOR 57-XXX CIP/PS CONCRETE BOX GIRDER 42.00 LF 3219.00 LF 135198.00 SQFT 9'-0" LF CIDH \$220.06	07/22/11 MCP-WB / I-215 SB CONNECTOR 57-XXX CIP/PS CONCRETE BOX GIRDER 47.00 LF 2688.00 LF 126336.0 SQFT 8'-6" LF CIDH \$243.12
COST OF EACH STRUCTURE	\$3,451,000	\$29,752,000	\$30,715,000

	<u>Bridge 1A - 7</u>	<u>Bridge 1A - 10</u>	Bridge 1A - 18
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet)	09/09/11 RAMONA EXPRESSWAY OVERHEAD (WIDEN) 57-XXX CIP/PS CONCRETE SLAB 45.75 LF 125.00 LF	08/01/11 I-215 NB & MCP-EB (INDIAN AVE UC) 57-XXX CIP/PS CONCRETE BOX GIRDER 80.81 LF 160.00 LF	01/28/11 RAMONA EXPRESSWAY OC- TIEBACK WALLS 57-XXX TIEBACK WALL NO. 1 16.05 LF 280.00 LF
Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	5719 SQFT 2'-3" LF CIDH \$499.50	12928.80 SQFT 7'-3" LF CIDH \$261.28	4494.0 SQFT N/A LF CIDH \$268.00
COST OF FACH	\$3 307 000	\$3 378 000	\$1 204 000

	Bridge 1B - 13	Bridge 1B - 14	Bridge 1B - 15
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	05/20/11 PERRIS BLVD OVERCROSSING 57-XXX CIP/PS CONCRETE BOX GIRDER 126.00 LF 248.42 LF 31301 SQFT 5'-6" LF CIDH \$319.52	08/01/11 PLACENTIA AVENUE OVERCROSSING 57-XXX CIP/PS CONCRETE BOX GIRDER 82.00 LF 538.25 LF 44136.50 SQFT 11'-6" LF CIDH \$363.17	05/18/11 REDLANDS AVENUE OVERCROSSING 57-XXX CIP/PS CONCRETE BOX GIRDER 100.00 LF 270.00 LF 27000.0 SQFT 5'-6" LF CIDH \$301.70
COST OF EACH	\$10,001,000	\$16,029,000	\$8,146,000

	Bridge 1B - 16 & 17	<u>Brid</u>
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	08/08/11 PERRIS VALLEY STORM DRAIN UNDERCROSSING 57-XXX CIP/PS CONCRETE BOX GIRDER 150.00 LF 853.00 LF 127950 SQFT 7'-3" LF CIDH \$231.97	Evans Road CIP/PS C 176.7 200.0 35364.6 4'-(
COST OF EACH	\$29,681,000	

	Bridge 2 - 33	Bridge 2 - 34A & B	Bridge 2 - 35A & B
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	09/15/14 BERNASCONI ROAD OVERCROSSING 57-XXX CIP/PS CONCRETE BOX GIRDER 75.50 LF 348.50 LF 26312 SQFT 7'-3" LF CIDH \$318.76	08/07/14 MARTIN STREET UC 57-XXX CIP/PS CONCRETE BOX GIRDER 122.00 LF 508.00 LF 61976.00 SQFT 8'-9" LF CIDH \$280.55	08/12/14 SAN JACINTO RIVER BRIDGE 57-XXX CIP/PS CONCRETE BOX GIRDER 122.00 LF 1953.00 LF 238266.0 SQFT 8'-9" LF CIDH \$274.76
COST OF EACH	\$8,387,000	\$17,387,000	\$65,465,000

	<u>Bridge 2 - 36</u>	<u>Bridge 2 - 37</u>	Bridge 2 - 38
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	05/18/17 MCP - Reservoir Road Overcrossing 57-XXX Cast-In-Place Prestressed Concrete Box Girder 102.37 LF 238.95 LF 24461 SQFT 5'-0" LF CIDH \$232.32	05/18/07 MCP - Town Center Blvd Overcrossing 57-XXX Cast-In-Place Prestressed Concrete Box Girder 110.37 LF 252.76 LF 27896.44 SQFT 5'-6" LF CIDH \$228.37	05/18/07 MCP - Park Center Blvd Overcrossing 57-XXX Cast-In-Place Prestressed Concrete Box Girder 102.37 LF 2322.29 LF 23779.2 SQFT 5'-0" LF CIDH \$222.37
COST OF EACH	\$5,683,000	\$6,371,000	\$5,288,000

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PRELIMINARY PROJECT COST ESTIMATE



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	<u>Bridge 3 - 19</u>	Bridge 3 - 20	Bridge 3 - 21
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	09/30/11 RAMONA EXPRESSWAY AT LINE Z 57-XXX CIP/PS CONCRETE BOX GIRDER 106.00 LF 470.00 LF 470.00 LF 49820 SQFT 3'-3" LF CIDH \$321.78	09/30/11 LINE Z LEFT CHANNEL 57-XXX CIP/PS CONCRETE BOX GIRDER VAR LF 530.00 LF 51125.00 SQFT 3'-9" LF CIDH \$352.02	09/30/11 LINE Z RIGHT CHANNEL 57-XXX CIP/PS CONCRETE BOX GIRDER VAR LF 508.00 LF 46533.0 SQFT 3'-9" LF CIDH \$360.62
COST OF EACH	\$16,031,000	\$17,997,000	\$16,781,000

	<u>Bridge 3 - 39</u>	Bridge 3 - 40	Bridge 3 - 41
DATE OF ESTIMATE	06/01/07	06/01/07	06/01/07
Name	MCP - Warren Road Overcrossing	MCP - Odell Ave Undercrossing	MCP - Cawston Avenue Undercrossin
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	Cast-In-Place Prestressed Concrete Box Girder	Cast-In-Place Prestressed Concrete Box Girder	Cast-In-Place Prestressed Concrete Box Girder
Width (Feet) [out to out]	94.23 LF	139.53 LF	159.74 LF
Total Length (Feet)	259.78 LF	162.98 LF	198.11 LF
Total Area (Square Feet)	24480 SQFT	22741.24 SQFT	31645.5 SQFT
Structure Depth (Feet)	5'-9" LF	7'-6" LF	4'-0" LF
Footing Type (pile or spread)	CIDH	CIDH	CIDH
Cost Per Square Foot	\$212.11	\$298.03	\$257.71
COST OF EACH	\$5,192,000	\$6.778.000	\$8,155,000

	Bridge 3 - 42	Bridge 3 - 43	Bridge 3 - 44
DATE OF ESTIMATE	04/04/07	04/04/07	04/04/07
Name Bridge Number	San Jacinto River Bridge At Sanderson Ave.(Widen) 57-XXX	SR-79 SB/MCP WB Overcrossing 57-XXX	MCP EB - SR79 NB Separation 57-XXX
Structure Type Width (Feet) [out to out] Total Length (Feet)	Cast-In-Place Prestressed Concrete Box Girder 49.05 LF 1225.44 LF	Cast-In-Place Prestressed Concrete Box Girder 41.23 LF 298.48 LF	Cast-In-Place Prestressed Concrete Box Girder 46.15 LF 3777.25 LF
Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread)	60110 SQFT 5'-10" LF CIDH	12306.16 SQFT 7'-3" LF CIDH	174313.1 SQFT 8'-6" LF CIDH
Cost Per Square Foot	\$225.19	\$210.36	\$200.19
COST OF EACH	\$13,536,000	\$2,589,000	\$34,895,000

	Bridge 3 - 45	]	Bridge 3 - 46	Bridge 3 - 47
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	10/08/07 SR-79 SB/MCP WB Separation 57-XXX Cast-In-Place Prestressed Concrete Box Girder 41.23 LF 2646.96 LF 109133 SQFT 8'-6" LF CIDH \$224.53		10/08/07 SR-79 NB/MCP WB Separation 57-XXX Cast-In-Place Prestressed Concrete Box Girder 46.15 LF 2709.28 LF 125032.19 SQFT 8'-6" LF CIDH \$232.63	12/04/07 MCP EB / SR79 SB Separation 57-XXX Cast-In-Place Prestressed Concrete Box Girder 41.23 LF 2277.63 LF 93905.5 SQFT 8'-9" LF CIDH \$258.15
COST OF EACH	\$24,503,000		\$29,086,000	\$24,242,000

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	<u>Bridge 3 - 48</u>	Bridge 3 - 50 (no APS <sup>2</sup> )	Bridge 3 - 51 (No APS <sup>2</sup> )
DATE OF ESTIMATE Name Bridge Number Structure Type Width (Feet) [out to out] Total Length (Feet) Total Area (Square Feet) Structure Depth (Feet) Footing Type (pile or spread) Cost Per Square Foot	10/31/07 Warren Road Bridge 57-XXX Cast-In-Place Prestressed Concrete Box Girder 98.43 LF 180.40 LF 17757 SQFT 8'-3" LF CIDH \$252.15	01/26/15 Ramona Expressway UC (4 bridges) 57-XXX Cast-In-Place Prestressed Concrete Box Girder 185.06 LF 254.00 LF 47005.24 SQFT - LF CIDH \$250.00	01/26/15 MCP Extension UC (2 bridges) 57-XXX Cast-In-Place Prestressed Concrete Box Girder 83.60 LF 870.80 LF 72798.9 SQFT - LF CIDH \$250.00
COST OF EACH	\$4,478,000	\$11.751.000	\$18.200.000

	Bridge 3 - 52 (No APS <sup>2</sup> )	
DATE OF ESTIMATE lame structure Type Vidth (Feet) [out to out] 'otal Length (Feet) 'otal Area (Square Feet) Structure Depth (Feet) 'ooting Type (pile or spread) Cost Per Square Foot	01/26/15 Record Road UC (4 bridges) 57-XXX Cast-In-Place Prestressed Concrete Box Girder 163.38 LF 183.00 LF 29899 SQFT - LF CIDH \$250.00	0.0 0.0 xxx
COST OF EACH	\$7,475,000	

### TOTAL COST OF STRUCTURES<sup>1</sup>

Estimate Prepared By	Sam Xie, P.E.
	Structures Project Engineer

<sup>1</sup>Structure's Estimate includes Overhead and Mobilization. <sup>2</sup>An APS was not prepared and is deferred until the PS&E phase (cost estimate was based on a \$250 per square foot cost)

PRELIMINARY PROJECT COST ESTIMATE



SUBTOTAL COST OF BRIDGES:

\$525,588,000

\$525,588,000

February 3, 2015 Date



### III. RIGHT OF WAY

M)

N)

Fill in all of the available information from the Right of Way data sheet.

A)	A1) A2)	Acquisition, including Excess La SB-1210	nd Purchases, Damages & Goodwill,	\$ \$	139,331,819 2,737,500	
B)	Acquisiti	on of Offsite Mitigation		\$	TBD	
C)	C1) C2)	Utility Relocation (State Share) Potholing (Design Phase)		\$ \$	0 0	
D)	Railroad	Acquisition		\$	0	
E)	Clearand	ce / Demolition		\$	TBD	
F)	Relocati	on Assistance (RAP and/or Last R	esort Housing Costs)	\$	16,783,125	
G)	Title and	Escrow		\$	2,555,000	
H)	Environr	nental Review		\$	10,461,250	
I)	Condem (Items	nation Settlements G & H applied to items A + B)	<u>0%</u>	\$	8,700,000	
J)	Design A	Appreciation Factor	0%	\$	0	
K)	Utility Re	elocation (Construction Cost)		\$	56,061,000	

L)		TOTAL RIGHT OF WAY ESTIMATE	\$236,630,000
	(Excluding Item #8 - Hazardous W	/aste)	

TOTAL R/W ESTIMATE:	Escalated	\$322,582,000

Right of Way Support \$ 14,446,000

Support Cost Estimate	Gene Ching, P.E.	(909) 974-2742
Prepared By	Project Coordinator <sup>1</sup>	Phone
Utility Estimate	Ron Peters, P.E.	(909) 974-2743
Prepared By	Utiliy Coordinator <sup>2</sup>	Phone
R/W Acquistion	Lynette Overcamp, SR/WA	(310) 626-4840
Estimate Prepared By	Right of Way Estimator <sup>3</sup>	Phone

10 of 11

<sup>1</sup> When estimate has Support Costs only <sup>2</sup> When estimate has Utility Relocation <sup>3</sup> When R/W Acquisition is required

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# IV. SUPPORT COST ESTIMATE SUMMARY

		Support Ratio
FUTURE		P3 Total
•		FUTURE
		•
•		
•		
2019	%0:£	2019
2018	3.0%	2018
2017	3.0%	2017
2016	3.0%	2016
2015	3.0%	2015
2014	0.0%	2014
YEAR	FORECASTED SUPPORT ESCALATION RATES*	SB-45 CATEGORY SUPPORT COST

SB-45 CATEGORY SUPPORT COST	2014		2015	2016		2017		2018	2019				FUTURE	P3 Total	s	Support Ratio
PR/ED (PD,PE,PM) (PA/ED in 2014 and prior; escalation does not apply)	\$ 45,083,4	111 \$	45,083,411	\$ 45,083,4	11 \$	45,083,411	÷	45,083,411	\$ 45,083,	411			 	3 45,083	,411	3.34%
PS&E (PS)	\$ 166,899,3	300 \$	171,906,279	\$ 177,063,4	i67 \$	182,375,371	¢	187,846,633	\$ 193,482,	032			40	193,482	000	14.34%
R/W (RW)	\$ 14,446,0	\$ 000	14,879,380	\$ 15,325,7	61 \$	15,785,534	¢	16,259,100	\$ 16,746,	873			40	3 16,747	000	1.24%
CONSTRUCTION (CM)	\$ 155,772,6	380 \$	160,445,860	\$ 165,259,2	36 \$	170,217,013	¢	175,323,524	\$ 180,583,	229			40	3 180,583	000	13.38%
Total Support Cost:	\$ 382,201,5	391 \$	392,314,930	\$ 402,731,5	376 \$	413,461,330	¢	424,512,667	\$ 435,895,	545 \$	-	\$ \$	5	\$ 435,895	,411	32.31%

Note: It is assumed that the Support Costs are already escalated by Programming to the year of expenditure. Use project Programming Sheet data.

Total Capital Cost:	\$1,349,292,000
Total Capital Outlay Support Cost:	\$435,895,411
Overall Percent Support Cost:	32.31%

# V. ESCALATED CONSTRUCTION AND ROW COST SUMMARY Note: Right of way escalated cost are also accounted for on sheet 10 of 11.

2018	MD	750 2	Estimated Date of Construction Start (Monthy Year) Number of Working Days
2018	-	2	Estimated Date of Construction Start (Month/Year)
2014	-	6	Date of Estimate (Month/Year)
Year	/	Month	

YEAR	2014	2015	2016	2017	2018	2019					FUTURE	
FORECASTED CONSTRUCTION ESCALATION RATES*	%0:0	3.0%	3.0%	3.0%	3.0%	3.0%						
ESCALATED CONSTRUCTION COSTS	2014	2015	2016	2017	2018	2019					FUTURE	OTAL ESCALATED COSTS
ROADWAY ITEMS	\$ 587,074,000	0 \$ 604,686,220	\$ 622,826,807	\$ 641,511,611	\$ 660,756,959	\$ 680,579,668	\$ 680,579,668	\$ 680,579,668	\$ 680,579,668	\$ 680,579,668 \$	680,579,668	\$ 680,579,668
STRUCTURE ITEMS	\$ 525,588,000	0 \$ 541,355,640	\$ 557,596,309	\$ 574,324,198	\$ 591,553,924	\$ 609,300,542	\$ 609,300,542	\$ 609,300,542	\$ 609,300,542	\$ 609,300,542 \$	609,300,542	\$ 609,300,542
SUBTOTAL	\$ 1,112,662,000	0 \$ 1,146,041,860	\$ 1,180,423,116	\$ 1,215,835,809	\$ 1,252,310,884	\$ 1,289,880,210	\$ 1,289,880,210	\$ 1,289,880,210	\$ 1,289,880,210	\$ 1,289,880,210 \$	1,289,880,210	\$ 1,289,880,210

ROW		014	2015	2016	2017	2018	2019					FITTIRE	
FORECASTED ROW ESCALATION RATES		%0''	5.0%	5.0%	7.0%	7.0%	8.0%						
ESCALATED ROW COSTS	, N	014	2015	2016	2017	2018	2019					EUTURE 0	OTAL SCALATED SOSTS
RIGHT OF WAY	\$	236,630,000 \$	248,461,500 \$	260,884,575 \$	279,146,495 \$	298,686,750 \$	322,581,690 \$	\$ 322,581,690 \$	322,581,690 \$	322,581,690 \$	322,581,690 \$	322,581,690	\$ 322,581,690

Approved by:

Chao Chen, P.E. Project Control Engineer

February 5, 2015 Date

# **MCP APS LIST**

Note:

Bridges listed in orange tables below had their APS's approved in 2008 in Metric units. Bridges listed in green tables below had their APS's resubmitted after project modification and approved in 2011 and 2014(Segment 2) in English

Segme	ent 1A Bridges		
Bridges re modificat	evised and resubmitted in 2011 (English Units) after project tion		Bridges Approved in 2008 (Metric Units)
Bridge Ref No.	Location / Bridge Name	Bridge Ref No.	Location / Bridge Name
Ч	Placentia Avenue OH (Widen)	N/A	N/A
2	Placentia Avenue OC (Widen)		
3	MCP-WB / I-215-NB Conn		
4	MCP-WB / I-215-NB On-Ramp Conn		
5	I-215-SB / MCP-EB Conn		
9	MCP-WB / I-215-SB Conn		
7	Ramona Exppressway OH (Widen)		
10	I-215-NB / MCP-EB Indian Ave UC		
18	Ramona Expwy OC - Tie Back Walls		
Septre	ant 18 Bridges		
1.300			
Bridges re modificat	evised and resubmitted in 2011 (English Units) after project rion		Bridses Annroved in 2008 (Metric Units)
Bridge Ref		Bridge Ref	
No.	Location	No.	Location
13	Perris Blvd. OC	30 & 31	Evans Road UC (Left & Right)
14	Placentia Ave OC		
15	Redlands Ave OC		
16 & 17	Perris Valley Storm Drain Undercrossing (Left & Right)		
Segme	ent 2 Bridges		
Bridges re	evised and resubmitted in 2014 (English Units) after project		
modificat	tion		Bridges Approved in 2008 (Metric Units)
Bridge Ref		Bridge Ref	
.0N		.0 <b>N</b> I	
33		32	Kamona Expressway Undercrossing
34A&B 35A&B	Marcin Street UC (Lt & Kt) San lacinto River Rridge (I + & R+)		
		36	Reservoir Road Overcrossing
		37	Town Center Blvd Overcrossing
		38	Park Center Blvd Overcrossing
Segme	ent 3 Bridges		
Bridges re	ovised and resubmitted in 2011 (English Units) after nroiect		
modificat	במאפט מווע ובפעמווווניסע ווו בסובר (בווקופוו סווונפ) מונכו מיטסכני נוסח		Bridges Approved in 2008 (Metric Units)
Bridge Ref		Bridge Ref	
<b>NO.</b>		No.	Location
TY 20	Kamona Expwy Bridge at Line 2	34	Warren Koad Uvercrossing
20	Line Z Channel UC (Left)	40	Odell Ave Undercrossing

21	Line Z Channel UC (Right)	41	Cawston Ave Undercrossing
		42	San Jacinto River Bridge at Sanderson Ave (Widen)
		43	SR-79 SB / MCP WB Overcrossing
SR-79 Brid	ges - APS was not prepared and is deferred until	44	MCP EB / SR-79 NB Separation
PS&E phas	se (cost estimate based solely on square footage cost)	45	SR-79 SB / MCP WB Separation
Bridge		46	SR-79 NB - MCP WB Separation
Ref No.	Location	47	MCP EB / SR-79 SB Separation
50	Ramona Expressway UC (4 bridges)	48	Warren Road Bridge
51	MCP Extension UC (2 bridges)		
52	Record Road UC (4 bridges)		

6-H **MCP APS LIST** 



**TRANSPORTATION** L 0 DEPARTMENT 1 ALIFORNIA U LL. Ō ЦШ ∢ 5 THE FOR REPARED

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DESIGNED BY K. Allam	DATE 8/1/2011	
DRAWN BY I. Karkoutli	DATE 8/1/2011	
CHECKED BY A. Moubayed	DATE 8/1/2011	PRC
APPROVED	DATE	

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

H-B-1



H-B-2


H-B-3a



H-B-3b



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### H-B-3c



FILE => ...\9395\_a\_GP\_MCP-I-215-NB On-Ramp.dgn



FILE => ... \9395\_a\_GP\_1-215 SB MCP-EB Conn.dgn

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CONTRACT NO .:

H-B-5a



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FILE => ... \9395\_a\_GP\_1-215 \$8 MCP-EB Conn\_\$P01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT		
08	RIV	MCP	0.0/16.3		
RIVERSIDE COUNTY TRANSPORTATION COMMISSION 4080 LEMON STREET, 3rd Floor P.O. BOX, 12008 RIVERSIDE, CA 92502-2208					
JACOBS 3850 VINE ST, Suite 120 RIVERSIDE, CA 92507 (951) 684-7802					



CONTRACT NO .:

# H-B-5b



H-B-5c



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FILE => ... \9395\_a\_GP\_I-215 SB MCP-EB Conn\_SP03.dgn

H-B-5d





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT		
08	RIV	MCP	0.0/16.3		
RIVERSIDE COUNTY TRANSPORTATION COMMISSION 4080 LEMON STREET, 3rd Floor P.O. 80X, 12008 RIVERSIDE, CA 92502-2208					
JACOBS 3850 VINE ST, Suite 120 RIVERSIDE, CA 92507 (951) 684-7802					



## H-B-5e



FILE => ... \9395\_a\_GP\_MCP WB\_I-215 SB CONN.dgn

H-B-6a



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ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

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ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

FILE => ... \9395\_a\_GP\_MCP WB\_I-215 SB CONN\_SP-3.dgn

H-B-6d

CONTRACT NO .:





FILE => ... \939S\_a\_GP\_MCP-EB\_Indian.dgn









H-B-16/17



H-B-18a



H-B-18b









ADVANCE PLANNING STUDY SHEET (METRIC) (REY. 10/27/05)

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## H-B-30/31



ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

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FILE => Ramona Expwy Br-APS01.dgn















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FILE => Odeli Ave UC-APS01.dgn



ADVANCE PLANNING STUDY SHEET (WETRIC) (REV. 10/27/05)

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FILE => Cawston! Ave UC-APS01.dgr


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H-B-42



H-B-43



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H-B-44a



ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

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FILE => MCP EB SR-79 NB Sep-APS sp01.dgn

H-B-44b



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H-B-44c



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ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

FILE => SR-79 SB MCP WB Sep-APSO1 gp.dgn

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![](_page_294_Figure_1.jpeg)

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

FILE => SR-79 S8 MCP W8 Sep-APS sp01.dgn

H-B-45b

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![](_page_295_Figure_1.jpeg)

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

## H-B-45c

![](_page_296_Figure_0.jpeg)

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

FILE => SR-79 SB MCP WB Sep-AP5 sp03.dgn

H-B-45d

![](_page_297_Figure_0.jpeg)

3

H-B-46a

Total Length of Bridge along § SR-79 NB/MCP WB Sep = 826.000 Frame 1 = 219.20031.700 48,500 6 Spans @ 64.500 = 387.000 10.000 BB ~ FG-600 mm CIDH <u>11.030 Min</u> Vert Clr Concrete Pile Abut 1 MCP WB On-Ramp 6. 5 Approx OG along 3.435 Rt of \$ SR-79 NB/MCP WB Sep Bent 2 Bent 3 Bent 4 Bent 5 Datum Elev 420.000 4+00 5+00 **DEVELOPED ELEVATION** 1:500 Proposed ~ Retaining Wall, see Road Plans 50.0 R=280.000 imn 103+98.291 EC -\$\_SR-79 SB/MCP WB OC  $\langle 2 \rangle$ 0 N 88°16'17" E { 4+00 3.6 Hinge A <u>SR-79 NB/MCP WB Sep 4+04.183 =</u> /MCP WB On-Romp 104+14.929 > \$ SR-79 NB/MCP WB Sep i/ then a in l m 200 NIM TO Perris h |4+00 N 87°43'05" W 5+00 n'i 3.0 (3)-57014-12" R=440.000 104+66,365 BC 3-R=440.000 <sup>A</sup>O/A\_A\_ BB 3+47.138 Elev 453.627 Toe of fill Top of fill N 87°43'05" W 2 0 3.6 4400 5÷00 1) \$ MCP EB/SR-79 NB Sep 3.0 R=280.000 § MCP ₩B On-Ramp CURVE DATA PLAN 1 § SR-79 NB/MCP WB Sep 2 <u>\$ MCP WB On-Ramp</u> 1:500 R = 280.000  $\Delta = 35^{\circ} 43'21''$  T = 90.228 L = 174.573 $\begin{array}{rcl} R &=& 440.000 \\ \Delta &=& 90^{\circ} 41'37' \\ T &=& 445.359 \end{array}$ Note: Assumed CIDH Pile Foundation. L = 696,477 DESIGNED BY Mohammed Atiqullah DATE 10/09/07 3 § MCP EB/SR-79 NB Sep (4) <u>§ MCP WB On-Ra</u>mp DRAWN BY DATE 10/09/07  $\begin{array}{rcl} R &=& 440.000\\ \Delta &=& 95^{\circ} 45'44''\\ T &=& 486.634\\ L &=& 735.400 \end{array}$  $\begin{array}{rcl} R &=& 280.000\\ \Delta &=& 31^{\circ} 18'23''\\ T &=& 78.457\\ L &=& 152.991 \end{array}$ Norman Morales CHECKED BY Ayman Salama DATE 10/09/07  $\mathcal{O}$ APPROVED DATE

ADVANCE PLANNING STUDY SHEET (METRIC) (REV, 10/27/05)

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FILE => SR-79 N8 MCP W8 Sep-APS sp01.dgn

![](_page_298_Figure_3.jpeg)

## H-B-46b

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![](_page_299_Figure_1.jpeg)

FILE => SR-79 NB MCP WB Sep-APS sp02.dgn

H-B-46c

![](_page_300_Figure_0.jpeg)

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

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FILE => SR-79 NB MCP WB Sep-APS sp03.dgn

![](_page_300_Figure_3.jpeg)

	DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT		
	08	RIV	MCP			
ic	RIVERSIDE COUNTY TRANSPORTATION COMMISSION 4080 LEMON STREET, 3rd Floor P.O. Box 12008 RIVERSIDE, CA 92502-2208					
	CH2N 3 HUT SANTA	A HILL TON CENTRE ANA, CALIFO	DRIVE, SUITE XRNIA 92707	200		

## STRUCTURE PLAN No. 3

ALI	L DIMENS	SIONS	ARE 3	EN
METERS	UNLESS	OTHE	RWISE	SHOWN

	PLANNIN	G STUDY
TMAN SALAMA	SR-79 NB/MCP	WB SEPARATION
	BRIDGE NO.	cu 08
	scale: As Noted	EA OF 3200

## H-B-46d

![](_page_301_Figure_0.jpeg)

H-B-47a

![](_page_302_Figure_0.jpeg)

ADVANCE PLANNING STUDY SHEET (NETRIC) (REV. 10/27/05)

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FILE => MCP EB-SR 79 SB Sep-APS sp01.dgn

![](_page_302_Figure_3.jpeg)

	DIST	COUNTY	ROUTE	KILOWETER POST TOTAL PROJECT
	08	RIV	MCP	
C	RIVER 4080 P.O. B RIVERS	SIDE COUNTY LEMON STREE OX 12008 SIDE, CA 925	TRANSPORTAT	ION COMMISSION
	CH2N 3 HUT SANTA	HILL TON CENTRE ANA, CALIFO	DRIVE, SUITE RNIA 92707	200

	PLANNING STUDY				
AN SALAMA	MCP	EB/SR-79	SB	SEPARATION	
	BRIDGE N	D	cu		
	SCALE	As Noted	EA	08-227-0F3200	

H-B-47b

**TRANSPORTATION** Total Length Bridge along \$ MCP EB/SR-79 SB SEP = 694.400 Frame 2 = 253.4003 Spans @ 65.500 = 196.500 4 Spaces @ 56.900 = 227.600 **Ц** € Hinge A-5.742 Mii Vert Cir DEPARTMENT Sanderson Ave Approx OG along 10.635 Rt of § MCP EB/SR-79 SB Sep Bent 5 Datum Elev 430.000 Bent 6 Bent 7 Bent 8 7+00 8+00 DEVELOPED ELEVATION 1:500 1 ALIFORNIA MCP EB/SR-79 SB Sep 6+67.831 = Sanderson Ave § MCP EB/SR-79 SB Sep 8+00 Ű 0 7+00 R=600.000  $(\mathbf{\bar{1}})$ Ч О Ц (Ш Hinge B ∢ -Hinge A F S THE PLAN 1:500 0 ١<u>Ē</u> С Ш Note: Assumed CIDH Pile Foundation. 4 CURVE DATA DESIGNED BY Mohammed Atiquilah REP DATE 12/05/07 1 S MCP EB/SR-79 SB Sep R = 600.000  $\Delta = 80^{\circ}57'26''$  T = 512.062 L = 847.783DRAWN BY DATE 12/05/07 Norman Morales CHECKED BY Ayman Salama ٥. DATE 12/05/07 DESIGN OVERSICHT APPROVED DATE SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

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FILE => MCP EB-SP 79 SB Sep APS sp02.dgn

![](_page_303_Figure_3.jpeg)

H-B-47c

![](_page_304_Figure_0.jpeg)

ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 10/27/05)

FILE => MCP EB-SR 79 SB Sep-APS sp03.dgn

	Callins	DIST	COUNTY	ROLITE	KILONETER POS TOTAL PROJECT
	Carbans	08	RIV	MCP	
	etric	RIVER:	SIDE COUNTY LEMON STREE	TRANSPORTATI	ION COMMISSION
		CH2N 3 Harr	HILL	DRIVE. SUITE	200
		SANTA	ANA, CALIFO	RNIA 92707	
FG					
mm CIDH crete Pile					
Legend, se	e "Structure Plan I	No. 1	" sheet.		
Blvd					
of fill					
B 11+19.00 Liev 448.42	0 9				
Top of fill					
N 030-					
53'5	4" W				
12+14.750	EC				
		<b>-</b>	<b></b> .		_
	SIRUCTU		PLA	N NO. E IN	3
	METERS UNL	EŠS	OTHERWI	SESHOWN	
N 641 AVA	PLANN	IIN	<u>g st</u>	UDY	
CT ENGINEER	MCP EB/SR-	79	SB S	EPARA	TION
	BRIDGE NO.		CU		200
	SCALES MO NUTEU		LEA US	0-221-UFS	200

H-B-47d

![](_page_305_Figure_0.jpeg)

TRANSPORTATION L 0 DEPARTMENT 1 CALIFORNIA L 0 ш F 4 F \$ ш I F 22 0 L 0 AREI REP

FILE => Warren Bridge OC-APS01.dgn

H-B-48

**ATTACHMENT I** 

**RIGHT OF WAY DATA SHEETS** 

# ATTACHMENT I

## **RIGHT OF WAY DATA SHEETS**

RIGH (Form #)	TOF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES 17-EX-21 Page 1 of 5	NEW 12/2007)	RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGE		
To:	District Division Chief Date: _11/17/2014	R/W Pag	V Data Sheet - Local Public Agencies e 2 of 5		
	Division of Right of Way and Land Surveys		III. Parcel Information (Land and Improvements)		
	Co. <u>RIV</u> Rte. <u>215 PM 28.0/34.3</u> F A (0F3200) 0800000125		A ro there any property rights required within the proposed p	roject	
Attention:	R/W Local Programs		Are more any property rights required whilm are proposed p	), ojeet	
Subject:	RIGHT OF WAY DATA SHEET - LOCAL PUBLIC AGENCIES		No YesX (Complete the following.)		
Project D	bescription:		Part Ta	ke	
	Right of way necessary for the subject project will be the responsibility of Riverside County Transp Commission.	ortation	A. Number of Vacant Land Parcels98	_	
	The information in this data sheet was developed by Epic Land Solutions. Inc.		B. Number of Single Family Residential Units 28		
	I. <u>Right of Way Engineering</u>		C. Number of Multifamily Residential Units 5		
	Will Right of Way Engineering be required for this project?		D. Number of Commercial/Industrial Parcels 79		
	• No • Yes <u>X</u>		E. Number of Farm/Agricultural Parcels20		
	Hard copy (base map) <u>X</u>		F. Permanent and/or Temporary Easements 0		
	Acquisition Documents <u>X</u>		G. Other Parcels (define in "Remarks" section) 9		
	R/W Record Map		Totals _239		
	• Record of Survey <u>X</u>		"Other" parcels include 8 transportation (Caltrans), 1 public	(City	
	II. <u>Engineering Surveys</u>		Provide a general description of the right of way and excess critical, or sensitive parcels, etc.)	lands	
	1. Is any surveying or photogrammetric mapping required?				
	No Yes (Complete the following.)		The project will acquire properties with various zoning and uses and Residential. Included in these acquisitions, is a dairy farm, a	such id sev	
	2. Datum Requirements		W Dediagtions		
	<ul> <li>Yes X Project will adhere to the following criteria:</li> <li>Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and English and measures.</li> </ul>	system of units	Are there any property rights which have been acquired, or a "dedication" process for the Project?	nticiŗ	
	<ul><li>Vertical - datum policy is NAVD 88.</li><li>Units - metric is not required.</li></ul>		No X Yes (Complete the following.	)	
	No Provide an explanation on additional page.		Number of dedicated parcels	liter i	
	3. Will land survey monument perpetuation be scoped into the project, if required?		maye the dedication parcells) been accepted by the multicipa	III Y II	
	Yes X		V. <u>Excess Lands / Relinquishments</u>		
	No Provide explanation on additional page.		Are there Caltrans property rights which may become exces	a land	
			No X Yes (Provide an explanation of	on add	

EXHIBIT ES (Cont.) 17-EX-21 (NEW 12/2007) Page 2 of 5

t limits?

ke	Full Take	Estimate \$
_	70	\$ _60,251,760
	82	\$_33,673,325
	17	\$11,050,000
	29	\$8,890,369
	1	\$_39,059,339
	0	\$_0
	0	\$ _14,145,401
	199	\$

of Perris).

s required (zoning, use, improvements,

as Agricultural, Vacant land, Commercial, everal small business and homes.

ipate will be acquired, through the

involved?

nds or potential relinquishment areas?

lditional page.)

R/W Data Sheet - Local Public Agencies Page 3 of 5

#### VI. Relocation Information

### Are relocation displacements anticipated?

No \_\_\_\_\_ Yes <u>X</u> (Complete the following.)

A. Number of Single Family Residential Units Estimated RAP Payments	82	\$6,206,476
B. Number of Multifamily Residential Units Estimated RAP Payments	17	\$ 1,049,024
C. Number of Business/Nonprofit Estimated RAP Payments	29	\$ 4,874,476
D. Number of Farms Estimated RAP Payments	_1	\$ 1,368,524
E. Other (define in the "Remarks" section) Estimated RAP Payments	0	\$_0
Totals	128	\$ 13.498.500

### VII. Utility Relocation Information

Do you anticipate any utility facilities or utility rights of way to be affected?

No Yes X (Complete the following.) See Attached Utility Information Sheet

Total estimated cost of State's obligation for utility relocation on this project: \$56,061,000

Any additional information concerning utility involvement on this project? Yes. See attached Utility Information Sheet.

#### **RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES (Cont.)** (Form #)

R/W Data Sheet - Local Public Agencies Page 4 of 5

### VIII. Rail Information

### Are railroad facilities or railroad rights of way affected?

No	Yes X	(Complete	the foll
Government La	nd Inform	ation Sheet	

Describe railroad facilities or railroad rights of way affected.

Widening of two existing overhead crossings at Cajalco/Ramona Expressway and Placentia Avenue over the San Jacinto Branch Line owned by the Riverside County Transportation Commission's (RCTC).

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. RCTC (Riverside County Transportation Commission)	Overhead Grade Separation	

Discuss types of agreements and rights required from the railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved?

Grade separations requiring construction and updated maintenance agreements. Temporary construction easements (TCE) will be required. Update to aerial easements will be required. C&M Agreement, Service Contract, and OE Clearances will be required.

### IX. <u>Clearance Information</u>

### Are there improvements that require clearance?

No <u>X</u> Yes (Complete the following.)

A. Number of Structures to be Demolished Estimated Cost of Demolition

### X. Hazardous Materials/Waste

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain

hazardous materials? None X Yes (Explain in the "Remarks" section.)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain

hazardous waste? None Yes X (Explain in the "Remarks" section.)

## XI. <u>Project Scheduling</u>

	Proposed
* Preliminary Engineering, Surveys	9
* R/W Engineering Submittals	9
* R/W Appraisals/Acquisition	18
Proposed Environmental Clearance	
Proposed R/W Certification	

EXHIBIT 17-EX-21 (NEW 12/2007) Page 4 of 5

### owing.) See Attached Railroad and

\$

lead time	Completion date
(months)	2015
(months)	2015
(months)	2016
	2016
	2016

RIGHT OF WAY DATA SHEET FOI (Form #)	R LOCAL PUBLI	C AGENCIES (Cont.) EXHII Page 5	BIT -21 (NEW 12/2007) 5 of 5	STATE ( UTIL Form #	DF CALIFORNIA – DEPARTMENT OF TRANSPORTATION ITY INFORMATION SHEET
R/W Data Sheet - Local Public Agencies Page 5 of 5				1. Na TH SC	me of utility companies involved in project: IE GAS COMPANY VI E Al
XII. Proposed Funding				EA M	ETROPOLITAN WATER DISTRICT
	Local	State Federal	Other	2. Ty	pes of facilities and agreements required:
Acquisition Utilities Released on Assistance Program	<u>\$400 Million</u> 			G/ EI	AS SI JECTRICAL CONDUITS C.
R/W Support Cost (Eng. Appraisals, etc.)	<u>دد</u>			W IR Al	ATER SUPPLY W RIGATION LINES RI ERIAL ELECTRICAL W
XIII. <i>Remarks</i> Environmental testing is recc	ommended to determin	ne if any hazardous waste material exis	sts in a few	J. IS	ere are utilities located longitudinally and adjacent ( way. These utilities will be relocated outside of the m
parcels					sposition of longitudinal encroachment(s): Relocation required. Exception to policy needed. Other, Explain.
				4. Ac or	lditional information concerning utility involvements or species seasons, customer service seasons (no transmiss
				Re re be	elocation of electrical utility poles outside of MCP Ri sult in longer spans and raising power lines to meet v required and need to be ordered at least 12 months
				Rene	elocation of pump/lift and pressure reducing stations ed to be manufactured. Since the well appears new,
Project Sponsor Consultant Prepared by: Epic Land Solutions 3850 Vine Street, Suite 200 Birgeride CA 02507	s, Inc.	Project Sponsor: RCTC Reviewed and Approved by:			
Agrette Duerean		Jule Struft	<u> </u>	5. PA Ta \$ No	ACS Input Information tal estimated cost of State's obligation for utility reloca 56,061,000 Die: Total estimated cost to include any Department o
		Deputy Kynte	Duto		access controlled right of way and acquire any ne Utility Involv U4-1 -2
		7 1/ 2			-3 -4 <u>121</u>
123/14 Date		Date 3 - 9 - 2013		Pr	Enally Putur
Caltrans Reviewed and approved based or	n information provided	d to date:		R	onald J. Peters, P.E JACOBS
Rebuece Gue	iado	2/26/15			ALTER

EXHIBIT 4-EX-5 (REV 3/2004) Page 1 of 1

VERIZON ADELPHIA

SEWER CABLE TV TELEPHONE WELL AND PUMP STATION RECLAIMED WATER SAMPLING STATION WATER PUMP STATION sting or proposed access controlled right of way? Explain.

djacent to existing and proposed access controlled right e of the new MCP Right -of-Way.

ments on this project, i.e., long lead time materials, growing transmission tower relocations in summer).

MCP Right -of-Way at perpendicular crossings will to meet vertical clearance requirements. Steel poles will 2 months in advance of the relocation date.

g stations requires ordering new pumps and valves which cars new, no lead time is considered.

ity relocation on this project:

artment obligation to relocate longitudinal encroachments in ire any necessary utility easements.

61 121 -8 -9

11-18-14 Date

LTERNATIVE 9 MODIFIED (Preferred Alternative)

	4-EX-0 1 of 2	
	Date       10/28/2014         Dist       08       Co       RIV       Rte       MCP       PM 0.0/16.3         Dist       08       Co       RIV       Rte       215       PM 28.0/34.3         EA       08-0F3200       (PN 0800000125)       HE       14         Project       Description       On Mid County Parkway         From I-215 to       SR-79 - Construct New Freeway	
Subject: Railroad and Government Land Data	Alternative 9 Modified (Preferred Alternative)	
<ol> <li>Describe railroad facilities or right of way affected.</li> <li>Widening of two existing overhead crossings at Cajalco/Ramon</li> </ol>	a Expressway and Placentia Avenue over the San	Prepared By: Madem
Jacinto Branch Line owned by the Riverside County Transports	tion Commission's (RCTC).	Right of Way Railroad Coordinator Merideth Cann. PE - Jacobs
<ol> <li>When branch lines or spurs are affected, would acquisition ar industries served by the railroad facility be more cost effectiv service?</li> </ol>	nd/or payment of damages to businesses and/or e than construction of a facility to perpetuate the rail	
Yes No X (If yes, please explain.)		Prepared By:
<ol><li>Discuss types of agreements and right required from the railre or grade separations requiring construct and maintenance agr</li></ol>	oads. Are grade crossings requiring service contracts ecments involved?	Right of Way Governmental Lands Coordinator Lynette Overcamp, SR/WA - Epic Land Solutions,
Grade separations requiring construction and updated maintena (TCE) will be required. Update to aerial easements will be required. Clearances will be required.	nce agreements. 'Temporary construction easements iired. C&M Agreement, Service Contract, and OE	
4. Remarks (non-operating railroad right of way involved?):		
	required	
California Public Utilities Commission (CPUC) application		
California Public Utilities Commission (CPUC) application r 5. Are Government Lands involved? Yes No		
<ul> <li>California Public Utilities Commission (CPUC) application r</li> <li>5. Are Government Lands involved? Yes No </li> <li>If yes, number of parcels: <u>51</u> Agency Name and Explanation:</li> </ul>		
<ul> <li>California Public Utilities Commission (CPUC) application a</li> <li>5. Are Government Lands involved? Yes ⊠ No □</li> <li>If yes, number of parcels: <u>51</u> Agency Name and Explanation:</li> <li>EMWD, MWD, Riverside County Flood Control, RCTC, Ca and miscellaneous parcels)</li> </ul>	ltrans, Vat Verde School District (roadways, street,	
<ul> <li>California Public Utilities Commission (CPUC) application a</li> <li>5. Are Government Lands involved? Yes ∑ No ☐</li> <li>If yes, number of parcels: <u>51</u> Agency Name and Explanation: EMWD, MWD, Riverside County Flood Control, RCTC, Ca and miscellaneous parcels)</li> <li>6. PMCS Input Information RR Involvement Yes C &amp; M Agreements 1 Service Contract 1 OE Clearances 1 Clauses</li> </ul>	ltrans, Val Verde School District (roadways, street,	
California Public Utilities Commission (CPUC) application a         5. Are Government Lands involved? Yes ⊠ No □         If yes, number of parcels: 51 Agency Name and Explanation:         EMWD, MWD, Riverside County Flood Control, RCTC, Ca and miscellaneous parcels)         6. PMCS Input Information RR Involvement Yes C & M Agreements 1 Service Contract 1 OE Clearances 1 Clauses 1 LIC/RE	altrans, Val Verde School District (roadways, street,	
California Public Utilities Commission (CPUC) application a         5. Are Government Lands involved?         Yes ⊠ No □         If yes, number of parcels: 51         Agency Name and Explanation:         EMWD, MWD, Riverside County Flood Control, RCTC, Ca         and miscellaneous parcels)         6. PMCS Input Information         RR Involvement       Yes         C & M Agreements       1         Service Contract       1         OE Clearances       1         LIC/RE       1         Government Land       21         Number of Project Parcels       438	altrans, Val Verde School District (roadways, street,	
California Public Utilities Commission (CPUC) application a          S. Are Government Lands involved?       Yes ∑       No □         If yes, number of parcels: 51       Agency Name and Explanation:        EMWD, MWD, Riverside County Flood Control, RCTC, Ca       and miscellaneous parcels)         6. PMCS Input Information	Itrans, Val Verde School District (roadways, street,	

## ORMATION SHEET

Exhibit 4-EX-6 2 of 2

Date 10/28/2014 Dist <u>08</u> Co <u>RIV</u> Rte <u>MCP</u> PM <u>0.0/16.3</u> Dist <u>08</u> Co <u>RIV</u> Rte <u>215</u> PM <u>28.0/34.3</u> EA <u>08-0F3200</u> (PN 0800000125) HE <u>14</u> Project Description <u>On Mid County Parkway</u> From I-215 to SR-79 - Construct New Freeway

Alternative 9 Modified (Preferred Alternative)

12/03/14 Date

ATTACHMENT J AGENCY LETTERS

## AGENCY LETTERS

## ATTACHMENT J

METROPOLITAN WATER

![](_page_312_Picture_2.jpeg)

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

MWD Colorado River Aqueduct, etc. Substr. Job No. 2001-04-007

May 13, 2005

MWD

Mr. Charles Landrey Project Manager Jacobs Civil, Inc 3850 Vinc Street, Suite 120 Riverside, CA 92507

Dear Mr. Landrey:

## Mid-County Parkway Alignment Conflicts with MWD Facilities

This letter is regarding the proposed Mid-County Parkway project alignment alternatives located in Riverside County generally between Interstate 15 and the city of San Jacinto, north and south of Lake Mathews and south of Lake Perris.

The following comments provide a detailed explanation of potential conflicts between the proposed project alignments and Metropolitan's various facilities. The subject locations are referenced accordingly on the enclosed aerial photo map that delineates the project's alternative alignments, which your company submitted to Metropolitan.

Colorado River Aqueduct/Casa Loma Siphon-1st Barrel - at Sanderson Avenue

Just south of the Ramona Expressway, Metropolitan's 148-inch-inside-diameter Casa Loma Siphon crosses Sanderson Avenue (MWD Station 10933+40). There is an existing protective concrete slab in place at Sanderson Avenue and our pipeline is between 4 and 10 feet below grade at this location. This protective slab may need to be upgraded or extended depending on the limits of the corridor construction in this area. Enclosed are prints of our Casa Loma Siphon Drawings B-363-10, B-363-11, H-1224 and H-1300, and Drawing B-25759 for the protective slab.

700 N. Alameda Street, Los Angeles, California 90012 • Mailing Address: Box 54153, Los Angeles, California 90054-0153 • Telephone (213) 217-6000

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. Charles Landrey Page 2 May 13, 2005

Π. Street and Princess Ann Road

> Just south of the Ramona Expressway at Princess Ann Road, Metropolitan's 185-inch-inside-diameter Colorado River Aqueduct monolithic concrete pipeline, 145-inch-inside-diameter Inland Feeder welded steel pipeline, and 133-inchinside-diameter welded steel Lakeview Pipeline are all in close proximity to the proposed corridor alignment. Please submit detailed plans of your corridor project in this area for our review and written approval when available. Enclosed are prints of our Drawings B-363-9, B-60591, B-88361, B-88362 and B-88381 for our facilities in this area.

Inland Feeder Davis Road/Hansen Avenue 111

> Metropolitan's 145-inch-inside-diameter Inland Feeder welded steel pipeline is located at the intersection of Ramona Expressway and Davis Road and runs parallel to Ramona Expressway for approximately 800 feet. The pipeline is located approximately 15 feet below grade in this area and may need to be protected within the limits of your corridor improvements. Enclosed for your information are prints of our Drawings B-92103 and B-92104.

IV. Lake Perris Facilities

Metropolitan has a number of facilities and properties along the south side of Lake Perris that may be impacted by the proposed corridor. In addition, appropriate protection of our various pipelines and tunnels in this area may need to be undertaken. Enclosed are prints of our Drawings B-363, B-363-6, B-60445 through B-60447, B-60561, B-60562, B-60563, B-60564, B-65646 and B-65656 through B-65661 for your information and use.

#### Lake Perris Bypass Pipeline a.

The proposed corridor alignment must be kept outside the limits of this right-of-way except where it must cross the pipeline.

METROPOLITAN WATER

## Colorado River Aqueduct, Inland Feeder and Lakeview Pipeline - between Bridge

## AGENCY LETTERS J-1

0004

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. Charles Landrey Page 4 May 13, 2005

> facility may also be affected where the Valverde Tunnel transitions into an outlet channel. Detailed plans of your proposed corridor improvements will be required in order to determine potential impacts to our facilities. Enclosed are prints of our Drawings B-363-1 through B-363-4 for your information and use.

VII. Lake Mathews Facilities, Upper Feeder and Lower Feeder

- 2.
- b. impacts to these pipelines will need to be mitigated.
- C. overcrossing.
- d. to be protected in place.
- C.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. Charles Landrey Page 3 May 13, 2005

> Perris Power Plant b.

> > The proposed corridor alignment must be kept outside the limits of our power plant and pressure control facility right-of-way.

Bernasconi Tunnels No. 1 and No. 2 - West and East Portals C.

Appropriate access will need to be provided to Metropolitan to these portal sites for routine maintenance and repairs.

#### SR-215 - Chemical Unloading Facilities V.

- Metropolitan owns and operates a chemical unloading facility just west а. of the proposed SR-215 interchange. The proposed alignment should not encroach into any area of this property. Please note that Metropolitan may be performing major upgrades to this facility in the near future. We will keep you informed of changes to this facility as they occur. Enclosed are prints of our Drawings B-26979 and B-26980 for your information and use.
- b. In addition, just cast of the chlorine facility extending approximately to the Cajalco Dam, Metropolitan's 183-inch-inside-diameter Colorado River Aqueduct Valverde Tunnel is longitudinally in close proximity to the proposed alignment with an average depth of 150 to 200 feet. Your proposed corridor must have no impact on this tunnel.

VI. Cajalco Dam - El Sobrante Road and Cajalco Road (Fast of Lake Mathews)

The proposed alignment may require modifications to the existing Cajalco Dam facility, which would have to be coordinated with Metropolitan, Riverside County Flood Control District and the California Division of Safety of Dams (DSOD). Also, access to the facility will need to be maintained. Enclosed are prints of our Drawings A-1178, H-1362 and H-1363 for your information and use.

Metropolitan's facilities between the Cajalco Dam and our Lake Mathews

NETROPOLITAN WATER

0005

The alignment of your proposed corridor in proximity to our Lake Mathews Dike No. 1 at McAllister Street would involve the removal of a hill that is acting as a buttress for this dike, which is unacceptable. Metropolitan cannot allow any activity which has the potential to compromise or reduce the factor of safety of this dike. Your corridor alignment will need to be revised such that no material is removed from this abutment area. Any construction in this area will also require DSOD approval.

Seepage pipes located at the face of this dike may also be affected. Any

Metropolitan's main entrance to our Lake Mathews facility is accessed from El Sobrante Road. The proposed alignment appears to interfere with this access. If this alignment will bridge over La Sierra Avenue, the height should be such that it allows all of our vehicles to cross under the

Metropolitan's 140-inch-inside-diameter Upper Feeder pipeline crosses the proposed alignment just west of La Sierra Avenue. This pipeline will need

Metropolitan's 108-inch-inside-diameter Lower Feeder pipeline and related above-ground facilities, including a small hydroelectric power plant, may be impacted by your proposed corridor alignment and auxiliary road between Lake Mathews and Temescal Canyon Road. As shown on the enclosed drawings, Metropolitan facilities include, but are not limited to, two standpipes, a control tower, a venturi meter and the Temescal Power

> AGENCY LETTERS J-2

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. Charles Landrey Page 5 May 13, 2005

this area.

Enclosed for your information are prints of our Lower Feeder pipeline and tunnel Drawings B-9363, B-10203 through B-10212, B-21226 and B-21227 and above-ground facility Drawings B-10275, B-10282, B-10283, B-30310 through B-30314, B-30398 and B-30399.

For any further correspondence with Metropolitan relating to this project, please make reference to the Substructures Job Number located in the upper right-hand corner of this letter. Should you require any additional information, please contact Mr. Ish Singh at (213) 217-6679.

Very truly yours,

Susan M. Walter

Gor Kieran M. Callanan. P.E. Manager. Substructures Team

> IS/ly DOC 2001-04-007 Enclosures (53)

METROPOLITAN WATER

0006

Plant. Please provide detailed information on how these facilities will be protected in place and how Metropolitan's access will be maintained in

![](_page_314_Picture_15.jpeg)

#### 08-19-05 From-OAN HO 13:24

## JUN 6 0 7005

Mr. Rick Simon CH2M HILL 3550 Vine Street, Suite 320 Riverside, California 92507

Dear Mr. Simon:

This letter is in response to your letter dated March 29, 2005 requesting feedback from the Department of Water Resources (DWR) on the Mid County Parkway (MCP) project being proposed by the Riverside County Transportation Commission.

One of the alternatives being studied for the MCP project is to place the alignment of the parkway in front of the Lake Perris Dam. Your plan and profile drawings were submitted with your letter for review to our Operations and Maintenance Division, Southern Field Division, and Division of Safety and Dams. As a result of the review, the following comments were submitted:

- 1.
- 2. at all times.
  - proposed parkway, which is unacceptable by DWR.
  - the downstream toe area of the dam.

For the reasons stated above this alternative alignment for the MCP is not desirable.

If you have further questions, please contact me by phone at (916) 653-5361 or you may e-mail me at cwinston@water.ca.gov .

Sincerely,

13.

4.

Clifford Winston Senior Land Agent

bcc: Teresa Sutiff, HQ Room 649

CWinston:CMarg 7435FDJ907 71CW060705CM

The parkway, as shown on the preliminary plan, is located in an area that was used for mitigation purposes during the construction of the dam.

The proposed alignment of the parkway crosses an emergency outlet near the left abutment of the dam. DWR would need access to the outlet

The existing system used to drain seepage would lay beneath the

The parkway would interfere with monitoring stations located throughout

## **AGENCY LETTERS** J-4

#### 13:23 From-OAM HQ 08-19-05

STATE OF CALIFORNIA - THE RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES 1416 NINTH STREET, P.O. BOX 942835 SACRAMENTO, CA 94236-0001 (916) 653-5791

August 19, 2005

Ms. Cathy Bechtel, Division Head, Planning **Riverside County Transportation Commission** Post Office Box 12008 4080 Lemon Street, 3rd Floor Riverside, California 92502-2208

Mid County Parkway North Perris Alignment

Dear Ms. Bechtel:

This letter is in response to your request for written confirmation regarding your several discussions with my staff, regarding the proposed Mid County Parkway North Perris Alignment that includes a major section along the downstream toe area of Perris Dam.

8166574239

The Department of Water Resources (DWR) recently completed a seismic stability analysis of Perris Dam and concluded that there is potential for large seismicallyinduced earthquake deformations, due to liquefaction of foundation soils beneath the eastern reach of the dam under the design earthquake loading. Based upon the completed analysis, we are lowering and restricting the Lake Perris water surface level to 27 feet below the spillway crest of Perris Dam. This is being done to mitigate the seismic risks associated with Perris Dam and to ensure the continued safety of lives and property downstream of the dam. This is an interim safety measure until a permanent solution for repair is determined.

As previously indicated in a June 8, 2005 letter from Cliff Winston of DWR's Real Estate Branch to Mr. Rick Simon with CH2M Hill, the proposed Mid County Parkway North Perris Alignment would also impact our existing facilities at Perris Dam. These facilities are essential to the safety of Perris Dam and include the seepage collection system, outlet system for Lake Perris, and surveillance monitoring stations throughout the downstream toe area of the dam. I have included a copy of this letter for your records. Another important item impacted by the proposed Parkway is the environmentally sensitive wildlife area located just beyond the downstream toe area of Perris Dam. I have been notified by our staff that this environmentally protected area was required as mitigation lands due to the original construction of Perris Dam.

![](_page_316_Picture_10.jpeg)

ARNOLD SCHWARZENEGGER, Governor

08-19-05 13:23

From-OAM HQ

Ms. Bechtel, Division Head August 19, 2005 Page 2

Based on the above information, we are requesting that you do not move forward with the proposed Mid County North Perris Alignment due to the significant impacts it would have on our existing Perris Dam facilities, and our need to maintain right of way ownership of the downstream property. This downstream property between Perris Dam and Ramona Expressway will be essential to us when evaluating repair options for the dam in the future.

If you have any questions please call me at (916) 653-3014 or Teresa Sutliff, Chief of the Division of Operations' Civil Engineering Branch at (916) 653-8350.

Sincerely,

Richard Sanchez, Chief State Water Project Operations Support Office Division of Operations and Maintenance

Attachment

## AGENCY LETTERS J-5

# ATTACHMENT K

**TRANSPORTATION MANAGEMENT PLAN DATA SHEETS** 

## ATTACHMENT K

## TMP DATA SHEETS

1			Caltrar	ns District	8 (Riversi	de & San Ber	nardino)	
				TMP or	TMP review	/ (Ver. June. 2014)		
Transporta	ition <mark>M</mark> anagen	nent Plan (TMP)	Data <mark>S</mark> hee	t is for <mark>PID,</mark> expires wh	, <mark>PSR, PR an</mark> nen that of th	d PS&E consider ne LRCs does.	ring DTM's requirements. T	he validity of this TMP
		The TMP Data	Sheet inclu	udes signatui	re & backgrou	Ind sheet, TMP es	timate & TMP elements	
			TEM	PLATE: TMP	P Data Shee	t (Revision 6/5/201	4).	
A) Requeste	Requester: pl	ease complete se	ection (A),	questions 1	1-18 only. Ty	pe the information	tion in the cells with yellow	background
1-Date of requ	uest	10/29/2014				2-Department	Jacobs Engineering	
3-Full name		Georgia Medina					·	
4-E-mail addres	S	georgia.medina@j	acobs.com					
5-Project Manag	ger's name	Merideth Cann				-		
6-Project Manag	ger's E-mail	merideth.cann@ja	cobs.com					
B) Project	information				1 EA#	08 052200	[	
2-County/Rou	to	08-Riv-MCP & 08.	-Riv-215		I-CA#	3_ID (E_EIS) #	80000125	-
4-Post mile (F	rom-To)	0.0/16.3.& 28.0/3	34 3			<u><u> </u></u>	00000125	-
5-Short descript	tion of iob	Construct new fre	eway and I	-215/MCP fr	eeway-to-free	way improvemen	ts	-
Construction pe	riod per PE		Construction	n period per W	/PS			-
6-Estimated sta	rt date	Feb-2018	8-Estimated	l start date	-		10-# of working days	730
7-Estimated end	d date	Dec-2020	9-Estimated	l end date	-		11-Estimated project cost	\$ 1,692,000,000
		•			•		• • • •	• • • • • •
		Requester:	Use the foll	owing area to	o add any info	ormation that help	os developing the TMP	
12-Document	s required		Ree	quester: Plea	ase attach the	e location map in	jpeg/pdf format to your E-main	/
If hard copies a	re requested, Ser	nd to the DTM located	d on the sout	h side of 11th.	. Fl., behind the	door attn: Al Afane	h. Any questions, please call 383-	6262
Following is	for DTM use >	·>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	>>>	Deve	eloper: Fill info	n green background	d. Obtain the updated estimate & #	t of work days at 95%
C) BA	ACKGROUND INFO	ORMATION	-	Date request	received		Job assigned to	
# of working da	ys	/30		1 - 1 - 1		1		
Estimated Proje	Ct COSt	\$ 1,692,000,000	Per E-mail C	lated				
THE estimate(\$	)			0 770/2	Of the project	L cost		
1		\$13,031,312	Equal to	0.77%	Of the project	: cost		
ІМРАСТ	High	Medium	Low	0.77%	Of the project Developer:	cost (Briefly, explain ti	he high impact/mitigation): Pi	roject is located in a
IMPACT State Hwy.	High X	Medium	Low	0.77%	Of the project Developer: heavy traffic	(Briefly, explain the second s	he high impact/mitigation): Pi vork windows and weekend wc	roject is located in a ork will be performed. To
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K-1

	TMP Elements	EA #	08-0F3200	Date	
	Note: An X in the check box means you need to include eliminate the need for the item. A ? in the box mean item is not needed at this time based on the information.	lude this in the ans TMP anticip ation received.	project unless sta ates this - please o	ging, material, or wo check into this. A bla	rk hour changes nk box means the
1	Public Information/Public Awareness Campaigr	ו (PAC)			
	BEES 066063 (Traffic Management Plan-Public Information reduced by Public Affairs (PA) and Construction Liaison (C under <b>State Furnished</b> as the <b>total</b> of PA+CL.	n). Cost to be L) only. Show			
1.1	X Include Rideshare information in PA/CL project materia vehicles reduction in work area	I to encourage			\$1,100,000
1.2	X Brochures and Mailers				\$825,000
1.3	X Media Releases (& minority media sources)				\$1,925,000
1.4	X Paid Advertising				\$1,925,000
1.5	Y Public Information Center/Kiosk				\$137,500
1.6	Y Public Meetings/PAC Mtgs./Speakers Bureau (show cos rental)	t also for room			\$275,000
1.7	X Hand deliver notices to vicinity				\$874,500
1.8	X Broadcast fax service				\$137,500
1.9	Telephone Hotline OR				
1.10	X 1-800-COMMUTE (The telephone number is shown on (	CS-Info signs) -			\$110,000
1.11	Visual Information (videos, slide shows, etc.)				
1.12	X Local cable TV and News				\$280,500
1.13	Traveler Information Systems (Internet)				
1.14	X Internet, E-mail				\$1,100,000
1.15	Notification to targeted groups:				
	X Revised Transit Schedules/maps				
	organizations representing people with disabilities				
	X bicycle organizations				
1 16	Include PA/CL/Consultant resources in WPS				
1.17	X Commercial traffic reporters/feeds - e.g. brief Traffic Ir	nformation			\$550,000
1.18	X Insert SSP's				
	"A representative of the Contractor, at Superintendent and authorized to commit the Contractor, shall attend in all Public Awareness Campaign meetings. Time com the meeting(s) varies from two to four hours per mont	level or higher, and participate mitment for h."			
1.19	Others			Section 1 Total	\$ 9,240,000
2	Traveler Information Strategies				
	Project team needs to coordinate with Traffic I	Jesign!	_		
2.1	Existing Electronic Message Signs (Stationary) - list loc	ations. See Not	e 5		
	New Installation (Stationary) - BEES 860532 CHANGEA SIGN SYSTEM - list locations. See Note 5	ABLE MESSAGE			
2.2	X Portable Changeable Message Signs (PCMS). Constru- Rental Lump sum BEES 128650	ction prefers			\$ 240,000
	These PCMS advise motorists to divert at <u>remote</u> advar stationary CMS, you are allowed to use them for advan placement may need to be cleared <b>environmentally</b> s be <b>in addition</b> to Traffic Design's PCMS for regular tra	nce decision poin ace motorist infor so that they can ffic handling in a	ts - outside the usua mation - e.g. a week be included in plans nd next to a work ar	I work limits. Unlike ahead. Their and SSP later. They ma ea.	иу

	TMP ElementsEA #08-0F3200Date		
	Placement Details: units to be placed in the direction of travel towards the closure at 1 mile and 1/2 mile before		
	getting to the closure. Total No. of PCMSs needed is units for 6 months ( )= \$		
2.3 2.4	X       Lane Closure Web Site         X       Caltrans Highway Information Network (CHIN)	\$ \$	30,000 30,000
2.5 2.6 2.7	Radar Speed Message Sign (Specter sign) BEES 066064 (approx. EA @ \$30,000) X Bicycle and pedestrian information, e.g. Detour maps Y Others	\$ ¢	10,000
2.7	Section 2 Total	<b>թ</b> \$	330,000
3	Incident Management		
3.1	CHP's Construction or Maintenance Zone Enhanced Enforcement Program – COZEEP or MAZEEP. BEES 066062 - show under "State or Agency furnished" in the Cost Estimate.		
	Make sure to consider the LC hours and add CHP driving time to/from their office		
	Day COZEEP: To protect active closures		
	# of days hours/day CHP vehicles # of officers. Rate/Hr.		
	400 8 2 1 \$ 95	\$	608,000
	Night COZEEP: To protect active closures		
	# of nights hours/night CHP vehicles Nights need 2 Rate/Hr.		
	500 8 2 2 \$ 95	\$	1,520,000
	BEES 066065 - show under "State or Agency furnished" in the Cost Estimate Short duration or remote area CFSP usually is bid with much higher hourly rates. If enhancement of program FSP feasible, CFSP could tie into the lower long-term FSP rates.		
	# of trucks # of days Hours per day		
	4   200   6	\$	264,000
	For service outside the regular FSP hours		
	B Extended Peak hour coverage		¢O
			şυ
	C Night support during structure freeway closures and major traffic shifts	đ	\$88,000
		4	,00,000
	D   Weekend support     2   80	\$	\$70,400
	Local agency (SAFE) support 8% 8% of truck cost	4	\$33,792
	CFSP CHP support5%5% of truck cost only if within regular FSP and area	\$	\$13,200
	Equipment/Supplies 10% % of truck cost unless more detail available	\$	\$42,240

Consult with the Inland Empire division of CHP or the border division in the southern Riverside county to select the method which is acceptable for the B,C,D that are outside the regular FSP

	F LIEIHEIIUS		EA #	08-0F3200	Date	
hours or area.						
Method 1						
CFSP/CHP support		20%				
20% of truck cos	t or					
CFSP Dispatcher @						
# of days	# of nights	hours	# of FSP	Rate	# of FSP vehicles	
0	0	0	0	\$45	0	\$
0	0	0	0		0	1
						_
CFSP CHP Officers (S	See Cozeep rate)	hours	# of officers	Pata	# of CHP vehicles	
		nours		Rate		∎ د
0	0	0	0	85	0	_ ↓ \$
LL		L				- ·
for Contact District F Service Contract Local Agency will Local Agency will	SP Coordinator for arrange CFSP with arrange CFSP adm	task orders. SAFE hinistration with	\$44,880 n CHP			
	3.3 Total	\$543,312				
					Section 3 Total	¢
						1 4
Construction Strate Contact DTM, at 909-38 list. Inform DTM of any	egies 3-6262, to get Del concerns/commitn	ay Calculations nents Re specia	, Lane Requireme al LC days, times,	ent Charts (LRC), Ta seasons, events, e	able Z and Special events environmental restrictions;	]
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# K-4

	TM	P Elements	EA #	08-0F3200	Date		
	BEES 066022 (Traffic	c) Right of Way delay. Show	in supplemental work.	If State (or agency	) denies an approved	7	
	closure or orders the	contractor an earlier pick up	p, this shall be used to	pay damages, e.g. f	or AC cold load, etc.		
4.7	X 10-Min. Delay	Contact DTM at 909-838-	6262 for 10 Min. Delay	/ penalty Calculations	s. Note that Delay	-	
4.0	Penalty	Penalty is different from t	he R/W Delay shown a	ibove!		\$	64
4.8	X Others			[	Section 4 Total	\$	640
				ļ		Ψ	010
5	Demand Manageme	ent (DM)					
	Project team needs to co	oordinate with RCTC/SANBA	G/CVAG				
	Traffic diversion may inc	crease available work hours.					
5.1	A coop will be execut	ted - mentioned in PSR or PF	र.				
	Instead of a coop, 15	5% is added to the cost of DI	M elements since the p	ayment to the local	agency will be routed	٦	
	through the contract	or.					
	Instead of a coop, the	e local agency will make the	ir own arrangements v	vith RCTC/SANBAG.			
	X PA/CL or local agency	y need to inform commuters	through RCTC/SANBA	G. Funds part of PA/	/CL.		
5.2	HOV Lanes/Ramps (N	New or Convert)					
5.3	Park-and-Ride Lots						
	Leased spaces (Spon	sored spaces may be feasibl	e in exchange for sign	s and print coverage	)		
5.4	Parking Management	/Pricing (Coordination with I	ocal agency is required	1)			
5.5	X BEES 066067 Ridesh	are Promotion				\$	50
5.6	Rideshare Incentives -			I	Soction 5 Total	<u></u>	150
6	Alternate Route Str	rategies			Section 5 Total	<b>– – P</b>	150
_	Caution - signed detours	s may require environmenta	I clearance. Traffic dive	ersion may increase	1		
	available work hours. P	lease work with Traffic Desig	gn.	,			
6.1	Add Capacity to Free	way connector			I		
6.2	X Ramp Closures						
6.3	X Temporary Highway	Lanes or Shoulder Use					
6.4	X Parking Restrictions						
6.5	X Street Improvements	5					
	X State R/W - Signa	als, Widen, etc.					
	X Local R/W - Signa	als, Widen, etc. Coop or Perr	nit may be needed				
6.6	X Local Street USE - Co	pop or Permit may be neede	d				
6.7	X Traffic Control Office	rs (see 3.1 Cozeep)					
6.8	X Signed detour - using	g State routes					
6.9	X Signed detour - using	g local streets and roads					
6.10	X Adjust signals						
6.11	X Temporary Dicycle or	pedestrian facilities					
6.12	Others			I	Section 6 Total	¢	
7	Other Strategies				Section o Total	⊅	
7 1	Application of new te	chnology					
7.2	Innovative products						
73	Others						
	0						
7.5					Continue 7 Tatul	+	

TMP Estimate									
	EA#	08-0F3200	ID (E-FIS) #	800000125	Date				

TMP developer: Amounts under the cost column will automatically be copied from the TMP elements

TMP Elements

- 1. Public Information
- 2. Motorist Information Strategies
- 3. Incident Management
- 4. Construction Strategies
- 5. Demand Management (DM)
- 6. Alternate Route Strategies
- 7. Other Strategies

Total TMP Estimate

![](_page_323_Figure_12.jpeg)

Cost

\$9,240,000

\$330,000

\$2,671,312

\$640,000

\$150,000

## **\$0**

\$0

\$ 13,031,312
ATTACHMENT L STAGE CONSTRUCTION

# ATTACHMENT L

# STAGE CONSTRUCTION



I-215 STAGE 1 MEDIAN WIDENING 0.4 MILE SOUTH OF NUEVO Rd OC TO VAN BUREN BIVD OC (Sta 1460+00 TO Sta 1809+50)



LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

FOR DISCUSSION **PURPOSES ONLY** THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.

NO SCALE

May 2014



MID COUNTY PARKWAY STAGE CONSTRUCTION PLANS I-215 / MCP STAGE 1 L-1







LEGEND AUX - Auxiliary - Clear Recovery Zone CRZ MLA Median Lane Addition -MF - Mixed Flow Prop - Proposed

FOR DISCUSSION **PURPOSES ONLY** THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.

NO SCALE

May 2014



MID COUNTY PARKWAY **STAGE CONSTRUCTION PLANS** I-215 / MCP STAGE 2 L-2



0.5 MILE NORTH OF PLACENTIA AVE OC TO 0.3 MILE SOUTH OF RAMONA EXPRESSWAY OC (Sta 1586+00 TO Sta 1623+00)



LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MLA - Median Lane Addition MF - Mixed Flow Prop - Proposed

FOR DISCUSSION **PURPOSES ONLY** THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.

NO SCALE

May 2014



MID COUNTY PARKWAY STAGE CONSTRUCTION PLANS I-215 / MCP STAGE 2 L-3



MCP STAGE 1 LAKEVIEW TO NUEVO AREA (Sta 560+00 TO Sta 815+00)



LEGEND AUX - Auxiliary CRZ - Clear Recovery Zone MF - Mixed Flow Prop - Proposed



NO SCALE







MCP STAGE 2 LAKEVIEW TO NUEVO AREA (Sta 560+00 TO Sta 815+00)



RCTC

<u>LEGEND</u> AUX - Auxiliary CRZ - Clear Recovery Zone MF - Mixed Flow Prop - Proposed

FOR DISCUSSION PURPOSES ONLY THIS MAP IS A DRAFT DOCUMENT ONLY AND HAS YET TO BE FINALIZED BY RCTC OR THEIR REPRESENTATIVE.









ATTACHMENT M

PHASING

## ATTACHMENT M

### PHASING



Phase 1 (2020)

Potential Phasing Plan Improvements - Phase 1 Mid County Parkway



08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34/3 EA 08-0F3200 (PN 0800000125)



Phase 2 (2030)

Potential Phasing Plan Improvements - Phase 1 and 2 Mid County Parkway

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34/3 EA 08-0F3200 (PN 0800000125)





Phase 3 (2040)

Potential Phasing Plan Improvements - Phase 1, 2 and 3 Mid County Parkway

NOT TO SCALE

I:\JCV531\G\_Mod\Phasing B.cdr (8/11/14)

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34/3 EA 08-0F3200 (PN 0800000125)



ATTACHMENT N RISK REGISTER

## ATTACHMENT N

# **RISK REGISTER**

Risk # Risk Status	Risk	Dependency	Functional Assignment	Phase	Event Risk Name	Risk Type	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	, Proposed Mitigation Action	Probability	Probability (HardCode)	10% Cost	Most Likely Cost	90% Cost	Cost Impact	Correlation Prior Cost Risk	Cost Risk (Threat/ Opportunity)	Probable Cost Impact (\$\$\$)	10% Schedule (Mo)	Most Likely Schedule (Mo)	90% Schedule (Mo)	Schedule Impact	Schedule Risk (Threat/ Opportunity)	Correlatio n (Cost/ Duration)	Parallel Events	Parallel Risks	Logical	Probable Schedule Impact (Mo)
Active	Indepen	ndent Cl	N+CE+CO Segi	ment 3	PE1 - Geo MWD Colorado Aqueduct	Cost/ o Sched ule	The embankment of MCP in Segment G/3, Warren Road to SR-79, might have impact to the Colorado aqueduct. The MWD approval process might delay the project, and potential cost impact. Initial studies have been done, but it has been agreed upon by RCTC and MWD that more detailed studies may be required in the design phase. If the levee project is approved and built the fill area can be lower, if the levee project has not been completed the fill will need to be higher.	My Action	75%	75% \$	25,000,000 \$	50,000,000 \$	100,000,000	\$ 50,000,000	Nil	Threat	\$ 37,500,000	6	12	18	12	Threat					9 9
2 Active	Indepen	ndent PE	E Proj	ectwide	PE2 - Caltrans HDM Standards	Cost/ Sched ule	The project complies with the current HDM or has received Fact Sheet approvals. During the PS&E phase there might be additional non-standard features uncovered or new standards could have been issued. In either events, update to latest standards will have potential impact to the schedule and cost. The design has been updated for 2012 standards and notes areas that still need update.	5 My Action	25%	25% \$	1,000,000 \$	3,000,000 \$	5,000,000	\$ 3,000,000	Nil	Threat	\$ 750,000	3	3	6	3	Threat				0.7	5 0.75
3 Active	Indepen	ndent Cf	N+CE+CO Proj	ectwide	Road1 - Existing I-215 Pavement	Cost	The existing I-215 pavement section appears to be in good condition according to Caltrans Material Engineer. However, the pavement condition will deteriorate overtime and migh require rehab by the time the project goes to construction.	s nt o My Action	25%	25% \$	5,000,000 \$	6,000,000 \$	10,000,000	\$ 6,000,000	Nil	Threat	\$ 1,500,000	0.01	0.02	0.03	0.02	Threat				0.00	5 0.005
4 Active	Indepen	ndent CI	N+CE+CO Proj	ectwide	Road2 - MCP Pavemen Section	t Cost	The final pavement section design will depend on who will have the maintenance responsibility. Caltrans prefers rigid pavement and the County of Riverside can only maintain flexible pavement. The decision will have impact to the cost.	My Action	100%	100% \$	20,000,000 \$	30,000,000 \$	40,000,000	\$ 30,000,000	Nil	Threat	\$ 30,000,000	0	0.01	0.02	0.01	Threat				0.0	10.01
5 Active	Indepen	ndent Cl	N+CE+CO Proj	ectwide	Road3 - Balance of Earthworks	Cost	The surplus generated in the western portion (E/1B and D/1A), and the import needed in the eastern portion (F/2&G/3). The construction sequencing might potential break the balance and impact the cost. The project will involve railroad at two	n My Action	10%	10% \$	10,000,000 \$	15,000,000 \$	20,000,000	\$ 15,000,000	Nil	Threat	\$ 1,500,000	0	0.01	0.02	0.01	Threat				0.00	1
6 Active	Indepen	ndent Cl	N+CE+CO Segi	ment 1A	PM1 - Railroad Coordination	Cost	locations: Cajalco Expressway and Placentia Ave. The coordination with the railroad, plan review and execution of the Construction an Maintenance Agreement might impact the schedule There are many plan developments within the project limits. Many of the interchanges	n Id My Action	100%	100% \$	1,000,000 \$	2,000,000 \$	3,000,000	\$ 2,000,000	Nil	Threat	\$ 2,000,000	0	0.01	0.02	0.01	Threat				0.03	1
7 Dorma	nt Indepen	ndent PF	- Proi	ectwide	PM2 - TR1? Coordination with the Developers	Sched	in Segment F/2 and G/3 are based on the future developments. Any changes in the development will certainly impact the project. TVOL is a massive 11,000 homes development in Segment F/2 area. It is currently in the planning stage and may receive final approval soon. <u>Many of the</u> <u>project design features are to be compatible</u> <u>with TVOL.</u> If the development changes or is replaced with another development in the	<u>•</u> My Action	75%	75% \$	1 \$	2 \$	. 3	Ś 7	Nil	Threat	Ś.	3	8	18	8	Threat					6 0
							The project assumes the SR 79 will be upgraded to freeway before MCP is constructed. In the event this does not happen, minor modification to the original design will be necessary. The MCP assumes a service interchange at Sanderson Avenue that can act as the MCP terminus until SR-79 is implemented. RCTC is sponsor for both projects and will have control of how funding is allocated to both projects, this lowers the risk of by having control over the timing of	a g			1 9	23	3				· -			10							
8 Dorma	nt Indepen	ndent Pf	E Proj	ectwide	PM3 - Connection with SR 79	Cost	construction. Three options: 1) simple connector saves millions 2) delayed construction costs millions in escalation 3) constructed as planned	My Action	50%	50% \$	1,000,000 \$	3,000,000 \$	5,000,000	\$ 3,000,000	Nil	Threat	\$-	3	3	6	3	Threat				1.!	5

Risk #	Risk Status	Risk Dependency	Functional Assignment	Phase	Event Risk Name	Detailed Description of Risk Event (Specific, Measurable Attributable, Relevant, Timebound) [SMART]	, Proposed Mitigation Action	Probability	Probability (HardCode)	10% Cost	Most Likely Cost	90% Cost	Cost Impact	Correlation Prior Cost Risk	Cost Risk (Threat/ Opportunity)	Probable Cost Impact (\$\$\$)	10% Schedule (Mo)	Most Likely Schedule (Mo)	90% Schedule (Mo)	Schedule Impact	Schedule Risk (Threat/ Opportunity)	Correlatio n (Cost/ Duration)	Parallel Events	Parallel Risks	Logical	Probable Schedule Impact (Mo)
9	Retired Ir	ndependent	CN+CE+CO	Segment 1A	PM4 - Construction on I-215	The major element in Segment D/1A is the widening of I-215. Maintaining existing Sched number of lanes during construction is ule critical to the success of the project.	My Action	75%	75%	\$ 1	\$ 2	\$ 3	\$ 2	Nil	Threat	\$-	0	12	12	12	Threat				9	0
10 ,	Active Ir	ndependent	CN+CE+CO	Projectwide	Geo1 - Subsurface Conditions	During the PA/ED phase, the geotechnical investigation involved mostly literature research. Drilling and soil sampling were onl conducted at the bridge locations or critical utility area and may not represent accurate subsurface condition. The more specific geotechnical studies during the PS&E phase might reveal conditions that might impact the cost and schedule	y My Action	50%	50%	\$ 1,000,000	\$ 10,000,000	\$ 40,000,000	\$ 10,000,000	Nil	Threat	\$ 5,000,000	0.01	0.02	0.03	0.02	Threat				0.01	0.01
					Geo2 - Groundwater	The depress section of MCP in Perris was designed based on low groundwater table. In the event that the groundwater table raises much higher than it is now, the design would need to be altered because Caltrans will not allow for any mechanical pumping. The design currently relies on gravity flow. The Lake Perris Dam is being reinforced, any changes at Lake Perris Dam that affects ground water table will impact cost and	n d																			
11 .	Active Ir	ndependent	CN+CE+CO	Segment 1B	Table RW1 - Right of Way	Costschedule.Acquire right of way is a high risk because of number of properties to acquire, over 100, some properties may need to go through eminent domain process. During the public outreach to date, the public has not been very vocal about concern to have there houses bought for project. It would have	My Action	25%	25%	\$ 1,000,000	\$ 15,000,000	\$ 20,000,000	\$ 15,000,000	Nil	Threat	\$ 3,750,000	0.01	0.02	0.03	0.01	Threat				0.0025	0.0025
12 /	Active Ir Active Ir	ndependent	ROW+UT	Projectwide	Acquisitions RW2 - Access Control	Costcost and schedule impacts.Caltrans desires access control be acquired from ramp intersection to the next intersection. The lengths of the access control in many area exceed the HDM standards. It may become an issue in the Cost case of eminent domain.	My Action	30%	30%	\$ 1,000,000 \$ 2,500,000	\$ 10,000,000 \$ 5,000,000	\$ 40,000,000 \$ 7,500,000	\$ 10,000,000 \$ 5,000,000	Nil	Threat Threat	\$ 3,000,000 \$ 5,000,000	0.01	0.02	0.03	0.01	Threat Threat				0.003	0.003
14	Active Ir	ndependent	ROW+UT	Projectwide	RW3 - Recession Prices	The project area is facing great recession since 2008. Many properties to be acquired are upside down on value to amount owed t bank. The government has regulations to assist on how property is acquired in this economy to make the home owner "whole". These factors may add difficulty to the right of way acquisition and delay the project. An improving economy could greatly increas the cost of right-of-way acquisition.	ie My Action	75%	75%	\$ 10,000,000	\$ 15,000,000	\$ 25,000,000	\$ 15,000,000	Nil	Threat	\$ 11,250,000	0.01	0.02	0.03	0.01	Threat				0.0075	0.0075
15	Active Ir	ndependent	ROW+UT	Projectwide	FHWA Incentive Program	e Sched FHWA Incentive Program for R/W Acquisitio ule and MAP-21 Early Acquisition Changes	n My Action	50%	50%	\$ 1	\$ 2	\$ 3	\$ 2	Nil	Opportunity	\$ (1)	3	6	6	6	Opportunity				-3	-3
16	Retired In	ndependent	ROW+UT	Segment 2	UT1 - Utility Coordination in Segment2	In the Lakeview Nuevo area, Segment F/2, the project assumes that all the utilities in the existing Ramona Expressway will be relocated to a utility corridor planned for the project, however If development comes in around the same time as MCP, the project would put the utilities in the local streets of the new development. This will require additional coordination.	e My Action	50%	50%	\$ 5,000,000	\$ 10,000,000	\$ 20,000,000	\$ 10,000,000	Nil	Threat	\$	6	6	12	0.01	Threat				0.005	0
17	Retired Ir	ndependent	ROW+UT	Projectwide	UT2 - Utility Relocation Plan Approval	The project requires many major utility relocation. The approval process is expected to be a risk because of the staffing level in ule the utility owners, and Caltrans reviewers.	My Action	75%	75%	\$ 1	\$ 2	\$ 3	\$ 1	Nil	Threat	\$ -	3	6	12	6	Threat				4.5	0
18	Active	ndependent	ROW+UT	Proiectwide	UT3 Utility Relocation Construction	Utility relocations are required for many major transmission and distribution lines. Interruption of the service is a concern and might delay the project. Unknown or incorrect information on underground utilities can cause delays until resolved. Also challenges to liability for relocation has become more prevalent in utility relocations This could involve legal counsel involvement	My Action	75%	75%	\$ 1,000,000	\$ 3,000,000	\$ 10,000,000	\$ <u>2000.000</u>	Nil	Threat	\$ 2 250 000	0.01	0.02	0.03	0.02	Threat				0.015	0.015

Risk #	Risk Status	Risk Dependency	Functional Assignment	Phase	Event Risk Name	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	Proposed Mitigation Action	Probability	Probability (HardCode)	10% Cost	Most Likely Cost	90% Cost	Cost Impact	Correlation Prior Cost Risk Cost Cost (Threat/ Opportunity)	Probable Cost Impact (\$\$\$)	10% Schedule (Mo)	Most Likely Schedule (Mo)	90% Schedule (Mo)	Schedule Impact	Schedule Risk (Threat/ Opportunity)	Correlatio n (Cost/ Duration)	Parallel Events	Parallel Risks	Logical	Probable Schedule Impact (Mo)
19	Retired I	Independent	CN+CE+CO	Phase 1	My Risk	Cost Short Writeup	My Action	50%	50%	\$ 1 \$		2 \$ 3	\$ 2	Nil Threat	\$ -	0	0.01	0.02	0.01	Threat				0.005	0 ن
20	Active	Independent	CN+CE+CO	Projectwide	Env3 - Cultural, Historical, Section 106	Unanticipated Cultural or Archaeological Findings. There is a high possibility as the area is known to have cultural resources. However, the agreements for the Section 106 process clearly outline what steps are to be taken if resources found. The probability of something as significant as a burial site is not likely based on cultural studies. Any Cost/ previously unknown culture site discovered Sched during the PS&E and the construction phases will impact the cost and schedule	My Action	75%	75%	ج 500.000 \$	2 000 00	)0 Š 5 000 000	\$ 2,000,000	Nil Threat	\$ 1 500 000	1	3	6	3	Threat				2 21	2 25
20				Tojectwide		Permits or agency actions delayed or take longer than expected, Some of the agencies		7370	7370	÷ 300,000 ÷	2,000,00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,000,000		÷ 1,500,000	1	, , , , , , , , , , , , , , , , , , , ,							2.2.	
21	Active I	Independent	ROW+UT	Projectwide	Env4 - Permit delays	that require permits can be known to take a Cost long time in issuing.	My Action	75%	75%	\$ 100,000 \$	500,00	00 \$ 2,000,000	\$ 500,000	Nil Threat	\$ 375,000	0	0.01	0.02	0.01	Threat				0.0075	0.0075
22	Retired I	Independent	CN+CE+CO	Projectwide	Env5 - Section 4(f) resources affected	Section 4(f) resources have been identified and are going through the appropriate findings with FHWA. However, the construction will take place directly adjacent to a 4(f) (resource) the SJWA reserve which will be watched with close scrutiny, so there ule is potential for 4 (f) discussions.	My Action	50%	50%	\$ 1 \$		2 \$ 3	\$2	Nil Threat	\$ -	3	3	6	3	Threat				1.5	50
73	Retired	Independent	CN+CE+CO	Projectwide	Env6 - Floodplain, water quality	<ul> <li>Portions of the project are located in a floodplain. The ED lays out criteria for how construction is handled in these areas due to sensitive biological resources. However there will be construction in these areas and a potential additional issues related to water regulations.</li> <li>Cost/ There is a possibility of water quality issues, as the project does require construction in areas of water resources.</li> </ul>	My Action	50%	50%	\$ 500.000 \$	2 500 00	10 Ś 5 000 000	Ś 2,500,000	Nil Threat	Ś.	2	3	6	3	Threat				1 -	
23	Netireu I			Tojectwide	Conservative Structures			3070		÷ 300,000 ¢	2,500,00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>Ş</i> 2,500,000		Ŷ			0						1.	
24	Active I	Independent	CN+CE+CO	Projectwide	Estiamte	Cost Conservative Structures Estimate	My Action	100%	100%	\$ 1 \$	50,000,00	00 \$ 70,000,000	\$ 50,000,000	Nil Opportunity	\$ (50,000,000)	0	0.01	0.02	0.01	Threat				0.01	0.01
25	Active	Independent	CN+CF+CO	Segment 2	San Jacinto River Bridge Design Variation	Under the San Jacinto River Bridge Design Variation, the MCP project would construct two bridges in the Lakeview Nuevo area, a 531-foot long bridge spanning Martin Street and a 1,941-foot long bridge spanning the San Jacinto River, for a total of 2,472 feet of bridge. The base case proposes one 4,321- foot long bridge to span the floodplain and Martin Street. Reduced lengths of SJ bridge would reduce the cost.	My Action	100%	100%	\$ 25,000,000	30.000.00	)0 \$ 35,000,000	Ś _ 30.000.000	Nil Opportunity	\$ (30.000.000)	0	0.01	0.02	0.01	Opportunity				-0 01	-0.01
						Cost/ Sched Updated seismic data and fault near Warren		100/0			00,000,00	, , , , , , , , , , , , , , , , , , ,		opportunity			0.01	0.02		Spectancy				0.01	0.01
26	Dormant	Independent	CN+CE+CO	Segment 3	Seismic	ule Rd.	My Action	50%	50%	\$ 5,000,000 \$	10,000,00	00 \$ 15,000,000	\$ 10,000,000	Nil Threat	\$-	0	0.01	0.02	0.01	Threat				0.005	0
27	Active I	Independent	ROW+UT	Projectwide	My Risk	Cost Short Writeup	My Action	50%	50%	\$ 1 \$		2 \$ 3	\$ 2	Nil Opportunity	\$ (1)	0	0.01	0.02	0.01	Opportunity				-0.005	-0.005