DRAFT
ENVIRONMENTAL IMPACT REPORT
(VOLUME 1)

FOR THE

INLAND VALLEY INFRASTRUCTURE CORRIDOR

Prepared for:

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In Partnership with the
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ACRONYMS

°C	Degrees Celsius
°F	Degrees Fahrenheit
AB	Assembly Bill
ACE	Affordable Clean Energy
ACI	American Concrete Institute
ACM	Asbestos-Containing Material
ACOE	United States Army Corps of Engineers
ACP	asbestos-cement pipe
ACS	American Community Survey
ADA	average daily attendance
ADA	American Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AF	Acre Feet
AFY	Acre Feet per Year
AGR	Agricultural Supply
AGSP	Airport Gateway Specific Plan
ALUCP	Airport Land Use Compatibility Plan
Amsl	Above Mean Sea Level
AMTP	Archaeological Monitoring and Treatment Plan
ANSI	American National Standards Institute
APE	Area of Potential Effect
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
B.A.	Bachelor of the Arts
B.P.	Before present
BACM	Best Available Control Measures
Bayview	United States v. Riverside Bayview
BGS	Below Ground Surface
BLM	United States Department of the Interior, Bureau of Land Management
BMP	Best Management Practice
BP	Business Park
BRA	Biological Resources & Jurisdictional Delineation Assessment
BTU	British Thermal Units
BUOW	Burrowing Owl
C	Candidate
C&D	Construction and Debris
C2H3Cl	vinyl chloride
CA	California
CA-BCM	California Basin Characteristic Model

CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CADnaA	Computer Aided Noise Abatement
CAGN	coastal California gnatcatcher
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
Cal/OSHA	California Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBB	Crotch's Bumble Bee
CBC	California Building Code
CBS/HVS	Census Bureau Housing Vacancies and Homeownership
CCF	Community Credit Fund
CDFW	California Department of Fish and Wildlife
CDSP	Comprehensive Storm Drain Plan
CEC	California Energy Commission
CEEP	Community Energy Efficiency Program
CEMEX	Cemex Construction Materials L.P
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERT	Community Emergency Response Team
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CGP	National Pollutant Discharge Elimination System Construction Stormwater General Permit
CGS	California Geological Survey
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Register of Historical Resources Information System
CIMIS	California Irrigation Management Information System
CIWMB	California Integrated Waste Management Board (now CalRecycle)
CMRS	County Maintained Roadway System
CMU	Concrete Masonry Unit
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory

CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COG	Council of Government
COG	council of governments
COLA	cost of living adjustments
COLD	Cold Freshwater Habitat
COMM	Commercial and Sport Fishing
CPF	cancer potency factor
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRMP	Cultural Resources Management Plan
CRMP	Cultural Resource Management Plan
CSUSB	California State University of San Bernardino
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CY	Cubic Yards
DAC	disadvantaged communities
Db	Decibel
dBA	Weighted Decibel
dBA L_{eq}	Composite Reference Noise Level
dBA L_w	Reference Power Level
DDW	California State Water Resources Control Board Division of Drinking Water
DEIR	Draft Environmental Impact Report
DigAlert	Underground Services Alert of Southern California
DMR	California Department of Conservation, Division of Mine Reclamation
DMV	California Department of Motor Vehicles
DOC	California Department of Conservation
DOD	United States Department of Defense
DOT	United States Department of Transportation
DPM	Diesel particulate matter
DTSC	Department of Toxic Substance Control
DWR	California Department of Water Resources
E	Endangered
EA	Energy Analysis
EB	East bound
ECS	electric charging stations
EDA	Federal Economic Development Administration
EDD	Employment Development Department
EIA	United States Energy Information Administration
EIC	Eastern Information Center
EIR	Environmental Impact Report
EMFAC	Emissions Factor Model

EMFAC2021	2021 Emissions Factor Model
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESA	Environmental Site Assessment
EV	Electric Vehicle
EVWD	East Valley Water District
FAA	Federal Aviation Administration
FAR	Firm Access Rights
FAR	Floor area ration
FBFM	Flood Boundary and Floodway Map
FEHA	Fair Employment and Housing Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FESA	Federal Endangered Species Act
FGC	California Fish and Game Code
FHA	Fire Hazard Abatement
FHBM	Flood Hazard Boundary Map
FHSZ	Fire Hazard Severity Zones
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
Flood Control District	San Bernardino County Flood Control District
FMMP	Farmland Mapping and Monitoring Program
FP	Fully Protected
FPA	Free Production Allowance
FRA	Federal Responsibility Area
FT	Feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FUDS	Formerly Used Defense Sites
GCC	Global Climate Change
GHG	Greenhouse Gas
GHGIA	Greenhouse Gas Impact Analysis
GIS	Geographical Information System
GP	General Plan
GPCD	Gallon per Capita per Day
GPD	Gallons per Day
GPM	Gallon Per Minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan

GT&S	Gas Transmission and Storage
GWh	Gigawatt Hours
GWP	Global Warming Potential
GWR	Groundwater Recharge
H2S	hydrogen sulfide
ha	Hectares
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCD	California Department of Housing and Community Development
HCD	California Department of Housing and Community Development
HI	Hazard Index
HI	Hazard index
HMBP	Hazardous Materials Business Plan
HMD	Hazardous Materials Division
HP	Horsepower
HRA	Health Risk Assessment
HUC	Hydrologic Unit Code
HUD	United States Department of Housing and Urban Development
HWCA	California Hazardous Waste Control Act
I	Industrial
I-	Interstate
IEPR	Integrative Energy Policy Report
IGG	Indian Gaming Grant
IGP	Industrial General Permit
IND	Industrial Supply
IP	Individual Permit
IpaC	United States Fish and Wildlife Service Information for Planning and Consultation System
IPCC	Intergovernmental Panel on Climate Change
IRWM	Integrated Regional Water Management
ISA	International Society of Arboriculture
ISO	Independent System Operator
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITP	Incidental Take Permit
IVDA	Inland Valley Development Agency
IVIC	Inland Valley Infrastructure Corridor
JD	Jurisdictional Delineation
kBTU	One Thousand British Thermal Units
kWh	Kilowatt Hours
LAFCO	Local Agency Formation Commission
lbs	Pounds
LBVI	Least Bell's Vireo
LDN	Day-Night Average Noise Level
LEED	U.S. Green Building Council's "Leadership in Energy and Environmental Design

L_{eq}	Equivalent Sound Level
LESA	Land Evaluation and Site Assessment
LF	Linear Feet
LID	Low Impact Development
L_{max}	Maximum Sound Level
LOS	Level of Service
LPB	Lead-Based Paint
LRA	Local Responsibility Area
LS	Less than Significant
LSA	Lake or Streambed Alteration Agreement
LSM	Less than Significant with Mitigation Measures
LST	Localized Significance Thresholds
LUP	Land Use Plan
LUST	Leaking Underground Storage Tank
M.S.	Master of Science
MBMI	Morongo Band of Mission Indians
MBTA	Migratory Bird Treaty Act
MDD	Maximum Daily Demand
MG	Million Gallons
mg/kg/day	milligrams per kilogram per day
MGD	Million Gallon(s) per Day
MICR	Maximum Individual Cancer Risk
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most Likely Descendant
MM	Mitigation Measure
MMcfd	Million Cubic Feet per Day
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPG	Miles per Gallon
MPH	Miles per Hour
MPH	Miles Per Hour
MPO	Metropolitan Planning Organizations
MRR	Mandatory Reporting Rule
MRZ	Mineral Resource Zone
MS4	Municipal Separate Stormwater Sewer Standards
MSHCP	Multiple Species Habitat Conservation Plan
MSWMP	Municipal Storm Water Management Plan
MT/YR	Metric Tons per Year
$MTCO_2e/yr$	Million Metric Tons of Carbon Dioxide per Year
MUN	Municipal and Domestic Supply
MW	Megawatt
MWELO	California Department of Water Resources' Model Water Efficient Landscape Ordinance
MWh	Megawatt per Hour
MY	Model Year

N	Nitrogen
N/A	Not Applicable
N2	nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	North bound
NCCP	Natural Community Conservation Plan
NDC	Nationally Determined Contributions
NDN	Nitrification-Denitrification
NEHRP	National Earthquake Hazard Reduction Program
NEPA	National Environmental Protection Act
NETR	Nationwide Environmental Title Research
NF_3	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NFP	National Fire Plan
NHMLAC	Natural History Museum of Los Angeles County
NHPA	National Historic Preservation Act of 1966
NHTSA	United States Department of Transportation National Highway Traffic Safety Administration
NIA	Noise Impact Analysis
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO2	Nitrogen dioxide
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	Nitrogen Oxides
NOX	Nitric oxide
NPA	No Project Alternative
NPA	No Project Alternative
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPPA	Native Plant Protection Act
NPPA	Native Plant Protection Act
NRC	Noise Reduction Coefficient
NRCS	Natural Resource Conservation Service
NRF	National Response Framework
NRHP	National Register of Historic Places
NS	Not Sampled
O_2	Oxygen
O_3	Ozone

OAC	Operation and Control Building
OAL	Office of Administrative Law
OBL	Obligate Wetland
OEHHA	California Office of Environmental Health Hazard Assessment (Proposition 65 Implementation)
OES	Office of Emergency Services
OHP	California Office of Historic Preservation
OPR	California Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PA1	Project Alternative without Roadway Capacity Expansion
Pavely	Pavely Regulations and Federal Fuel Efficiency Standards
Pb	Lead
PCE	Primary Constituent Elements
PFC	Perfluorocarbons
PG&E	Pacific Gas and Electric
pH	Potential of Hydrogen
PHI	California Points of Historical Interest
PHMSA	Pipeline and Hazardous Materials Safety Administration
PM	Particulate Matter
PM10	Respirable Particulate Matter
PM2.5	Fine Particulate Matter
POST	California Commission on Peace Officer Standards and Training
Ppb	Parts per billion
PPV	Peak Particle Velocity
PRC	Public Resources Code
PROC	Industrial Process Supply
PS&E	Plan, Specification, and Estimate
PSI	Pounds per Square Inch
Psi	Pounds per square inch
PVC	Polyvinyl chloride
R	Rate
RAFSS	Riversidean Alluvial Fan Sage Scrub
Rapanos	Rapanos v. United States
RARE	Rare, Threatened, or Endangered Species
RCB	reinforced concrete box
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RCRA	Resource Conservation and Recovery Act
REC1	Water Contact Recreation
REC2	Non-Contact Water Recreation
REL	Reference Exposure Level
RHNA	Regional Housing Needs Assessment
RMP	Risk Management Plan
RMS	root mean square
RO	Reverse Osmosis

ROG	Reactive Organic Gases
ROW	Right(s)-of-Way
ROWD	Report of Waste Discharge
RPS	California's Renewable Portfolio Standard
RRM	Robertson's Ready Mix
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RUWMP	Regional Urban Water Management Plan
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
Sackett II	Sackett v. EPA
SAFE	Safer Affordable Fuel-Efficient
SANBAG	San Bernardino Associated Governments
SARA	Superfund Amendments and Reauthorization Act
SAWPA	Santa Ana Watershed Project Authority
SB	Senate Bill
SB	South bound
SBB	San Bernardino Basin
SBCFCD	San Bernardino County Flood Control District
SBCFD	San Bernardino County Fire Department
SBCM	San Bernardino County Museum
SBCOAE	San Bernardino County Operational Area Emergency Response Plan
SBCOG	San Bernardino Council of Governments
SBCSD	San Bernardino County Sheriff's Department
SBCSS	San Bernardino County Superintendent of Schools
SBCTA	San Bernardino County Transportation Authority
SBCUSD	San Bernardino City Unified School District
SBIA	San Bernardino International Airport
SBIAA	San Bernardino International Airport Authority
SBKR	San Bernardino kangaroo rat
SBNF	San Bernardino National Forest
SBTAM	San Bernardino Transportation Analysis Model
SBVWCD	San Bernardino Valley Water Conservation District
SBWRP	San Bernardino Water Reclamation Plant
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCH	State Clearinghouse
SCOTUS	Supreme Court of the United States
SCS	Sustainable Communities Strategy
SDC	Seismic Design Category
SDG&E	San Diego Gas & Electric

SDWA	Safe Drinking Water Act
SEIR	Subsequent Environmental Impact Report
SEMS	Standardized Emergency Management System
SF	Square Foot
SF_6	Sulfur Hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SHMP	State Multi-Hazard Mitigation Plan
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLPS	Short-Lived Climate Pollutant Strategy
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	California State Mining and Geology Board
SMP	Sewer Master Plan
SNMP	Salt and Nutrient Management Plan
SNRC	Sterling Natural Resource Center
SO_2	Sulfur Dioxide
SO_4	Sulfate
SO4	sulfates
SoCalGas	Southern California Gas
SO_X	Sulfur Oxides
SP	Service Populations
SPWN	Spawning, Reproduction, and/or Early Development
SR	State Route
SRA	Source Receptor Areas
SSC	Species of Special Concern
SSMP	Sewer System Management Plan
STC	Sound Transmission Loss
STC	Sound transmission class
SWANCC	Solid Waste Agency of Northern Cook County v. Army Corps
SWHA	Swainson's hawk
SWIS	Solid Waste Information System
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T	Threatened
TAC	Toxic Air Contaminants
TCR	Tribal Cultural Resource
TDA	Tom Dodson & Associates
TEA-21	Transportation Equity Act for the 21st Century
TGM	Technical Guidance Manual
Title 24	California Code of Regulations Title 24
TMP	Transportation Management Plan
TOD	transit-oriented development

TOT	Transient Occupancy Tax
TSCA	Federal Toxic Substances Control Act
TSDF	treatment, storage and disposal facilities
TTCP	traditional tribal cultural places
U.N.	United Nations
U.S.	United States
U.S.C.	United States Code
UFC	Uniform Fire Code
UNFCCC	United Nation's Framework Convention on Climate Change
USACE	United States Army Corps of Engineers
USACOE	United States Army Corps of Engineers
USAF	United States Air Force
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
UWMP	Urban Water Management Plan
VCP	Vitrified clay pipe
VdB	Vibration Decibel Notation
VFD	Variable Frequency Drive
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
Vph	Vehicles per hours
VVTA	Victor Valley Transit Authority
WARM	Warm Freshwater Habitat
Wash Plan	Upper Santa Ana River Wash Habitat Conservation Plan
WB	West bound
WDR	Waste Discharge Requirement
WGS	World Geodetic System
WILD	Wildlife Habitat
WOTUS	Waters of the United States
WQCP	Water Quality Control Plan
WQMP	Water Quality Management Plan
WQO	Water Quality Objective
WRR	Water Recycling Requirements
WSMP	Water Supply Master Plan
WWII	World War II
WWTP	Wastewater Treatment Plant
YSMN	Yuhaaviatam of San Manuel Nation
µg/L	Micrograms per Liter

CHAPTER 1 – EXECUTIVE SUMMARY

This Executive Summary for the Inland Valley Infrastructure Corridor (IVIC) Draft Environmental Impact Report (DEIR) evaluated all potential environmental impacts of implementing the IVIC and provides focused summaries of these potential significant environmental effects, including potential significant adverse environmental impacts, that are forecast to occur from implementation of the proposed Project. It also contains a summary of the Project background, Project objectives, and Project Description. A table summarizing environmental impacts, mitigation measures, and mitigation responsibility is included at the end of this Executive Summary (**Table 1.5-1**).

1.1 BACKGROUND

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. In fact, IVDA has facilitated coordination of a number of infrastructure improvements within the IVIC Project area with the participating agencies working with IVDA to implement this Project. The other participating agencies in developing the IVIC include: City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). These Partners have jurisdictional and ownership/service interests in the Project area and have invested significant time and resources in supporting the IVDA in completing the IVIC for the benefit of the area. A table outlining the infrastructure improvements—including the stage of development in the planning process, design process, construction phase, and those that are completed—in the Project area is provided below, and **Figure 1-1** also shows a graphic of these infrastructure improvements. It indicates that IVDA has played a coordinating role in several infrastructure improvements within the Project area over the last decade.

Table 1.1-1
CURRENT & COMPLETED INFRASTRUCTURE IMPROVEMENTS WITHIN THE IVIC PROJECT AREA

Project Name	Agency Partners	Funded By	Status	Project Cost	Project Distance (mi)
3rd Street Drainage Project	IVDA, YSMN	EDA[2]	Complete	$1,440,000.00	0.22
3rd Street Roadway and Infrastructure Improvements	SBIAA,[1] YSMN, City of Highland	EDA	Completed	$3,456,000.00	0.93
3rd Street/5thStreet Corridor Improvement Project	YSMN, City of Highland, IVDA	EDA	In Construction	$11,997,968.00	1.84
Sterling Avenue Upgrade Project	IVDA, YSMN	EDA	In Design	$3,814,391.00	0.01
3rd Street Corridor Project	IVDA	DOT[3]	In Design	$3,000,000.00	1.49
Victoria Avenue Storm Drain Improvement (City Creek Channel to 9th Street) Victoria Avenue Roadway Improvement (City Creek Channel to 6th Street)	City of Highland	YSMN-IGG[4] YSMN-CCF[5] DOT	In Design	$9,450,000.00	0.75
			TOTAL	$33,158,359.00	5.24

[1] SBIAA = San Bernardino International Airport Authority
[2] EDA = Federal Economic Development Administration

[3] DOT = California Department of Transportation
[4] YSMN-IGG = IGG - Indian Gaming Grant
[5] YSMN-CFF = CCF - Community Credit Fund

1.2 INTENDED USE OF THIS ENVIRONMENTAL IMPACT REPORT

This DEIR has been prepared in accordance with the CEQA Statutes and Guidelines, 2022, pursuant to Section 21151 of the CEQA statute. The IVDA is the Lead Agency for the Project and has supervised the preparation of this DEIR. The other participating agencies/entities in developing the IVIC include the City of Highland, City of San Bernardino, the Yuhaaviatam of San Manuel Nation, and the East Valley Water District (cooperating agencies). This DEIR is an information document which will inform public agency decision makers and the general public of the potential environmental effects, including any significant impacts that may be caused by implementing the proposed Project. Possible ways to minimize significant effects of the proposed Project and reasonable alternatives to the Project are also identified in this DEIR.

This document broadly assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed Project. This DEIR is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this Project, such as modifications to the City Creek Bypass channel at the southern end of the planning area.

Other California agency approvals (if required) for which this environmental document may be utilized are outlined in **Table 1.2-1**, below:

Table 1.2-1
PROJECT APPROVALS

Agency	Approvals Necessary
Local Partners	Future site-specific projects may be enacted by IVIC Partners. This DEIR and subsequent environmental documents may be reviewed by each City or Partner as part of the review process for future IVIC related projects.
Inland Valley Development Agency	
East Valley Water District	
City of Highland	
City of San Bernardino	
County of San Bernardino	
Yuhaaviatam of San Manuel Nation	
State Water Resources Control Board (SWRCB)	SWRCB is responsible for issuing water supply permits administered under the Safe Drinking Water Project.
State Water Resources Control Board (SWRCB)	Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the Project area, the Santa Ana Regional Board enforces the BMP requirements contained in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor under contract to a Partner agency, with the Regional Board providing enforcement oversight.

Agency	Approvals Necessary
Jurisdictional Waters	The Project includes the potential discharge of fill into or alterations of "waters of the United States," "waters of the State," and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to Project activities such as pipeline installation are likely be required. • A Section 404 permit for the discharge of fill material into "waters of the United States" may be required from the ACOE • A Section 401 Water Quality Certification may be required from the Regional Board • 1600 Streambed Alteration Agreement may be required from the CDFW
Army Corps of Engineers (ACOE)	
Santa Ana Regional Water Quality Control Board	
California Department of Fish and Wildlife (CDFW)	
U.S. Fish and Wildlife Service (USFWS) CDFW	These agencies may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
San Bernardino County City of Highland City of San Bernardino	Land use permits may be required from local jurisdictions
South Coast Air Quality Management District (SCAQMD)	Air quality permits may be required from the SCAQMD.
California Department of Transportation (Caltrans) County of San Bernardino Flood Control Agencies (San Bernardino County Department of Public Works) Southern California Edison SoCalGas	Encroachment permits may be required.
State Water Resources Control Board	State Water Resources Control Board will be a responsible agency if water supply permits are requested from the Division of Drinking Water, or funding from the State Revolving Fund Project is requested from the Division of Drinking Water.

No other reviewing or permitting agencies have been identified.

1.3 PROJECT OBJECTIVES

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. The IVIC represents a long-range infrastructure Project that would be installed over a 20 year horizon. The IVIC Project area covers territory within three jurisdictions—within the City of Highland and City of San Bernardino and County of San Bernardino—and the coordination of infrastructure concurrent with development of the Project area is necessary to serve the whole of the area harmoniously. The IVIC would ensure that infrastructure improvements necessary to support the development of this area that has been forecast to occur pursuant to the respective jurisdictions' General Plan are implemented consistently across jurisdictional lines by the two cities. After conferring with the participating agencies, a group of local agencies and Partners agreed that the Inland Valley Development Agency (IVDA or Agency, a joint powers agency with responsibilities in both cities and intervening unincorporated areas) would assume the lead in managing the preparation of the IVIC and the environmental documentation required to comply with the California Environmental Quality Act (CEQA). Collectively, the participants determined that the Project area would benefit from the preparation of the IVIC. The following objectives have

been established for the proposed Project to guide the implementation of the infrastructure improvements outlined herein:

- Provide comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs. Infrastructure improvements provide solutions to current issues in the area experienced by residents and businesses and plans for future needs related to:
    - **Water** – Enhance the potable water distribution system and expand the potential for utilization of recycled water in the future
    - **Sewer** – Support wastewater collection capacity and upgrade sewer system to meet projected demand
    - **Roadways** – Improve traffic circulation, safety, mobility, and roadway conditions
    - **Stormwater Drainage** – Address longstanding flooding issues within the IVIC Project area by improving and expanding the capacity of drainage systems
    - **Other Utility Integration –** Strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements
- Efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

The primary goal of the IVIC is to provide the necessary infrastructure improvements to the Project area through a collaborative effort with IVDA partners to benefit the entire Project area, and greater area surrounding the Project utilizing this Inland Valley Infrastructure Corridor.

1.4 PROJECT APPROVALS

This DEIR for the IVIC will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the CEQA lead agency, the Inland Valley Development Agency. CEQA requires that the IVDA, the CEQA Lead Agency, to consider the environmental information in the project record, including this DEIR, prior to making a decision regarding whether or not to approve the proposed Inland Valley Infrastructure Corridor. The IVDA would also recommend approval by the Cities of San Bernardino and Highland, and East Valley Water District as Responsible Agencies that would utilize this document to facilitate some of the projects contemplated under the IVIC Project. The decision that will be considered by the IVDA is whether to approve the IVIC as defined in Chapter 3 of this document and discussed above under Section 1.1. Alternatively, the IVDA can reject the Project as proposed. This DEIR evaluates the environmental effects as outlined above.

The IVDA will serve as the CEQA Lead Agency pursuant to the State CEQA Guidelines Section 15015(b)(1). This IVIC DEIR has been prepared by Tom Dodson & Associates (TDA) under contract to and the direction of the IVDA. TDA was retained to assist the IVDA to perform the independent review of the Project required by CEQA before the DEIR is released. The IVDA Staff have reviewed the content of the DEIR and concurs in the conclusions and findings contained herein, and recommend approval of the DEIR to the IVDA Board of Directors.

1.5 IMPACTS

The IVDA concluded that an EIR should be prepared to address any potential significant impacts that may result from implementation of the proposed Project. The IVIC DEIR has been prepared for the proposed IVIC to address all 20 of the topics that make up the current (2022) Appendix G of the CEQA Guidelines.

Based on data and analysis provided in this DEIR, it is concluded the proposed Project will result in significant adverse environmental impacts to Transportation as a result of exceeding the significance thresholds for Vehicle Miles Traveled as a result of IVIC Project implementation. All other potential impacts were determined to be less than significant without mitigation, based primarily on implementation of IVIC Project goals and policies, or can be reduced to a less than significant level with implementation of the mitigation measures identified in the DEIR. Note that the cumulative significant impacts are identified in this document based on findings that the Project's contributions to such impacts are considered to be cumulatively considerable which is the threshold identified in Section 15130 of the State CEQA Guidelines. **Table 1.5-1** summarizes all of the environmental impacts and proposed mitigation and monitoring measures identified in this DEIR and will be provided to the decision-makers prior to finalizing the DEIR.

Aesthetics: As described in **Subchapter 4.2**, all potential aesthetic impacts associated with the Project can be mitigated to a less than significant impact level. Aesthetic impacts to scenic vistas and resources from disturbance would be potentially significant, but can be reduced to less than significant by requiring the new EVWD Reservoir to be at a similar scale to nearby and adjacent development to minimize conflicts with scenic vistas, as specified in **MM AES-1**. Power lines shall be undergrounded to minimize existing conflicts to the surrounding mountains per **MM AES-2.** Additionally, under the Project implementation of **MM AES-3** is required to ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a less than significant level to ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. **MM AES-4** requires a light and glare analysis that demonstrates that individual IVIC Projects would not cause significant light and glare impacts at sensitive receivers such as residences and vehicles utilizing area roadways. These mitigations together minimize aesthetics impacts to a level of less than significant. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to aesthetics from implementing the IVIC Project as proposed. Impacts would be less than significant through the implementation of mitigation.

Agriculture and Forestry Resources: As described in **Subchapter 4.3** of this DEIR, the proposed Project is not forecast to cause any significant adverse impacts to agricultural or forestry resources or resource values. No unavoidable significant impact to agricultural or forestry resources will result from implementing the proposed IVIC.

Air Quality: As described in **Subchapter 4.4**, with the implementation of mitigation, construction of the proposed Project would reduce impacts for all criteria pollutants below SCAQMD significance thresholds. Additionally, the regional operational emissions that would result from Project implementation would be less than significant without the need for mitigation. Mitigation is required to reduce nitrogen oxide (NO_x) emissions, which would reduce construction related emission to a level of less than significant, through the implementation of **MM AQ-1**. Furthermore, the Project would be consistent with the SCAQMD 2022 Air Quality Management Plan (AQMP), and as such would not result in or cause National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) violations. Construction- and operation-source

emissions would not exceed the applicable SCAQMD Localized Significance Thresholds (LSTs) and would be less than significant. **MMs** would: reduce NO_x emissions below SCAQMD thresholds. Furthermore, the Health Risk Analysis prepared for the project concluded that the carcinogenic chemical risk and non-carcinogenic exposures would all fall below SCAQMD standards of significance through the implementation of **MM AQ-1**, thereby impacts to sensitive receptors were concluded to be less than significant with the implementation of mitigation. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to air quality from implementing the Project as proposed. Impacts would be less than significant through the implementation of mitigation.

Biological Resources: As described in **Subchapter 4.5** of this DEIR, due to the lack of significant biological resources within the proposed Project area, the Project is not forecast to cause any direct significant unavoidable adverse impact to sensitive biological resources. This is because all potential impacts to biological resources within the Project area would be limited and can be mitigated to a less than significant impact level. The DEIR concluded that no special status habitats would be significantly impacted by the proposed project, but that several special status species—Crotch's bumble bee, burrowing owl, least Bell's Vireo, San Bernardino kangaroo rat, and California coastal gnatcatcher—may occur within certain portions of the IVIC Project area. Mitigation measures would: preconstruction clearance surveys to confirm that special status plant species are absent from the project site, or otherwise, impacts to such species are fully avoided through site design or through compliance with USFWS and/or CDFW regulations (**MM BIO-1**), minimize impacts to burrowing owl through preconstruction surveys and following protocol for protection of this species based on CDFW regulations (**MM BIO-2**), minimize impacts to San Bernardino kangaroo rat through restricting construction to roadways and adjacent developed sidewalk area along 5th Street between Church Avenue and State Route (SR) 210 (**MM BIO-3**), conducting preconstruction/absence surveys for SBKR where avoidance per **MM BIO-3** is not possible (**MM BIO-4**), through further impact minimization methods where SBKR are determined to be present at a project site (**MM BIO-5**), and through avoiding the installation of new permanent lighting along 5th Street between Church Avenue and SR 210 (**MM BIO-6**), minimize impacts to California coastal gnatcatcher through presence absence surveys in targeted locations (**MM BIO-7**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if California coastal gnatcatcher is found to be present within an IVIC Project site (**MM BIO-8**), minimize impacts to least Bell's vireo through presence absence surveys in targeted locations (**MM BIO-9**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if least Bell's vireo is found to be present within an IVIC Project site (**MM BIO-10**), minimize impacts to Crotch's bumble bee through vegetation removal carried out under the observations of a qualified monitor/biologist/entomologist prior to construction outside of the Crotch's bumble bee flying season (**MM BIO-11**), and through consultation with the CDFW and obtaining a take permit from the CDFW if Crotch's bumble bee is found to be present within an IVIC Project site, ensure that the EVWD Well Development and Reservoir are subject to a site-specific biological resources assessment, wherein, if sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements (**MM BIO-12**), ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features (**MM BIO-13**), ensure that jurisdictional features are documented in accordance with state and federal guidelines (**MM BIO-14**), and minimize impacts to nesting birds through either construction outside of nesting season or through a preconstruction survey that confirms nesting birds are absent from a given IVIC Project site (**MM BIO-15**). Thus, based on the lack of significant onsite biological resources and the mitigation that must be implemented to

control potential site specific impacts on biological resources, the proposed Project is not forecast to cause significant unavoidable adverse impacts to biological resources.

Cultural Resources: As described in **Subchapter 4.6**, proposed IVIC Project area may contain historical, archaeological, tribal, or paleontological resources. As such, future individual IVIC Projects may be developed within sites that contain such resources. The IVIC project area cultural resources report determined that no significant resources were known to occur within the Project area of potential effects (APE), but that mitigation to ensure protection of unknown resources that could be uncovered by construction of the IVIC Project is necessary to reduce impacts from Project implementation. **MM CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, in addition to those sites for which a cultural resource evaluation has already been prepared (the City Creek Bypass Channel) and would require the implementing agency to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities. **MM CUL-2** would ensure that the future IVIC Project Sites that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, will require a follow-on Phase I Cultural Resources Investigation. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within the future IVIC Project Sites. **MM CUL-3** would ensure that, after each phase of the studies required by **MM CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Program Infrastructure project site. **MM CUL-4** would ensure that, after each phase of the studies required by **MM CUL-3** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to the South Central Coastal Information Center (SCCIC), the Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM). This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Project Infrastructure project site. **MM CUL-4** would require an archaeologist to be present if any cultural resources are discovered during construction of any individual IVIC Project, and that YSMN is informed of the find to provide tribal input in regard to the potential significance of the cultural resource and to provide input on the treatment of the resource to ensure it is handled in a manner that would ensure impacts to the resource would be less than significant. **MM CUL-5** was also requested to be implemented by YSMN as part of the AB 52 consultation process, as was **MM CUL-4**, which requires that, if avoidance of cultural resources is not possible, that an archaeological monitor be present for the remainder of the implementation of the given IVIC Project pursuant to a Monitoring and Treatment Plan, which would further ensure that cultural resources are treated appropriately if unearthed as part of the implementation of the IVIC Project. Further, **MM CUL-6** was also requested to be implemented for the IVIC Project by YSMN, as it would protect human remains and funerary objects, and minimize impacts thereof. As described in **Subchapter 4.6**, no unavoidable significant impact to cultural resources will result from implementing the proposed Project. Impacts would be less than significant through the implementation of mitigation.

Energy: As discussed in **Subchapter 4.7**, Project construction and operation would not result in inefficient, wasteful or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. IVIC Project would be designed and constructed in accordance with the latest adopted energy efficiency standards, which are based on the Title 24 energy efficiency standards. The IVIC Project does not propose trip-generating land use and while it is anticipated that the IVIC Project would require intermittent maintenance, such

maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Furthermore, a goal of the IVIC Project is to strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements, which includes alternative energy technologies. Thus, the IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). The proposed IVIC Project would comply with these regulations. Thus, it is anticipated that construction of the proposed IVIC Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Compliance with mandatory measures would ensure that future facilities proposed under the IVIC Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Impacts would be less than significant. With compliance with current Federal and State regulations pertaining to energy conservation, the proposed IVIC Project is anticipated to have a less than significant impact on energy demand and resources.

Geology and Soils: The San Bernardino Valley contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future IVIC Project related infrastructure in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the IVIC Project was identified in **Subchapter 4.8**. However, several **MMs** were identified to minimize geology and soils impacts from implementation of the Project, including those **MMs** that would: reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation, minimize impacts to paleontological resources that may be exposed during construction through proper treatment by a paleontological professional, and through the implementation of soil erosion minimization on sites that are smaller than one acre, and thereby are not subject to the provisions of the following permits and plans: Stormwater Pollution Prevention Plans (SWPPP), National Pollutant Discharge Elimination System (NPDES), and Water Quality Management Plan (WQMP). As described in **Subchapter 4.8**, no unavoidable significant impact to geology and soils will result from implementing the proposed Project. Impacts would be less than significant through the implementation of mitigation.

Greenhouse Gas: As described in **Subchapter 4.9**, implementation of the proposed Project will result in approximately 1,422.67 $MTCO_2e$/yr (million metric tons of carbon dioxide per year) from construction and operational activities. As such, the Project would not exceed the SCAQMD's recommended numeric threshold of 3,000 $MTCO_2e$ or 10,000 $MTCO_2e$/yr if it were applied. Thus, the Project would not result in a cumulatively considerable impact with respect to greenhouse gas (GHG) emissions. The IVIC Project involves construction activity and does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. Therefore, the Project would not conflict with the 2022 Scoping Plan, and no significant impact would occur. As concluded in **Subchapter 4.9**, the proposed Project would not have the potential to generate a significant amount of GHGs emissions. As such, the proposed Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Project-related GHG emissions are not considered to be significant or adverse and would not result in an unavoidable significant adverse impact on global climate change. Impacts would be less than significant.

Hazards and Hazardous Materials: The Project contains substantial hazards and hazardous materials issue constraints. Due to these substantial constraints and the installation of future Project infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the IVIC Project were identified in **Subchapter 4.10**. However, several **MMs** were identified to minimize hazards and hazardous materials impacts, which would apply to all individual components of the IVIC Project. **MM HAZ-1** would require implementation of a Hazardous Materials Business Plan (HMBP) and the best management practices (BMPs) therein to minimize the potential for accidental release of hazardous materials. **MM HAZ-2** would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials. **MM HAZ-3** would require modeling of pathways for hazardous materials to contain hazardous material and manage hazardous materials appropriately to avoid exposure of hazardous materials at nearby sensitive receptors, thereby preventing hazardous materials impacts from storage and use onsite. **MM HAZ-4** would require disposal of hazardous materials in compliance with State and Federal law. **MM HAZ-5** would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law. While it is not anticipated that facilities under the proposed IVIC Project would be installed on a known site containing hazardous contamination, during project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. The implementation of **MM HAZ-6** would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of **MM HAZ-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. The implementation of **MM HAZ-8** would ensure compliance with the appropriate airport land use plan, minimization of conflicts with the airport safety review areas, and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the IVIC Project area during construction and operation of the IVIC Project facilities. **MM HAZ-8** would require facilities within the airport safety zones to be designed in conformance with the ALUCP, or, where a conflict with the ALUCP is identified, the facility shall be relocated or redesigned to avoid a conflict with the ALUCP, thereby avoiding a potentially significant conflict with an airport safety zone. The implementation of **MM TRAN-1**, identified under **Subchapter 4.18** of this DEIR, would require the preparation of a Transportation Management Plan (TMP) with comprehensive strategies to reduce potential disruption to emergency evacuation or an emergency response plan. Therefore, potential significant impacts to emergency access and evacuation would be reduced to a less than significant level. Therefore, though there will be some adverse impacts as a result of implementing the Project, specific **MMs** have been identified to reduce potential IVIC Project specific and cumulative (direct and indirect) impacts to a less than significant level for hazards and hazardous material issues. Thus, the IVIC Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts. Impacts would be less than significant through the implementation of mitigation.

Hydrology and Water Quality: As described in **Subchapter 4.11** of this DEIR, the proposed Project will make unavoidable alterations in the IVIC Project Area hydrology and the improved infrastructure must be installed in accordance with local, State, and Federal low in order to protect area water quality. However, the IVIC Project requires mitigation measures to minimize overall hydrology and water quality impacts to a level of less than significant. The IVIC Project requires mitigation measures to address the following: ensure that during construction the SWPPP will be

implemented to control any discharges from the site to minimize potential water quality degradation during this stage of development, thereby minimizing construction related potential for water quality violations to a level of less than significant; ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational water quality violation potential to a level of less than significant; where individual projects are less than one acre, require implementation of BMPs during construction that would minimize the potential for water quality violations to a level of less than significant; require a pump test on the new well to ensure that a cone of depression does not occur as a result of pumping the new well that could impact nearby wells; and, ensure that future IVIC infrastructure projects located within a floodplain would be further evaluated to determine their potential to impede or redirect flood flows. Through implementation of mitigation, potential hydrology and water quality impacts can be controlled to a less than significant impact level. The proposed IVIC Project will not cause unavoidable significant hydrology or water quality impacts.

Land Use and Planning: As described in **Subchapter 4.12**, impacts related to land use and planning are minimal. The proposed IVIC Project would install infrastructure in five categories: Road improvements; City Creek Bypass Channel; EVWD Well; EVWD Reservoir; and sewer installation. None of these facilities or their physical arrangement or character will function as a physical division within the existing IVIC Project area community. The only infrastructure facilities with any potential to divide a community are the proposed roadways and the Channel. These are both linear features that can result in dividing a community. However, in this case the roadway alignments and Channel are existing infrastructure features within the local community. Improving their ability to function by improving the roads to handle traffic and the Channel to handle stormwater runoff better will not cause any new physical divisions within the community. The IVIC Project does not propose to modify any existing land uses. Based on an analysis of the current infrastructure deficiencies within the Project area, the IVIC proposes to upgrade existing infrastructure in five categories (road improvements; City Creek Bypass Channel; groundwater extraction well; storage reservoir; and sewer installation). Each of these infrastructure systems needs to be upgraded in order to adequately support the gradual build-out of the two cities' General Plans over the next 20 years. Thus, the IVIC Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the IVIC Project-related land use and planning impacts would fall below a level of significance, and as such, the proposed IVIC Project will not cause unavoidable significant land use and planning impacts. Impacts would be less than significant through the implementation of mitigation.

Mineral Resources: As described in **Subchapter 4.13**, based on a review of cities General Plans, mineral resource extraction is not a permitted activity within the IVIC Project area. Furthermore, as no mines are currently located within the IVIC Project footprint, even though mineral resource values are known or suspected to exist within the overall IVIC Project area (refer to **Figures 4.13-1 and 4.13-2**), the individual components of the proposed Project would not preclude future mining activities from being developed within the IVIC Project area, nor would the IVIC Project components be anticipated to be within a site that would be suitable for future mining activities as a result of existing uses and underlying land use designations. Therefore, there is no potential impact that would result in a loss of availability of a known mineral resource. Neither the City of Highland or the City of San Bernardino General Plans designate the Project area as a locally-important mineral resource recovery site, nor does either General Plan designate EVWD's Intermediate or Lower zones as containing locally-important mineral resource recovery sites. As previously stated, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would be located within and adjacent to existing rights-of-

way that would not include areas that are designated locally-important mineral resource recovery sites. Additionally, the proposed EVWD Well and Reservoir are not anticipated to require a large footprint, such that these individual projects would interfere with the exploitation of mineral resources, even though no locally-important mineral resource recovery sites have been designated within these areas. Therefore, implementation of the IVIC Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Thus, IVIC Project-related mineral resource impacts can be reduced below a level of significance, and as such, the proposed IVIC Project will not cause unavoidable significant mineral resource impacts. Impacts would be less than significant.

Noise: As described in **Subchapter 4.14**, The IVIC Project would traverse through an area that contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints, a potential exists for significant noise impacts from implementation of the IVIC Project, particularly during construction and as a result of the roadway land expansion. Construction-related impacts for the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would be less than significant without the need for mitigation. The only operational noise sources of any significance are off-site traffic noise related, as any mechanical equipment associated with the EVWD Well and Reservoir are expected to be placed within structures or underground to minimize operational noise sources. Off-site traffic noise can be minimized to a level of less than significant through the implementation of **MM NOI-1**. EVWD Well Development and Reservoir construction noise can be minimize to a level of less than significant through **MMs NOI-2 and NOI-3.** Thus, overall temporary and permanent noise generated by the IVIC Project would be less than significant through the implementation of mitigation. IVIC Project construction vibration levels will satisfy the typical Project construction vibration levels will satisfy the transient human annoyance and building damage threshold. Therefore, the vibration impacts due to Project construction are considered less than significant. Furthermore, the analysis shows that the airport noise level impacts would be considered less than significant during both construction and operation of the proposed IVIC Project. Thus, overall noise impacts would be less than significant through the implementation of mitigation.

Population and Housing: As described in **Subchapter 4.15**, implementation of the IVIC Project would not significantly induce growth within the San Bernardino Valley area within which the Project is proposed. While the locations of the EVWD Reservoir and Well Development are not presently known beyond that these facilities would be located within the lower and intermediate zones of EVWD's service area (**Figure 3-15**), respectively, EVWD anticipates avoid impacting any housing as a matter if site selection. As such, neither construction nor operation of the EVWD Reservoir and Well Development are not anticipated to impact persons or housing, as each will operate within its own facility intended to support water infrastructure. The proposed roadway improvements would occur within existing and adjacent to road rights-of-way. The areas adjacent to the road rights-of-way that would be expanded in width could result in some encroachment onto adjacent properties, but this take would not encroach into residential housing units within the IVIC Project area. As the roadways within the IVIC Project area do not support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Construction of the proposed infrastructure would require temporary employment. It is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within Southern California. They would become part of the IVIC Project Area's temporary population during the construction of each facility. Locally available temporary housing for the maximum of 90 construction employees that would be required at any given time during

the implementation of the proposed IVIC Project. Adequate temporary housing resources are available within the IVIC Project Area that can accommodate a temporary housing population of 90 persons on an average daily basis (90/76,839 = 0.117%). The proposed IVIC Project envisions installing new infrastructure over a 20 year period to meet both City's build-out growth forecasts based on the existing mix of General Plan uses within the Project area. The IVIC Project does not directly contribute to future permanent development (population or housing), but will accommodate growth as it occurs under the existing cities' General Plan land use designations, and as envisioned in the cities' General Plans. Therefore, the IVIC Project-related population and housing impacts are less than significant, and as such, the proposed IVIC Project will not cause unavoidable significant population and housing impacts. Impacts would be less than significant.

Public Services: As described in **Subchapter 4.16**, implementation of the Project would not significantly impact fire protection, police protection, schools, recreation/parks or other public facilities. However, mitigation was identified to minimize impacts to police protection that would minimize the potential for trespass that could exacerbate demand for police protection services. With implementation of **MM PS-1**, the IVIC Project-related police protection impacts can be reduced to a less than significant impact level.

Recreation: As described in **Subchapter 4.17**, implementation of the IVIC Project would not significantly impact recreation. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. There is a potential that the EVWD Well Development and Reservoir could be located within parks or facilities designated for such use. Construction and staging areas within parks at which the EVWD Well Development and Reservoir may be installed may result in the temporary closure of parks or portions of parks. However, several parks in the area surrounding the IVIC Project area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to development within existing parks, there is a potential for the EVWD Well Development and Reservoir to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the area surrounding the IVIC Project. As such, **MM REC-1** would be implemented to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, implementation of **MM REC-2** would ensure that, should construction of recreation or park facilities be required as a part of the IVIC Project, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated. Thus, the Project-related recreation impacts would be less than significant through the implementation of mitigation, and proposed IVIC Project will not cause unavoidable significant recreation impacts.

Tribal Cultural Resources: As described in **Subchapter 4.19** of this DEIR, the Yuhaaviatam of San Manuel Nation (YSMN; [formerly known as the San Manuel Band of Mission Indians]) and the Morongo Band of Mission Indians (MBMI), requested continued participation with this Project's CEQA process and future projects implemented under the IVIC Project during the initial 30-day AB 52 consultation period. The proposed IVIC Project has a modest potential to impact (alter or destroy) a Tribal Cultural Resource (TCR). Based on the research results summarized above and direct experience with the YSMN and MBMI tribes, many of the IVIC infrastructure projects have a potential to expose subsurface resources. Mitigation is identified that will be implemented by future individual IVIC projects. These measures are intended to address concerns expressed by the YSMN and MBMI. In consultation with the YSMN, it was requested that the following **MMs TCR-1 and TCR-2** be implemented to protect tribal cultural resources. **MM TCR-1** would require notification of YSMN in the event of a TCR discovery, and would allow YSMN to coordinate the implementation of its own Cultural Resources Monitoring and Treatment Plan that would enable a monitor to be present representing YSMN onsite thereafter. This would ensure that TCRs that may be discovered that fall under YSMN's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. **MM TCR-2** would require that documentation of any discovered resources and other such reports pertaining to archaeological and tribal resources are communicated to the YSMN for its records. In consultation with the MBMI, it was requested that the following **MMs TCR-3 and TCR-10** be implemented to protect tribal cultural resources. These mitigation measures would accomplish the following: retaining a tribal and archaeological monitor to develop and implement a Cultural Resource Management Plan (CRMP) that would ensure close attention to ground disturbing activities that might uncover or otherwise impact TCRs. These measures would ensure that TCRs that may be discovered that fall under MBMI's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. Through incorporation of **MMs**, impacts to TCRs are considered less than significant. Thus, with implementation of mitigation to protect TCRs, the IVIC Project would not cause significant unavoidable adverse impacts to TCRs. Impacts would be less than significant through the implementation of mitigation.

Utilities and Service Systems: As described in **Subchapter 4.20** of the DEIR, the proposed IVIC Project will cause an contribute to expanding existing and constructing new utilities and service systems within the IVIC Project area. Based on the analysis presented in the DEIR, the construction and operation of the EVWD Well and Reservoir can be accomplished without causing significant adverse environmental effects. The existing wastewater transmission system, as well as the previously analyzed and planned for transmission system associated with the development of the SNRC, for which implementation is in progress, are anticipated to require construction of approximately 5,000 linear feet of new sewer over the 20 year implementation period (maximum estimate 2,500 lineal feet per year. Given that the proposed IVIC project would not result in any significant impacts under any issues pertaining to construction of infrastructure, no significant impacts related to the construction of water and wastewater facilities are anticipated. Additional/expanded stormwater collection is necessary to develop the IVIC as envisioned within each City's General Plan. In addition, as individual development projects occur within the IVIC Project area, they will be required to meet current WQMP design and Low Impact Development (LID) requirements. This will minimize increases in runoff due to new impervious surfaces associated with future development. The proposed IVIC Project would require or result in the relocation or construction of new or expanded stormwater facilities, but the construction or relocation of which would not result in significant adverse impact. Full development of the infrastructure proposed as part of the IVIC Project area will not have a significant impact on availability of energy resources in the City of Highland, City of San Bernardino and unincorporated

areas of the San Bernardino County. While individual projects—namely the EVWD Well and Reservoir—may require extension of electrical service to a given site within the IVIC Project area, the whole of the area is forecast to be served by comprehensive existing electrical systems. Because it is not known exactly where the EVWD Well and Reservoir will be installed, there may be locations in which electricity services are not available within the immediate vicinity of a given Program site. As such, **MM UTIL-1** would ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated. Given the availability of natural gas within the Project area, while individual projects may require extension of natural gas services to a given site within the area, the whole of the IVIC is served by existing natural gas pipelines; therefore, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects.

It appears that the whole of the IVIC Project is served by existing telecommunication facilities; therefore, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded facilities, the construction or relocation of which could cause significant environmental effects.

Per the Western-San Bernardino Judgement, EVWD is not limited in the amount of groundwater it can produce from SBB. Based on this information, it is anticipated that there will be available water supply within the SBB to support the District's new well pumping operations. Therefore, the proposed IVIC Project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. Further, none of the proposed infrastructure facilities will generate wastewater and given that the SNRC would be developed and ready to accept sewer flow from EVWD's service area, the potential impact from the IVIC Project is a no impact finding.

Because future construction developed under the IVIC Project will be regulated by waste reduction and diversion from landfill programs, the construction of the IVIC Project, particularly given that development will occur gradually over a 20-year horizon, would not result in a substantial increase in demand in excess of capacity for local solid waste disposal facilities and regional landfill capacity. IVIC Project infrastructure development would be required, through the implementation of **MM UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. The IVIC Project will be required to ultimately divert up 75 percent of solid waste from landfills as a result of AB 341. Furthermore, **MM UTIL-3** would require further diversion through the recycling of soils where possible for future IVIC Project infrastructure. Any hazardous materials collected within the IVIC Project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes.

Based on the facts and findings presented in the above analysis, the proposed Project will not cause unavoidable significant adverse impacts to utilities and service systems.

Wildfire: As described **in Subchapter 4.21** of this DEIR, under the proposed IVIC Project, due to the location of the IVIC Project area being 3 to 5 miles south of the foothills, construction and operation of future infrastructure would be well outside of any delineated high fire hazard severity zone. The Roadway Improvements and Sewer Improvements would require construction within

road rights-of-way. These construction activities could potentially block access to roadways and driveways for emergency vehicles for short periods. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. The implementation of **MM WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level. Furthermore, due to the short-term potential for wildfire related pollutant exposure in the IVIC Project area, no significant adverse exposure is forecast to occur for future persons working, residing, or visiting the IVIC Project area. The IVIC is located in an urban area. Installation or maintenance of associated infrastructure such as fuel breaks, emergency water sources, power lines, etc. that may exacerbate fire risks or result in temporary ongoing impacts to the environment is not required. Finally, the proposed IVIC Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, due to IVIC Project infrastructure locations outside of very high FHSZs in LRAs, i.e., urban areas. Thus, with implementation of mitigation to minimize wildfire impacts, the IVIC Project would not cause significant unavoidable adverse impacts under wildfire. Impacts would be less than significant through the implementation of mitigation.

The proposed Project could result in significant impacts to the following environmental issue: Transportation, based on the facts, analysis and findings in this DEIR.

Transportation: As described in **Subchapter 4.18** of the DEIR, the proposed IVIC Project may result in significant and unavoidable transportation impacts, specifically related to Vehicle Miles Traveled impacts from expanding the area roadways to General Plan Buildout configurations. Project construction could result in other short-term circulation effects such as temporary alteration of the movement and circulation of roadway vehicles, public transit, bicycles, and/or pedestrians within the project area, as lane and/or road closures could be required where water conveyance pipelines and any lateral connecting pipelines would be installed in public roadway rights-of-way and construction disturbance could traverse under existing transit, bicycle, and/or pedestrian thoroughfares. **MM TRAN-1** would require, for projects that would potentially impact circulation (construction of facilities that generate greater than 50 construction [PCE] or operational trips per day, or where the facility would encroach within road rights-of-way) implementation of designated construction roadway vehicle routes, damage repair procedures, and transportation control measures to minimize potential impacts to the movement and circulation of vehicles, public transit, bicycles, and/or pedestrians within the project area due to construction roadway vehicle volumes and lane and/or road closures during project construction. In addition, **MM TRAN-1** would require coordination with SBCTA and designation of alternative bicycle and pedestrian routes during project construction to compensate for impacts to transit stops and bicycle and pedestrian facilities. Furthermore, **MM TRAN-1** would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved Construction Transportation Management Plan, and it would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of **MM TRAN-1** would reduce construction transportation circulation system impacts to a less than significant level.

The Project proposes to construct approximately 20-lane miles of lane addition. Consistent with the Technical Advisory, potential induced vehicle travel was evaluated to determine if the roadway

capacity enhancements would result in an increase in total VMT. Consistent with guidance provided by the Technical Advisory, the proposed Project would result in a potential VMT impact if the "With Project" condition would result in a net increase in total VMT as compared to the "No Project" condition. As such, the Project is found to result in a net increase in total VMT and would therefore result in a significant and unavoidable VMT impact. As IVDA does not have land use authority to enforce transportation reduction strategies, these strategies will be recommended to be incorporated by the Cities of Highland and San Bernardino and the County of San Bernardino. Furthermore, no VMT reduction strategy would be sufficient to offset the additional VMT that would be generated by the roadway capacity expansion that would occur as a result of the land additions by the proposed IVIC. Thus, significant and unavoidable VMT impacts would result from IVIC Project implementation. As such, based on these findings, the proposed Project would cause significant unavoidable adverse transportation impacts, specifically as a result of exceeding VMT significance thresholds.

The Executive Summary of potential Project impacts is presented in Table 1.5-1.

Table 1.5-1 provides a summary of all impacts and **MMs** identified in the detailed environmental evaluation presented in Chapter 4 of this DEIR. This summary is meant to provide a quick reference to proposed IVIC Project impacts, but the reader is referenced to Chapter 4 to understand the assumptions, method of impact analysis and rationale for the findings and conclusions presented in Table 1.6-1.

Table 1.5-1
SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DISCUSSED IN THIS DEIR

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
AESTHETICS		
AES-1	To mitigate the potential effects of installing a new reservoir within the IVIC project area, the site selected shall either be proximate to existing large structures within the project area or the reservoir shall replace existing structures that already interfere with the view to the north, i.e., the San Bernardino Mountains. The objective is to minimize the modification in views to this scenic resource from east-west roadways within the project area.	Implementing Agency[1]
AES-2	Each new roadway development within the IVIC in the future shall include an effort to underground the above existing above ground power lines and removal of power poles adjacent to the roadways.	Implementing Agency
AES-3	Should the removal of trees be required for a specific project, the Implementing Agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the Implementing Agency shall replace all trees removed at a 1:1 ratio. If this cannot be accomplished a second tier CEQA evaluation shall be completed.	Implementing Agency
AES-4	Prior to approval of the Final Design for future site-specific IVIC projects, an analysis of potential glare from sunlight or exterior lighting to impact vehicles traveling on adjacent roadways shall be submitted to the pertinent City for review and approval. This analysis shall demonstrate that due to building orientation or exterior treatment, no significant glare may be caused that could negatively impact drivers on the local roadways or impact adjacent land uses. If potential glare impacts are identified, the building orientation, use of non-glare reflective materials or other design solutions acceptable to the Cities of Highland and San Bernardino shall be implemented to eliminate glare impacts.	Implementing Agency

[1] Implementing Agency refers to the Agency of the Project Team—EVWD, City of San Bernardino, City of Highland, IVDA—implementing the individual facility for which these mitigation measures apply.

Impact Description	Impact After Mitigation
AESTHETICS The existing visual setting of the proposed Project area will be permanently altered. The addition of expanded infrastructure greater than that which presently occurs within the IVIC Project area will change the visual setting. The impacts to visual resources in the area including scenic resources, trees, rock outcroppings, etc., and from new sources of light and glare were determined to be significant without mitigation. As such, mitigation is required to reduce impacts under this issue.	As described in **Subchapter 4.2**, all potential aesthetic impacts associated with the Project can be mitigated to a less than significant impact level. Aesthetic impacts to scenic vistas and resources from disturbance would be potentially significant, but can be reduced to less than significant by requiring the new EVWD Reservoir to be at a similar scale to nearby and adjacent development to minimize conflicts with scenic vistas, as specified in **MM AES-1**. Power lines shall be undergrounded to minimize existing conflicts to the surrounding mountains per **MM AES-2.** Additionally, under the Project implementation of **MM AES-3** is required to ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a less than significant level to ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. **MM AES-4** requires a light and glare analysis that demonstrates that individual IVIC Projects would not cause significant light and glare impacts at sensitive receivers such as residences and vehicles utilizing area roadways. These mitigations together minimize aesthetics impacts to a level of less than significant. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to aesthetics from implementing the IVIC Project as proposed. Impacts would be less than significant through the implementation of mitigation.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
AGRICULTURE AND FORESTRY RESOURCES No mitigation necessary.	–

Impact Description	Impact After Mitigation
AGRICULTURE AND FORESTRY RESOURCES As described in **Subchapter 4.3** of this DEIR, the proposed Project is not forecast to cause any significant adverse impacts to agricultural or forestry resources or resource values. No unavoidable significant impact to agricultural or forestry resources will result from implementing the proposed IVIC.	No mitigation is required. Impacts are less than significant

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
AIR QUALITY AQ-1: The Construction Contractor shall ensure that off-road diesel construction equipment complies with Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications. This measure will apply to all future projects.	Implementing Agency

Impact Description	Impact After Mitigation
AIR QUALITY The Project-specific evaluation of emissions presented in **Subchapter 4.4** demonstrates that construction of the proposed IVIC would result in an exceedance of thresholds for a criteria pollutant: NO_x. Maximum daily NO_X emissions would exceed the SCAQMD regional significance threshold throughout the entire duration of Project construction. Operational emissions would fall below significance thresholds without the need for added mitigation due to the limited operational activities associated with the IVIC Project. The Project would be consistent with the SCAQMD 2022 AQMP, and as such would not result in or cause NAAQS and CAAQS violations. The Health Risk Analysis prepared for the project concluded that the carcinogenic chemical	As described in **Subchapter 4.4**, with the implementation of mitigation, construction of the proposed Project would reduce impacts for all criteria pollutants below SCAQMD significance thresholds. Additionally, the regional operational emissions that would result from Project implementation would be less than significant without the need for mitigation. Mitigation is required to reduce nitrogen oxide (NO_x) emissions, which would reduce construction related emission to a level of less than significant, through the implementation of **MM AQ-1**. Furthermore, the Project would be consistent with the SCAQMD 2022 Air Quality Management Plan (AQMP), and as such would not result in or cause National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS)

Impact Description	Impact After Mitigation
risk and non-carcinogenic exposures would not fall below SCAQMD standards of significance without mitigation, thereby impacts to sensitive receptors would be significant and unavoidable. Mitigation is required to reduce the Project's contribution to significant air quality emissions.	violations. Construction- and operation-source emissions would not exceed the applicable SCAQMD Localized Significance Thresholds (LSTs) and would be less than significant. **MMs** would: reduce NO_x emissions below SCAQMD thresholds. Furthermore, the Health Risk Analysis prepared for the project concluded that the carcinogenic chemical risk and non-carcinogenic exposures would all fall below SCAQMD standards of significance through the implementation of **MM AQ-1**, thereby impacts to sensitive receptors were concluded to be less than significant with the implementation of mitigation. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to air quality from implementing the Project as proposed. Impacts would be less than significant through the implementation of mitigation.

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIOLOGICAL RESOURCES		Implementing Agency
BIO-1	Preconstruction clearance surveys shall be conducted by a qualified biologist who is familiar with the local flora, to determine if any special status plant species are present within the proposed disturbance area prior to construction of the EVWD Well Development and Reservoir. Botanical surveys shall be conducted during the appropriate time of year, when target species are both evident and identifiable. Should any special status plants be located within the area of potential effect (APE) during the preconstruction survey, the Implementing Agency shall fully avoid the plant(s) or due if the species is federally listed, Section 7 Consultation with the USFWS shall be conducted, if the species is listed by the State, an Incidental Take Permit (ITP) from CDFW shall be obtained. Subject to CDFW and/or USFWS concurrence, EVWD shall mitigate the loss of the plant(s) through the purchase of mitigation credits from a CDFW-approved bank, or the acquisition and conservation of land approved by CDFW at a minimum 1:1 (replacement-to-impact) ratio.	
BIO-2	All future IVIC projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Implementing Agency shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval. Preconstruction burrowing owl surveys shall be conducted no less than 14 days prior to	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
	the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys shall be performed by a qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If the preconstruction surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and prepare a Burrowing Owl Plan that shall be submitted to CDFW and USFWS for review and approval prior to commencing Project activities.	
BIO-3	All construction activities between Church Avenue and SR-210 shall be restricted to existing roadways and adjacent sidewalk areas, and shall take place during daytime hours to avoid any light or noise disturbance that could potentially alter the nocturnal behavior of San Bernardino kangaroo rat (SBKR) present in adjacent habitat within and along City Creek. In the event that construction outside of roadway and adjacent sidewalk footprints cannot be avoided, the provisions of **MM BIO-4** shall be adhered to and required.	Implementing Agency
BIO-4	Preconstruction presence/absence surveys for San Bernardino kangaroo rat (SBKR) shall be conducted within 45 days prior to any onsite ground disturbing activity by a qualified biologist. SBKR surveys shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service (USFWS). If no presence of SBKR is found during the survey, **MM BIO-5** need not be enforced.	Implementing Agency
BIO-5	In the event that the preconstruction survey determines the presence of SBKR, and complete avoidance is not possible, the Implementing Agency shall acquire an ESA and/or CESA Incidental Take Permit (ITP) prior to any vegetation- or ground disturbing activities. Any take of SBKR without take authorization would be a violation of Fish and Game Code section 2050 et seq. The Implementing Agency shall provide compensation for loss of habitat to SBKR in the following manner: the Implementing Agency shall obtain a 2081 ITP from the CDFW; the Implementing Agency shall offset the loss of habitat to SBKR by purchasing suitable SBKR habitat at a minimum 3:1 ratio depending on the habitat quality of the impact site and the location and habitat quality of the identified mitigation site; and any conserved habitat shall be provided with an appropriate endowment to ensure permanent protection and the conserved habitat shall be managed in perpetuity by an agency or party considered acceptable to the CDFW. No ground disturbance within potential SBKR habitat shall occur until an ITP is obtained by the Implementing Agency from CDFW and USFWS. Note that the final compensation package contained in the permit may differ from the above compensation package.	Implementing Agency
BIO-6	IVIC Projects shall avoid installing permanent lighting between Church Avenue and SR-210 beyond that which exists at present. If new permanent lighting must be installed between Church Avenue and SR-210 as part of the IVIC Project circulation system infrastructure improvements, low intensity lighting that is directed away from adjacent areas shall be utilized to protect SBKR and other nocturnal species from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting in adjacent areas is not increased.	Implementing Agency
BIO-7	IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for coastal California gnatcatcher (CAGN) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (February 1 to September 15 is CAGN nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the CAGN is found to occupy the site, MM BIO-8 shall be required	Implementing Agency
BIO-8	If CAGN are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of coastal California gnatcatcher. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact gnatcatcher. If a take permit from the USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.	Implementing Agency
BIO-9	IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for least Bell's vireo (LBVI) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (March 15 to September 30 is LBVI nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the LBVI is found to occupy the site, MM BIO-8 shall be required.	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-10	If LBVI are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of LBVI. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact LBVI. If a take permit from the USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.	Implementing Agency
BIO-11	The following mitigation conditions shall be required for Projects that occur between Church Avenue and the SR-210, specifically where the construction APE falls outside of existing sidewalk and right-of-way. Vegetation Clearing: Between November 1 and January 31, the shall proceed with hand clearing the vegetation within the whole of the Project Site. If vegetation clearing is not able to proceed during this timeline, SGVWC shall proceed with the Protocol Survey outlined below. This activity shall only occur under the supervision of a qualified monitor/biologist/entomologist familiar with the species behavior and life history of Crotch's bumble bee. The qualified monitor/biologist/entomologist shall stop the vegetation removal crew from further vegetation removal within a 10-foot buffer where any holes, burrows, or crevices are encountered and shall assess the hole utilizing passive measures to determine whether the burrow supports the Crotch's bumble bee. If the hole, burrow, or crevice is not determined to support the species, vegetation removal in this area can resume. If the hole, burrow, or crevice is determined to potentially support this species, the burrow, and the hole, burrow, or crevice shall remain undisturbed for the remainder of vegetation clearing efforts, but the vegetation around the burrow can continue to be hand cleared only where the prevention of disturbance of the hole, burrow, or crevice is possible. Protocol Survey: If vegetation clearing cannot be accomplished during November 1 and January 31 Protocol surveys for CBB shall be carried out pursuant to CDFW Survey Methods published in June of 2023 for Candidate Bumble Bee Species.[2] If the survey indicates that the species is absent from the project area, construction can proceed without further action. If the species has been determined to be present by the protocol survey, a written survey report will be submitted to the California Department of Fish and Wildlife (CDFW) within 30 days of the last site visit. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report. If "take" or adverse impacts to Crotch's bumble bee cannot be avoided either during Project activities or over the life of the Project, the Implementing Agency shall consult CDFW to determine if a CESA Incidental Take Permit is required (pursuant to Fish & Game Code, § 2080 et seq.) and if required, the mitigation identified in the permit shall be carried forth by the Implementing Agency to avoid impacts to this species.	Implementing Agency
BIO-12	Prior to implementation of the EVWD Well Development and Reservoir, a site-specific biological resources assessment shall be conducted by a qualified biologist familiar with area flora and fauna. This survey shall be conducted in accordance with appropriate standards by a qualified biologist/ ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken: a. The Implementing Agency shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost, with the ultimate compensatory mitigation ratio being determined through negotiation with USFWS and/or CDFW, and never less than 1:1. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species. b. The final mitigation may differ from the above values based on negotiations between the implementing agency and USFWS and CDFW for any incidental take permits for listed species. The Implementing Agency shall retain a copy of the incidental take	Implementing Agency

[2] CDFW, 2023. California Department of Fish and Wildlife Survey Considerations for California Endangered Species Act (CESA). Candidate Bumble Bee Species https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline (accessed 05/23/24)

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
	permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished. c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted in areas that were not previously surveyed because of access or timing issues or project design changes; pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. If special-status plants or plant communities are identified, the following hierarchy of actions shall be taken: a) find an alternative site; b) avoid the plants and maintain them onsite after completing the project; or c) provide compensatory mitigation offsite.	
BIO-13	The City Creek Bypass Channel shall minimize discharge of fill to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Impacts to jurisdictional waters shall be mitigated at a minimum 1:1 ratio, with the ultimate compensatory mitigation ratio being determined through negotiation with regulatory agency, and never at a rate of less than 1:1. The ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency, and must be deemed sufficient by the regulatory agency issuing the permit to compensate for/offset the impacts to the jurisdictional waters and supported species and habitats therein. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (USACE, RWQCB, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the implementing agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.	Implementing Agency
BIO-14	A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities for the City Creek Bypass Channel to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with **MM BIO-12.**	Implementing Agency
BIO-15	To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 15 of a given calendar year, depending on the species). Additionally, at the discretion of a qualified avian biologist, nesting bird surveys shall be required, where appropriate, regardless of the time of year no more than three (3) days prior to vegetation clearing or ground disturbance activities. • Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If no active nests are found, no further action would be required. If an active nest is found, the biologist shall set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. There are no standard nest buffers specified in the MBTA or within the FGC. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project- and site-specific basis. The nest(s) and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
nest is inactive. • Preconstruction nesting bird surveys shall include a nighttime component to address the potential for presence of nocturnal species. The nesting bird surveys shall consist of a minimum of five (5) consecutive survey days and shall include an additional three (3) consecutive nights of survey for nocturnal species. Nocturnal surveys shall be conducted between the hours of 9:00 pm. and midnight, during appropriate weather conditions (e.g., no rain or winds). • Vegetation removal, including any tree removal or pruning, and structure demolition shall be conducted outside the typical nesting season (i.e., between September 1st and January 31st), to the maximum extent feasible. Otherwise, the provisions of the preconstruction nesting bird surveys, above, shall suffice to ensure impacts to nesting birds are minimized.	

Impact Description	Impact After Mitigation
BIOLOGICAL RESOURCES As described in **Subchapter 4.5,** there is a potential that a future Project facility may be developed in an area containing significant biological resources that cannot be avoided. Future Project facilities may be installed within sites that contain significant biological resources that may be impacted without mitigation. These impacts may include direct impacts such as the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts such as erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the Project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Furthermore, while it is recommended that future IVIC infrastructure projects avoid construction within the natural areas outside of the 5the Street corridor between Church Street and SR-210. Consequently, without mitigation, the Project could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources.	As described in **Subchapter 4.5** of this DEIR, due to the lack of significant biological resources within the proposed Project area, the Project is not forecast to cause any direct significant unavoidable adverse impact to sensitive biological resources. This is because all potential impacts to biological resources within the Project area would be limited and can be mitigated to a less than significant impact level. The DEIR concluded that no special status habitats would be significantly impacted by the proposed project, but that several special status species—Crotch's bumble bee, burrowing owl, least Bell's Vireo, San Bernardino kangaroo rat, and California coastal gnatcatcher—may occur within certain portions of the IVIC Project area. Mitigation measures would: preconstruction clearance surveys to confirm that special status plant species are absent from the project site, or otherwise, impacts to such species are fully avoided through site design or through compliance with USFWS and/or CDFW regulations (**MM BIO-1**), minimize impacts to burrowing owl through preconstruction surveys and following protocol for protection of this species based on CDFW regulations (**MM BIO-2**), minimize impacts to San Bernardino kangaroo rat through restricting construction to roadways and adjacent developed sidewalk area along 5th Street between Church Avenue and State Route (SR) 210 (**MM BIO-3**), conducting preconstruction/absence surveys for SBKR where avoidance per **MM BIO-3** is not possible (**MM BIO-4**), through further impact minimization methods where SBKR are determined to be present at a project site (**MM BIO-5**), and through avoiding the installation of new permanent lighting along 5th Street between Church Avenue and SR 210 (**MM BIO-6**), minimize impacts to California coastal gnatcatcher through presence absence surveys in targeted locations (**MM BIO-7**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if California coastal gnatcatcher is found to be present within an IVIC Project site (**MM BIO-8**), minimize impacts to least Bell's vireo through presence absence surveys in targeted locations (**MM BIO-9**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if least Bell's vireo is found to be present within an IVIC Project site (**MM BIO-10**), minimize impacts to Crotch's bumble bee through vegetation removal carried out under the observations of a qualified monitor/biologist/entomologist prior to construction outside of the Crotch's bumble bee flying season (**MM BIO-11**), and through consultation with the CDFW and obtaining a take permit from the CDFW if Crotch's bumble bee is found to be present within an IVIC Project site, ensure that the EVWD Well Development and Reservoir are subject to a site-specific biological resources assessment, wherein, if sensitive species are identified as a result of the survey for

Impact Description	Impact After Mitigation
	which mitigation/compensation must be provided in accordance with regulatory requirements (**MM BIO-12**), ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features (**MM BIO-13**), ensure that jurisdictional features are documented in accordance with state and federal guidelines (**MM BIO-14**), and minimize impacts to nesting birds through either construction outside of nesting season or through a preconstruction survey that confirms nesting birds are absent from a given IVIC Project site (**MM BIO-15**). Thus, based on the lack of significant onsite biological resources and the mitigation that must be implemented to control potential site specific impacts on biological resources, the proposed Project is not forecast to cause significant unavoidable adverse impacts to biological resources.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
CULTURAL RESOURCES		
CUL-1	Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a roadway or engineered building site), the agency implementing the individual IVIC Project will not be required to complete a follow-on cultural resources report. Where a Phase I Cultural Resources Investigation is not required or at any location where a subsurface cultural resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials: • Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.	Implementing Agency
CUL-2	Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an undisturbed site <u>and/or</u> a site that will require substantial earthmoving activities and/or excavation, a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given individual IVIC Project: 1. <u>Phase I (Identification)</u>: A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate: • Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet. • Historical background research, geoarchaeological profile analysis, and paleontological literature review; • Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups; • Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions; • Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases. 2. <u>Phase II (Evaluation)</u>: If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
	typical Phase II study consists of the following research procedures: • Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals; • In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation; • Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples; • Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted. 3. Phase III (Mitigation): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project: • Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation; • Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public; • Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question. 4. Phase III (Monitoring): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate.	
CUL-3	After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM, as appropriate and in addition to the lead agency for the project, for permanent documentation and easy references by future researchers.	Implementing Agency
CUL-4	In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.	Implementing Agency
CUL-5	If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within MM TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
CUL-6	If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.	Implementing Agency

Impact Description	Impact After Mitigation
CULTURAL RESOURCES As described in **Subchapter 4.6,** the IVIC Project area is a large area that may contain historical, archaeological, tribal or paleontological resources. As such, future IVIC infrastructure projects may be developed within sites that contain such resources. This site-specific Cultural Resources Report determined that no significant resources were known to occur within the IVIC Project APE, but that mitigation to ensure protection of unknown resources that could be uncovered by construction of the IVIC Project is necessary to reduce impacts from Project implementation.	As described in **Subchapter 4.6**, proposed IVIC Project area may contain historical, archaeological, tribal, or paleontological resources. Mitigation to ensure protection of unknown resources that could be uncovered by construction of the IVIC Project is necessary to reduce impacts from Project implementation. **MM CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, in addition to those sites for which a cultural resource evaluation has already been prepared (the City Creek Bypass Channel) and would require the implementing agency to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities. **MM CUL-2** would ensure that the future IVIC Project Sites that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, will require a follow-on Phase I Cultural Resources Investigation. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within the future IVIC Project Sites. **MM CUL-3** would ensure that, after each phase of the studies required by **MM CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Project Infrastructure project site. **MM CUL-4** would ensure that, after each phase of the studies required by **MM CUL-3** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to the South Central Coastal Information Center (SCCIC), the Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM). This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Project Infrastructure project site. **MM CUL-4** would require an archaeologist to be present if any cultural resources are discovered during construction of any individual IVIC Project, and that YSMN is informed of the find to provide tribal input in regard to the potential significance of the cultural resource and to provide input on the treatment of the resource to ensure it is handled in a manner that would ensure impacts to the resource would be less than significant. **MM CUL-5** was also requested to be implemented by YSMN as part of the AB 52 consultation process, as was **MM CUL-4**, which requires that, if avoidance of cultural resources is not possible, that an archaeological monitor be present for the remainder of the implementation of the given IVIC Project pursuant to a Monitoring and Treatment Plan, which would further ensure that cultural resources are treated appropriately if unearthed as part of the implementation of the IVIC Project. Further, **MM CUL-6** was also requested to be implemented for the IVIC Project by YSMN, as it would protect human remains and funerary objects, and minimize impacts thereof. As described in **Subchapter**

Impact Description	Impact After Mitigation
	4.6, no unavoidable significant impact to cultural resources will result from implementing the proposed Project. Impacts would be less than significant through the implementation of mitigation.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
ENERGY No Mitigation Required.	--

Impact Description	Impact After Mitigation
ENERGY As discussed in **Subchapter 4.7**, Project construction and operation would not result in inefficient, wasteful or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. IVIC Project would be designed and constructed in accordance with the latest adopted energy efficiency standards, which are based on the Title 24 energy efficiency standards. The IVIC Project does not propose trip-generating land use and while it is anticipated that the IVIC Project would require intermittent maintenance, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Furthermore, a goal of the IVIC Project is to strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements, which includes alternative energy technologies. Thus, the IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). The proposed IVIC Project would comply with these regulations. Thus, it is anticipated that construction of the proposed IVIC Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Compliance with mandatory measures would ensure that future facilities proposed under the IVIC Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Impacts would be less than significant. With compliance with current Federal and State regulations pertaining to energy conservation, the proposed IVIC Project is anticipated to have a less than significant impact on energy demand and resources.	No mitigation is required. Impacts are less than significant.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
GEOLOGY AND SOILS GEO-1 Prior to the construction of each IVIC improvement a design-level geotechnical investigation, including the collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including ground shaking hazard, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential as appropriate relative to the type of facility and risk to human life. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible, a second tier CEQA evaluation shall be completed.	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
GEO-2	For each site-specific project that is less than one acre in size requiring ground disturbing activities such as grading, the implementing agencies shall identify and implement BMPs to minimize soil erosion and loss of topsoil comparable to that which would be required under a SWPPP (BMPs may include, but are not limited to hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.	Implementing Agency
GEO-3	At any location where a subsurface paleontological resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed resource materials: • Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.	Implementing Agency

Impact Description	Impact After Mitigation
GEOLOGY AND SOILS The IVIC Project area contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future IVIC infrastructure facilities in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the IVIC Project was identified.	Significant geology and soils impacts can be reduced through the implementation of mitigation. Several **MMs** were identified to minimize geology and soils impacts from implementation of the Project, including those **MMs** that would: reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation, minimize impacts to paleontological resources that may be exposed during construction through proper treatment by a paleontological professional, and through the implementation of soil erosion minimization on sites that are smaller than one acre, and thereby are not subject to the provisions of the following permits and plans: Stormwater Pollution Prevention Plans (SWPPP), National Pollutant Discharge Elimination System (NPDES), and Water Quality Management Plan (WQMP). As described in **Subchapter 4.8**, no unavoidable significant impact to geology and soils will result from implementing the proposed Project. Impacts would be less than significant through the implementation of mitigation.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
GREENHOUSE GASES No Mitigation Required.	--

Impact Description	Impact After Mitigation
GREENHOUSE GASES As described in **Subchapter 4.9**, implementation of the proposed Project will result in approximately 1,422.67 $MTCO_2e$/yr (million metric tons of carbon dioxide per year) from construction and operational activities. As such, the Project would not exceed the SCAQMD's recommended numeric threshold of 3,000 $MTCO_2e$ or 10,000 $MTCO_2e$/yr if it were applied. Thus, the Project would not result in a cumulatively considerable impact with respect to greenhouse gas (GHG) emissions. The IVIC Project involves construction activity and does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. Therefore, the Project would not conflict with the	No mitigation is required. Impacts are less than significant.

Impact Description	Impact After Mitigation
2022 Scoping Plan, and no impact would occur. As concluded in **Subchapter 4.9**, the proposed Project would not have the potential to generate a significant amount of GHGs emissions. As such, the proposed Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Project-related GHG emissions are not considered to be significant or adverse and would not result in an unavoidable significant adverse impact on global climate change. Impacts would be less than significant.	

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
HAZARDS AND HAZARDOUS MATERIALS		
HAZ-1	For IVIC infrastructure that handles hazardous materials or generate hazardous waste, the HMBP prepared and submitted to the CUPA shall incorporate BMPs designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for HMBPs. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The HMBP shall be approved prior to operation of the given facility.	Implementing Agency
HAZ-2	The HMBP shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.	Implementing Agency
HAZ-3	Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.	Implementing Agency
HAZ-4	All hazardous materials during both operation and construction of IVIC infrastructure shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and Federal law.	Implementing Agency
HAZ-5	Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and Federal law.	Implementing Agency
HAZ-6	All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the IVIC. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.	Implementing Agency
HAZ-7	Should an unknown contaminated site be encountered during construction of IVIC infrastructure, all work in the immediate area shall cease; the type of contamination and its extent shall be determined by a hazardous materials specialist, such as an Environmental Scientist; and the local CUPA or other regulatory agencies (such as the DTSC or Santa Ana Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the CUPA or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.	Implementing Agency
HAZ-8	For projects within airport safety zones, facility design shall follow the guidelines of the appropriate ALUCP. If a potential conflict with an ALUCP is identified as a result of implementation of the proposed IVIC Project, the implementing agency shall relocate the facility outside the area of conflict, or if the site is deemed essential, the implementing	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
agency shall propose an alternative design that reduces any conflict to a less than significant impact, with no conflicts with the ALUCP.	

Impact Description	Impact After Mitigation
HAZARDS AND HAZARDOUS MATERIALS The IVIC Project area contains substantial hazards and hazardous materials issue constraints. Due to these substantial constraints and the installation of future IVIC infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the IVIC Project were identified in **Subchapter 4.10.**	The hazards and hazardous materials evaluation in the DPEIR concluded that the identified hazards in the Project area can be adequately mitigated to a level of impact that is less significant. Several **MMs** were identified to minimize hazards and hazardous materials impacts, which would apply to all individual components of the IVIC Project. **MM HAZ-1** would require implementation of a Hazardous Materials Business Plan (HMBP) and the best management practices (BMPs) therein to minimize the potential for accidental release of hazardous materials. **MM HAZ-2** would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials. **MM HAZ-3** would require modeling of pathways for hazardous materials to contain hazardous material and manage hazardous materials appropriately to avoid exposure of hazardous materials at nearby sensitive receptors, thereby preventing hazardous materials impacts from storage and use onsite. **MM HAZ-4** would require disposal of hazardous materials in compliance with State and Federal law. **MM HAZ-5** would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law. While it is not anticipated that facilities under the proposed IVIC Project would be installed on a known site containing hazardous contamination, during project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. The implementation of **MM HAZ-6** would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of **MM HAZ-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. The implementation of **MM HAZ-8** would ensure compliance with the appropriate airport land use plan, minimization of conflicts with the airport safety review areas, and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the IVIC Project area during construction and operation of the IVIC Project facilities. **MM HAZ-8** would require facilities within the airport safety zones to be designed in conformance with the ALUCP, or, where a conflict with the ALUCP is identified, the facility shall be relocated or redesigned to avoid a conflict with the ALUCP, thereby avoiding a potentially significant conflict with an airport safety zone. The implementation of **MM TRAN-1**, identified under **Subchapter 4.18** of this DEIR, would require the preparation of a Transportation Management Plan (TMP) with comprehensive strategies to reduce potential disruption to emergency evacuation or an emergency response plan. Therefore, potential significant impacts to emergency access and evacuation would be reduced to a less than significant level. Therefore, though there will be some adverse impacts as a result of implementing the Project, specific **MMs** have been identified to reduce potential IVIC Project specific and cumulative (direct and indirect) impacts to a less than significant level for hazards and hazardous material issues. Thus, the IVIC

Impact Description	Impact After Mitigation
	Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts. Impacts would be less than significant through the implementation of mitigation.

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
HYDROLOGY AND WATER QUALITY		
HYD-1	The Implementing Agency shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for individual Projects over one acre in size, which specifies Best Management Practices that will be implemented to prevent construction pollutants from contacting stormwater and with the performance standard of keeping all products of erosion from moving offsite. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction to control urban runoff to the maximum extent practicable based on available, feasible best management practices. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit and NPDES No. CAS618033, Order No. R8-210-0036 for projects within San Bernardino County or the permit in place at the time of construction.	Implementing Agency
HYD-2	The Project-Specific Water Quality Management Plan (WQMP) which defines infiltration basins (open space basins or subsurface), bioretention basins and treatment units as permanent Best Management Practices shall be implemented for individual Projects to prevent long-term surface runoff from discharging pollutants from site on which construction has been completed. The WQMP shall be implemented with the goal of achieving a reduction in pollutants following construction to control urban runoff pollution to the maximum extent practicable based on available, feasible best management practices at the time of construction. The stormwater discharge from the project site shall be treated to control pollutant concentrations for all pollutants, but especially for those identified pollutants that impair downstream surface water quality (Santa Ana River) at the time construction occurs. Source Control BMPs reduce the potential for urban runoff and pollutants from coming into contact with one another. Source Control BMPs that may be incorporated into the project are described in County's TGM.	Implementing Agency
HYD-3	The Implementing Agency shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the Implementing Agency include the following: • The use of silt fences or coir rolls; • The use of temporary stormwater desilting or retention basins; • The use of water bars to reduce the velocity of stormwater runoff; • The use of wheel washers on construction equipment leaving the site; • The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads; • The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and • Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.	Implementing Agency
HYD-4	The District shall conduct a pump test of the new well and determine whether any other wells are located within the cone of depression once the well reaches equilibrium. If any private wells are adversely impacted by future groundwater extractions from the proposed well, the District shall offset this impact through provision of water service; or adjusting the flow rates or hours of operation to mitigate adverse impacts.	Implementing Agency
HYD-5	The EVWD shall verify that the Well Development and Reservoir are located outside of the 100-year floodplain by utilizing the FEMA FIRM panels for the selected area prior to project implementation. If the well and/or reservoir are located outside of the 100-year floodplain, then no subsequent CEQA documentation specific to floodplains are required. However, if the well and/or reservoir are located within the 100-year floodplain either (1) a new location outside of the 100-year floodplain shall be selected, or (2) a second tier CEQA evaluation shall be completed that would address the given project's location within the 100-year floodplain.	Implementing Agency

Impact Description	Impact After Mitigation
HYDROLOGY AND WATER QUALITY As described in **Subchapter 4.11,** the overall hydrology (watershed, drainage and flood hazards) and water quality impacts that would result from implementation of the Project could be significant without the implementation of substantive **MMs**. As such, several **MMs** were identified to minimize impacts related to hydrology and water quality.	As described in **Subchapter 4.11** of this DEIR, the IVIC Project requires mitigation measures to address the following: ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential water quality degradation during this stage of development, thereby minimizing construction related potential for water quality violations to a level of less than significant; ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational water quality violation potential to a level of less than significant; where individual projects are less than one acre, require implementation of BMPs during construction that would minimize the potential for water quality violations to a level of less than significant; require a pump test on the new well to ensure that a cone of depression does not occur as a result of pumping the new well that could impact nearby wells; and, ensure that future IVIC infrastructure projects located within a floodplain would be further evaluated to determine their potential to impede or redirect flood flows. Through implementation of mitigation, potential hydrology and water quality impacts can be controlled to a less than significant impact level. The proposed IVIC Project will not cause unavoidable significant hydrology or water quality impacts.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
LAND USE & PLANNING No Mitigation Required.	--

Impact Description	Impact After Mitigation
LAND USE & PLANNING As described in **Subchapter 4.12**, impacts related to land use and planning are minimal. The proposed Project would install infrastructure in five categories: Road improvements; City Creek Bypass Channel; EVWD Well; EVWD Reservoir; and sewer installation. None of these facilities or their physical arrangement or character will function as a physical division within the existing IVIC Project area community. The only infrastructure facilities with any potential to divide a community are the proposed roadways and the Channel. These are both linear features that can result in dividing a community. However, in this case the roadway alignments and Channel are existing infrastructure features within the local community. Improving their ability to function by improving the roads to handle traffic and the Channel to handle stormwater runoff better will not cause any new physical divisions within the community. The IVIC Project does not propose to modify any existing land uses. Based on an analysis of the current infrastructure deficiencies within the Project area, the IVIC proposes to upgrade existing infrastructure in five categories (road improvements; City Creek Bypass Channel; groundwater extraction well; storage reservoir; and sewer installation). Each of these infrastructure systems needs to be upgraded in order to adequately support the gradual build-out of the two cities' General Plans over the next 20 years. Thus, the IVIC Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the IVIC Project-related land use and planning impacts can be reduced below a level of significance, and as such, the proposed IVIC Project will not cause unavoidable significant land use and planning impacts. Impacts would be less than significant through the implementation of mitigation.	No mitigation is required. Impacts are less than significant.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
MINERAL RESOURCES No Mitigation Required.	--

Impact Description	Impact After Mitigation
MINERAL RESOURCES As described in **Subchapter 4.13**, Based on a review of cities General Plans, mineral resource extraction is not a permitted activity within the IVIC Project area. Furthermore, as no mines are currently located within the IVIC Project footprint, even though mineral resource values are known or suspected to exist within the overall IVIC Project area (refer to **Figures 4.13-1 and 4.13-2**), the individual components of the proposed Project would not preclude future mining activities from being developed within the IVIC Project area, nor would the IVIC Project components be anticipated to be within a site that would be suitable for future mining activities as a result of existing uses and underlying land use designations. Therefore, there is no potential impact that would result in a loss of availability of a known mineral resource. Neither the City of Highland or the City of San Bernardino General Plans designate the Project area as a locally-important mineral resource recovery site, nor does either General Plan designate EVWD's Intermediate or Lower zones as containing locally-important mineral resource recovery sites. As previously stated, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would be located within and adjacent to existing rights-of-way that would not include areas that are designated locally-important mineral resource recovery sites. Additionally, the proposed EVWD Well and Reservoir are not anticipated to require a large footprint, such that these individual projects would interfere with the exploitation of mineral resources, even though no locally-important mineral resource recovery sites have been designated within these areas. Therefore, implementation of the IVIC Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Thus, IVIC Project-related mineral resource impacts can be reduced below a level of significance, and as such, the proposed IVIC Project will not cause unavoidable significant mineral resource impacts. Impacts would be less than significant..	No mitigation is required. Impacts are less than significant.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
NOISE		
NOI-1	During the initial design phase for roadway improvements along Del Rosa Drive, the Project will conduct a noise study to identify noise levels and potential locations for barriers necessary to reduce noise impacts. The analysis should evaluate the effectiveness of different noise barrier locations, such as along the right-of-way, the parcel line of the receiving property, and any intervening high point. The initial noise analysis should be updated when plans are final and all noise reduction calculations should be checked with final grading and wall locations.	Implementing Agency
NOI-2	To comply with the daytime and nighttime noise level limits, a focused technical noise analysis of the drilling activities would be prepared when drilling activity occurs within 2,000 feet of residences. The focused well-drilling noise analysis should, at a minimum: • provide a detailed description of activities; • identify ambient noise levels near the closest affected residences; • determine predicted noise levels at local residences from drilling rig activities, including the drill top drive, compressors, generator sets, mud pumps, roll-off bins, pipe trailers, and field offices; and, • evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
NOI-3	To comply with the nighttime noise level limit during the nighttime hours noise, a focused noise analysis of the construction activities would be required surrounding the reservoir construction site locations when within 100 feet of residences. The focused reservoir noise analysis should, at a minimum: • provide a detailed description of activities; • identify ambient noise levels near the closest affected residences; • determine predicted noise levels at local residences from construction activities, including the excavation activities and nighttime concrete pours; and, • evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.	Implementing Agency

Impact Description	Impact After Mitigation
NOISE As described in **Subchapter 4.14**, The IVIC Project would traverse through an area that contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints, a potential exists for significant noise impacts from implementation of the IVIC Project, particularly during construction and as a result of the roadway land expansion. Construction-related impacts for the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would be less than significant without the need for mitigation. The only operational noise sources of any significance are off-site traffic noise related, as any mechanical equipment associated with the EVWD Well and Reservoir are expected to be placed within structures or underground to minimize operational noise sources. Off-site traffic noise would be significant and unavoidable without the mitigation identified above. EVWD Well Development and Reservoir construction noise would be significant and unavoidable without the mitigation identified above. Thus, overall temporary and permanent noise generated by the IVIC Project would be significant and unavoidable without the mitigation identified above. Thus, mitigation is necessary to avoid a significant and unavoidable noise impact. IVIC Project construction vibration levels will satisfy the typical Project construction vibration levels will satisfy the transient human annoyance and building damage threshold. Therefore, the vibration impacts due to Project construction are considered less than significant. Furthermore, the analysis shows that the airport noise level impacts would be considered less than significant during both construction and operation of the proposed IVIC Project.	As described in **Subchapter 4.14,** As described in **Subchapter 4.14**, The IVIC Project would traverse through an area that contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints, a potential exists for significant noise impacts from implementation of the IVIC Project, particularly during construction and as a result of the roadway land expansion. Off-site traffic noise can be minimized to a level of less than significant through the implementation of **MM NOI-1,** which would minimize off-site traffic noise through future evaluation of noise generated by roadway land expansion projects and would require solutions that would minimize off-site traffic noise below significance thresholds, and therefore **MM NOI-1** would ensure that off-site traffic noise would be less than significant.. EVWD Well Development and Reservoir construction noise can be minimize to a level of less than significant through **MMs NOI-2 and NOI-3. MM NOI-2** would require a well drilling noise analysis for the future EVWD Well Development Project in order to ensure that proper noise mitigation strategies are employed to minimize construction noise impacts below significance thresholds. **MM NOI-3** would require a reservoir construction noise analysis for the future EVWD Reservoir Project in order to ensure that proper noise mitigation strategies are employed to minimize construction noise impacts below significance thresholds. With implementation of these **MMs**, the Project-related noise impacts can be reduced to a less than significant impact level.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
POPULATION AND HOUSING No Mitigation Required.	--

Impact Description	Impact After Mitigation
POPULATION AND HOUSING As described in **Subchapter 4.15**, implementation of the IVIC Project would not significantly induce growth within the San Bernardino Valley area within which the Project is proposed. While the locations of the EVWD Reservoir and Well Development are not presently known beyond that these facilities would be located within the lower and intermediate zones of EVWD's service area (**Figure 3-15**), respectively, EVWD anticipates avoid impacting any housing as a matter if site selection. As such, neither construction nor operation of the EVWD Reservoir and Well Development are not anticipated to impact persons or housing, as each will operate within its own facility intended to support water infrastructure. The proposed	No mitigation is required. Impacts are less than significant.

Impact Description	Impact After Mitigation
roadway improvements would occur within existing and adjacent to road rights-of-way. The areas adjacent to the road rights-of-way that would be expanded in width could result in some encroachment onto adjacent properties, but this take would not encroach into residential housing units within the IVIC Project area. As the roadways within the IVIC Project area do not support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Construction of the proposed infrastructure would require temporary employment. It is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within Southern California. They would become part of the IVIC Project Area's temporary population during the construction of each facility. Locally available temporary housing for the maximum of 90 construction employees that would be required at any given time during the implementation of the proposed IVIC Project. Adequate temporary housing resources are available within the IVIC Project Area that can accommodate a temporary housing population of 90 persons on an average daily basis (90/76,839 = 0.117%). The proposed IVIC Project envisions installing new infrastructure over a 20 year period to meet both City's build-out growth forecasts based on the existing mix of General Plan uses within the Project area. The IVIC Project does not directly contribute to future permanent development (population or housing), but will accommodate growth as it occurs under the existing cities' General Plan land use designations, and as envisioned in the cities' General Plans. Therefore, the IVIC Project-related population and housing impacts are less than significant, and as such, the proposed IVIC Project will not cause unavoidable significant population and housing impacts. Impacts would be less than significant.	

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
PUBLIC SERVICES		
PP-1	Would the Project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.	Implementing Agency

Impact Description	Impact After Mitigation
PUBLIC SERVICES Due to the limited population increase that would occur as a result of implementation of the IVIC Project, the demand for public services (fire, sheriff, schools, libraries, etc.) would be minimal. However, it is anticipated that all sites containing facilities associated with the proposed IVIC Project would be fenced in and contain security lighting, which would minimize the future need for police protection from trespass. Though a significant demand for police protection services is not anticipated, mitigation is proposed to address trespass issues.	As described in **Subchapter 4.16,** implementation of the Project would not significantly impact fire protection, police protection, schools, recreation/parks or other public facilities. However, mitigation was identified to minimize impacts to police protection that would: minimize the potential for trespass that could exacerbate demand for police protection services. With implementation of this **MM**, the IVIC Project-related police protection and park/recreation impacts can be reduced to a less than significant impact level.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
RECREATION		
REC-1	IVIC Project infrastructure that is proposed to be located within vacant parkland or IVIC Project infrastructure that is proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland or (2) shall provide supplemental	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
	parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the IVIC Project infrastructure.	
REC-2	The Implementing Agency shall prepare subsequent CEQA documentation for any Parks or Recreation facilities required to be developed as part of implementation of MM REC-1—i.e., in the event an IVIC Project infrastructure project would be result in loss of parkland or recreation facilities.	Implementing Agency

Impact Description	Impact After Mitigation
RECREATION As described in **Subchapter 4.17,** implementation of the Project would not significantly impact recreation. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project. However, there is a potential that the EVWD Well Development and Reservoir could be located within parks or facilities designated for such use. Construction and staging areas within parks at which the EVWD Well Development and Reservoir may be installed may result in the temporary closure of parks or portions of parks. In addition to development within existing parks, there is a potential for the EVWD Well Development and Reservoir to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the area surrounding the IVIC Project. Thus, the IVIC Project-related recreation impacts could be significant and unavoidable.	As described in **Subchapter 4.17**, implementation of the IVIC Project would not significantly impact recreation. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. There is a potential that the EVWD Well Development and Reservoir could be located within parks or facilities designated for such use. Construction and staging areas within parks at which the EVWD Well Development and Reservoir may be installed may result in the temporary closure of parks or portions of parks. However, several parks in the area surrounding the IVIC Project area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to development within existing parks, there is a potential for the EVWD Well Development and Reservoir to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the area surrounding the IVIC Project. As such, **MM REC-1** would be implemented to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, implementation of **MM REC-2** would ensure that, should construction of recreation or park facilities be required as a part of the IVIC Project, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated. Thus, the Project-related recreation impacts would be less than significant through the implementation of mitigation, and proposed IVIC Project will not cause unavoidable significant recreation impacts.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
TRANSPORTATION TRAN-1: Prepare and Implement Construction Transportation Management Plan (TMP) A construction TMP shall be developed and implemented by the implementing agency, in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to: Construction Traffic Routes and Staging Locations: The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable. Damage Repair: The TMP shall include the following requirements to minimize damage to the existing roadway network: • A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water Conveyance Pipelines. • The roadway network along the proposed City Creek Bypass Channel, Roadway Improvements & Sewer shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report. • Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the implementing agency or its contractors shall repair all damage. Coordination with Emergency Services: The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public ROW if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized. Coordination with Active Transportation Facilities: The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points. Coordination with SBCTA: If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with Mountain Transit. Coordination with Caltrans: If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines. Coordination with Nearby Construction Sites: The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following: • All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures; • All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips; and • The implementing agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles. Transportation Control and Safety: The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders. Plan Approval: The TMP shall be submitted to SBCTA for review and approval.	

Impact Description	Impact After Mitigation
TRANSPORTATION Since transportation system facilities occur throughout much of the IVIC Project area and the installation of future infrastructure facilities can directly impact roadways or traffic on such roadways, a potential for significant transportation/traffic impacts from implementation of the Project was identified in **Subchapter 4.18.** Construction requires mitigation to implement a TMP. In the long-term, operation of the Project will generate minimal traffic. Furthermore, the Project proposes to construct approximately 20-lane miles of lane addition. As such, the Project is found to result in a net increase in total VMT and would therefore result in a significant and unavoidable VMT impact.	As described in **Subchapter 4.18** of the DEIR, the proposed IVIC Project may result in significant and unavoidable transportation impacts, specifically related to Vehicle Miles Traveled impacts from expanding the area roadways to General Plan Buildout configurations. Project construction could result in other short-term circulation effects such as temporary alteration of the movement and circulation of roadway vehicles, public transit, bicycles, and/or pedestrians within the project area, as lane and/or road closures could be required where water conveyance pipelines and any lateral connecting pipelines would be installed in public roadway rights-of-way and construction disturbance could traverse under existing transit, bicycle, and/or pedestrian thoroughfares. **MM TRAN-1** would require, for projects that would potentially impact circulation (construction of facilities that generate greater than 50 construction [PCE] or operational trips per day, or where the facility would encroach within road rights-of-way) implementation of designated construction roadway vehicle routes, damage repair procedures, and transportation control measures to minimize potential impacts to the movement and circulation of vehicles, public transit, bicycles, and/or pedestrians within the project area due to construction roadway vehicle volumes and lane and/or road closures during project construction. In addition, **MM TRAN-1** would require coordination with SBCTA and designation of alternative bicycle and pedestrian routes during project construction to compensate for impacts to transit stops and bicycle and pedestrian facilities. Furthermore, **MM TRAN-1** would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved Construction Transportation Management Plan, and it would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of **MM TRAN-1** would reduce construction transportation circulation system impacts to a less than significant level. The Project proposes to construct approximately 20-lane miles of lane addition. Consistent with the Technical Advisory, potential induced vehicle travel was evaluated to determine if the roadway capacity enhancements would result in an increase in total VMT. Consistent with guidance provided by the Technical Advisory, the proposed Project would result in a potential VMT impact if the “With Project” condition would result in a net increase in total VMT as compared to the “No Project” condition. As such, the Project is found to result in a net increase in total VMT and would therefore result in a significant and unavoidable VMT impact. As IVDA does not have land use authority to enforce transportation reduction strategies, these strategies will be recommended to be incorporated by the Cities of Highland and San Bernardino and the County of San Bernardino. Furthermore, no VMT reduction strategy would be sufficient to offset the additional VMT that would be generated by the roadway capacity expansion that would occur as a result of the land additions by the proposed IVIC. Thus, significant and unavoidable VMT impacts would

Impact Description	Impact After Mitigation
	result from IVIC Project implementation. As such, based on these findings, the proposed Project would cause significant unavoidable adverse transportation impacts, specifically as a result of exceeding VMT significance thresholds.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
TRIBAL CULTURAL RESOURCES		
TRC-1	The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CR-1, of any pre-contact and/or historic-era cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.	Implementing Agency
TCR-2	Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Implementing Agency for dissemination to YSMN. The Implementing Agency shall, in good faith, consult with YSMN throughout the life of the project.	Implementing Agency
TCR-3	Prior to the issuance of grading permits, the applicant shall enter into a Tribal Monitoring Services Agreement with the Morongo Band of Mission Indians (MBMI) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources).	Implementing Agency
TCR-4	Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a Qualified Archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The Archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The Archaeologist will conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session will focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.	Implementing Agency
TCR-5	Prior to any ground-disturbing activities the project Archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the project site. This Plan shall be written in consultation with the consulting Tribe[s] and shall include the following: approved Mitigation Measures (MMs), contact information for all pertinent parties, parties' responsibilities, procedures for each MM, and an overview of the project schedule.	Implementing Agency
TCR-6	The retained Qualified Archeologist and Consulting Tribe[s] representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.	Implementing Agency
TCR-7	During all ground-disturbing activities the Qualified Archaeologist and the Tribal Monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and Tribal Monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The Qualified Archaeologist, in consultation with the Tribal Monitor, shall be responsible for determining the duration and frequency of monitoring.	Implementing Agency
TCR-8	In the event that previously unidentified cultural resources are unearthed during construction, the Qualified Archaeologist and the Tribal Monitor shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.	Implementing Agency

	Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
	If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the Qualified Archaeologist and Tribal Monitor[s]. The Archaeologist shall notify the Implementing Agency and consulting Tribe[s] of said discovery. The Qualified Archaeologist, in consultation with the Implementing Agency, the consulting Tribe[s], and the Tribal Monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the Qualified Archaeologist in consultation with the Tribe[s] and the Tribal Monitor[s] and be submitted to the Implementing Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference: A. Full avoidance. B. If avoidance is not feasible, Preservation in place. C. If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction. D. If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1).	
TCR-9	The Morongo Band of Mission Indians requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the consulting Tribe[s]. A. Should human remains and/or cremations be encountered on the surface or during any and all ground- disturbing activities (i.e., clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98. B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5. C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98 D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial will not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations will be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the Implementing Agency.	Implementing Agency
TCR-10	The final report[s] created as a part of the project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the Implementing Agency and Consulting Tribe[s] for review and comment. After approval of all parties, the final reports are to be submitted to the Eastern Information Center, and the Consulting Tribe[s].	Implementing Agency

Impact Description	Impact After Mitigation
TRIBAL CULTURAL RESOURCES As described in **Subchapter 4.19** of this DEIR, the YSMN and MBMI requested continued participation with this Project's CEQA process and future projects implemented under the IVIC Project during the initial 30-day AB 52 consultation period. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; presence of Native American monitors during future	The proposed IVIC Project has a modest potential to impact (alter or destroy) a Tribal Cultural Resource (TCR). Based on the research results summarized above and direct experience with the YSMN and MBMI tribes, many of the IVIC infrastructure projects have a potential to expose subsurface resources. Mitigation is identified that will be implemented by future individual IVIC projects. These measures are intended to address concerns expressed by the YSMN and MBMI. In consultation with the YSMN, it was requested that the following **MMs TCR-1 and TCR-2**

Impact Description	Impact After Mitigation
ground disturbing activities; and, education of construction workers on tribal history and the potential for resources.	be implemented to protect tribal cultural resources. **MM TCR-1** would require notification of YSMN in the event of a TCR discovery, and would allow YSMN to coordinate the implementation of its own Cultural Resources Monitoring and Treatment Plan that would enable a monitor to be present representing YSMN onsite thereafter. This would ensure that TCRs that may be discovered that fall under YSMN's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. **MM TCR-2** would require that documentation of any discovered resources and other such reports pertaining to archaeological and tribal resources are communicated to the YSMN for its records. In consultation with the MBMI, it was requested that the following **MMs TCR-3 and TCR-10** be implemented to protect tribal cultural resources. These mitigation measures would accomplish the following: retaining a tribal and archaeological monitor to develop and implement a Cultural Resource Management Plan (CRMP) that would ensure close attention to ground disturbing activities that might uncover or otherwise impact TCRs. These measures would ensure that TCRs that may be discovered that fall under MBMI's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. Through incorporation of **MMs**, impacts to TCRs are considered less than significant. Thus, with implementation of mitigation to protect TCRs, the IVIC Project would not cause significant unavoidable adverse impacts to TCRs. Impacts would be less than significant through the implementation of mitigation.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
UTILITIES AND SERVICE SYSTEMS		
UTIL-1	For future IVIC infrastructure projects that do not have access to electrical or natural gas connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet electricity needs at a future IVIC infrastructure site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical infrastructure.	Implementing Agency
UTIL-2	The contract with demolition and construction contractors for each future proposed infrastructure facility within the IVIC Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, asphalt, and demolition materials. The contractor shall submit a recycling plan to the local jurisdiction for review and approval prior to the start of demolition/construction activities to accomplish this objective.	Implementing Agency
UTIL-3	The contract with demolition and construction contractors for a given IVIC Project infrastructure shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused onsite to balance soil import/export.	Implementing Agency

Impact Description	Impact After Mitigation
UTILITIES AND SERVICE SYSTEMS **Subchapter 4.20** concluded that implementation of the Project could significantly impact energy as a result of requiring the construction or extension of such utilities as a result of development of the Project. This is because the proposed Project may be developed within sites that would require extension of or that may impact existing utility service systems. The topic of water and wastewater infrastructure were also discussed in **Subchapter 4.20**. The extension of stormwater, telecommunications, natural gas, water and wastewater related	As described in **Subchapter 4.20** of the DEIR, the proposed IVIC Project will cause an contribute to expanding existing and constructing new utilities and service systems within the IVIC Project area. Based on the analysis presented in the DEIR, the construction and operation of the EVWD Well and Reservoir can be accomplished without causing significant adverse environmental effects. The existing wastewater transmission system, as well as the previously analyzed and planned for transmission system associated with the development of the SNRC, for which implementation is in progress, are anticipated to require construction of

Impact Description	Impact After Mitigation
infrastructure was determined to be significant under the IVIC Project. Sufficient capacity for wastewater and sufficient supply of water exists to accommodate the demands generated by the IVIC Project. However, given the large amount of waste that may be generated by construction of the IVIC, solid waste impacts would be significant and unavoidable without the implementation of mitigation.	approximately 5,000 linear feet of new sewer over the 20 year implementation period (maximum estimate 2,500 lineal feet per year. Given that the proposed IVIC will not require or result in the relocation or construction of new or expanded wastewater treatment facilities, no significant impacts thereof are anticipated. Additional/expanded stormwater collection is necessary to develop the IVIC as envisioned within each City's General Plan. In addition, as individual development projects occur within the IVIC Project area, they will be required to meet current WQMP design and LID requirements. This will minimize increases in runoff due to new impervious surfaces associated with future development. The proposed IVIC Project would require or result in the relocation or construction of new or expanded stormwater facilities, but the construction or relocation of which would not result in significant adverse impact. Full development of the infrastructure proposed as part of the IVIC Project area will not have a significant impact on availability of energy resources in the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County. While individual projects—namely the EVWD Well and Reservoir—may require extension of electrical service to a given site within the IVIC Project area, the whole of the area is forecast to be served by comprehensive existing electrical systems. Because it is not known exactly where the EVWD Well and Reservoir will be installed, there may be locations in which electricity services are not available within the immediate vicinity of a given Project site. As such, **MM UTIL-1** would ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated. Given the availability of natural gas within the Project area, while individual projects may require extension of natural gas services to a given site within the area, the whole of the IVIC is served by existing natural gas pipelines; therefore, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects. It appears that the whole of the IVIC Project is served by existing telecommunication facilities; therefore, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded facilities, the construction or relocation of which could cause significant environmental effects. Per the Western-San Bernardino Judgement, EVWD is not limited in the amount of groundwater it can produce from SBB. Based on this information, it is anticipated that there will be available water supply within the SBB to support the District's new well pumping operations. Therefore, the proposed IVIC Project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. Further, none of the proposed infrastructure facilities will generate wastewater and given that the SNRC would be developed and ready to accept sewer flow from EVWD's service area, the potential impact from the IVIC Project is a no impact finding. Because future construction developed under the IVIC Project will be regulated by waste reduction and diversion from landfill programs, the construction of the IVIC Project, particularly given that development will occur gradually over

Impact Description	Impact After Mitigation
	a 20-year horizon, would not result in a substantial increase in demand in excess of capacity for local solid waste disposal facilities and regional landfill capacity. IVIC Project infrastructure development would be required, through the implementation of **MM UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. The IVIC Project will be required to ultimately divert up 75 percent of solid waste from landfills as a result of AB 341. Furthermore, **MM UTIL-3** would require further diversion through the recycling of soils where possible for future IVIC Project infrastructure. Any hazardous materials collected within the IVIC Project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. Based on the facts and findings presented in the above analysis, the proposed Project will not cause unavoidable significant adverse impacts to utilities and service systems.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
WILDFIRE		
WF-1	Prior to initiating construction of proposed facilities within public rights-of-way (ROW), the Implementing Agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The Implementing Agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW.	Implementing Agency

Impact Description	Impact After Mitigation
WILDFIRE The location of IVIC infrastructure facilities would likely be located outside of designated high and very high FHSZs. However, it is possible that emergency access could be hindered as a result of construction activities associated with the IVIC, thereby resulting in a significant impact thereof. All other wildfire impacts are considered less than significant without the need for mitigation as a result of the IVIC Project infrastructure distance from designated fire hazard severity zones.	As described **in Subchapter 4.21** of this DEIR, under the proposed IVIC Project, due to the location of the IVIC Project area being 3 to 5 miles south of the foothills, construction and operation of future infrastructure would be well outside of any delineated high fire hazard severity zone. The Roadway Improvements and Sewer Improvements would require construction within road rights-of-way. These construction activities could potentially block access to roadways and driveways for emergency vehicles for short periods. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. The implementation of **MM WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level. Furthermore, due to the short-term potential for wildfire related pollutant exposure in the IVIC Project area, no significant adverse exposure is forecast to occur for future persons working, residing, or visiting the IVIC Project area. The IVIC is located in an urban area. Installation or maintenance of associated infrastructure such

Impact Description	Impact After Mitigation
	as fuel breaks, emergency water sources, power lines, etc. that may exacerbate fire risks or result in temporary ongoing impacts to the environment is not required. Finally, the proposed IVIC Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, due to IVIC Project infrastructure locations outside of very high FHSZs in LRAs, i.e., urban areas. Thus, with implementation of mitigation to minimize wildfire impacts, the IVIC Project would not cause significant unavoidable adverse impacts under wildfire. Impacts would be less than significant through the implementation of mitigation.

1.6 ALTERNATIVES

The California Environmental Quality Act (CEQA) and the State CEQA Guidelines require an evaluation of alternatives to the proposed action. Section 15126 of the State CEQA Guidelines indicates that the "discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of not significant...." The State Guidelines also state that "a range of reasonable alternatives to the project....which could feasibly attain the basic objectives of the project" and "The range of alternatives required in an EIR is governed by 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The detailed analyses of the alternatives evaluated are provided in Chapter 5 of this DEIR. This evaluation addresses those alternatives for feasibility and range of alternatives required to permit decision-makers a reasoned choice between the alternatives. Refer to **Table 1.6-1** for a tabular comparison of alternatives (found at end of chapter).

Overall, the purpose of developing a IVIC Project for the Project area is to coordinate infrastructure concurrent with development of the Project area, which is necessary to serve the whole of the area harmoniously. The IVIC would ensure that infrastructure improvements necessary to support the development of this area that has been forecast to occur pursuant to the respective jurisdictions' General Plan are implemented consistently across jurisdictional lines by the two cities, and San Bernardino County. The primary goal of the IVIC Project is to implement a collaborative effort, intended to provide a regulatory framework for the Project Area that provides comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs.

In this instance the DEIR analysis in Chapter 4 has reached a finding that there is only 1 issue with unavoidable significant adverse effects from implementing the IVIC Project as proposed in Chapter 3, the Project Description.

One of the alternatives that must be evaluated in an environmental impact report (EIR) is the "No Project Alternative," regardless of whether it is a feasible alternative to the proposed IVIC Project, i.e., would meet the project objectives or requirements.

No Project Alternative (NPA)

Under this alternative, the environmental impacts that would occur if the proposed IVIC Project is not approved and implemented are identified.

This is a true no project alternative, in that it assumes that none of the proposed improvements would be installed in the future, leaving the area in a stasis of no further infrastructure expansion beyond that which exists at present.

With respect to the NPA, Project objectives are not attained because no infrastructure improvements would be included as a part of the NPA. With respect to the significant unavoidable impacts of Project, the NPA would avoid the significant VMT impact that would result from implementation of the IVIC Project, but would have a potential to result in significant impacts to Hydrology and Water Quality as a result of not updating the stormwater capacities concurrent with continued development of vacant land within the IVIC Project area, Transportation as a result of the lack of circulation improvements for pedestrians, transit, bicycles, and automobiles that would result under from not expanding roadway capacities concurrent with development, and Utilities and Service Systems as a result of not developing necessary water infrastructure to adequately serve the anticipated growth in demand forecast to occur by the EVWD Urban Water Management Plan (UWMP), where the IVIC Project would not.

Project Alternative without Roadway Capacity Expansion

Another alternative is the Project Alternative without Roadway Capacity Expansion. Under this Alternative (PA1), each of the IVIC Project infrastructure components would be installed, with the exception of the expansion of the roadway lane capacities and improvements. As the IVIC pertains to infrastructure only, the changes in land use that may occur over time are within the overall IVIC Project area not being considered.

The following improvements proposed under the IVIC Project are contemplated as part of the Planning Documents of the Partner agencies, but it should be noted that environmental documentation to address the implementation of these individual projects would likely still be required:

EVWD

- **Project 1** - 3.5 MG storage reservoir located in the Lower Zone;
- **Project 2 -** New Well 01 in the Intermediate Zone.

City Creek Bypass Channel

Installation of a new channel design (two alternatives) that will need to be installed to have sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Twin Creek Channel (terminus). Figures 3 11a through 3-11d show the alternative channel designs and acknowledges that these designs are preliminary and not ready for construction. For planning and impact forecast purposes it is assumed that a maximum of one-half mile of new channel will be installed in any given year.

Sewer Line Expansion

While no new sewer is planned to be necessary as a result of EVWD's installation of infrastructure for the Sterling Natural Resource Center, as a contingency measure, it is forecast that up to 5,000 LF of sewer may be installed to support the infrastructure needs of the IVIC area.

With respect to the PA1, some of the IVIC Project objectives are not attained.

The PA1 would not result in some vital infrastructure projects, such as the roadway capacity expansion and improvements proposed under the IVIC. Furthermore, because the PA1 would not result in an integrated planning approach across the jurisdictions within which the IVIC would occur, it would not efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

With respect to the significant unavoidable impacts of Project, the PA1 would avoid the significant and unavoidable VMT impact that would result from expanding the roadway lane capacities that would result under the IVIC. Furthermore, the PA1 would have a potential to result in new significant impacts to Transportation (circulation) where the IVIC would not, as a result of not expanding the roadway capacities necessary to accommodate growth in the area (as identified in the City of Highland and City of San Bernardino General Plans) as the area reaches Build-Out. Ultimately, the IVIC and PA1 would result in similar levels of significance for many issues, though some impacts would be lesser than those that would occur under the IVIC. The exceptions—Circulation—are discussed in detail above.

Conclusion

There is no alternative that completely avoids a significant impact. Even the NPA would not fully avoid significant and unavoidable impacts because without taking action in the IVIC Project area to improve infrastructure, certain infrastructure systems would reach existing capacity, and would therefore not be sufficient to meet future demand. The NPA would result in new stormwater (Hydrology & Water Quality and Utilities & Service Systems, Transportation [circulation]) and water supply impacts (Utilities & Service Systems). The PA1 would avoid the significant and unavoidable VMT impact that would result from the IVIC Project, primarily as a result of expansion of roadway capacities, but would create a new Transportation impact through lack of circulation improvements—including pedestrian, bicycle, and transit, as well as roadways circulation—that are necessary to accommodate the future growth within this area identified in the City of Highland and City of San Bernardino General Plans. Arguably, the IVIC Project would be the environmentally superior alternative because the significant and unavoidable VMT impact would have lesser overall consequence on public safety and health than that which would occur under the PA1. As VMT was, in part, developed as a model by which to moderate significant GHG emissions, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution,[3] and that the IVIC Project would not result in significant and unavoidable GHG emissions in and of itself, this significant impact is deemed to be lesser in overall impact to human health and public safety than that which would be generated by the PA1. The PA1 would not provide the necessary circulation improvements—including pedestrian, bicycle, and transit, as well as roadways circulation—to protect public safety along and adjacent to the IVIC Project area roadways. Thus, the IVIC Project is deemed the environmentally superior alternative. Furthermore, the IVIC Project would achieve all of the Project Objectives, and the PA1 would not achieve the transportation and circulation improvement objectives because it would not result in any roadway capacity improvements.

[3] California Office of Planning and Research (OPR), 2024. SB 743 Frequently Asked Questions. https://opr.ca.gov/ceqa/sb-743/faq.html#:~:text=VMT%20measures%20how%20much%20actual,and%20metric%20for%20some%20time. (Accessed 07/09/24)

A summary of impacts of the alternatives compared to the proposed IVIC Project is included in **Table 1.6-1** below, pursuant to CEQA Guidelines Section 15126.6(d).

Table 1.6-1
TABULAR COMPARISON OF ALTERNATIVES

	Would the Project Result in Significant Adverse Impact?	***Would the Alternative Result in Equal, Greater, or Less Impacts than the Project?***	
	Proposed Project	**No Project Alternative**	**PA1**
Aesthetics	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Agricultural and Forestry	Yes Impacts LS	Impact level would be equal	Impact level would be equal
Air Quality	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Biological Resources	Yes Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Cultural Resources	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Energy	No Impacts LS	Impact level would be less than the Project	Impact level would be less than the Project
Geology and Soils	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Greenhouse Gas	No Impacts LS	Impact level would be less than the Project	Impact level would be less than the Project
Hazards and Hazardous Materials	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Hydrology and Water Quality	No Impacts LSM	Impact level would be greater than the Project	Impact level would be equal
Land Use and Planning	No Impacts LS	Impact level would be equal	Impact level would be equal
Mineral Resources	No Impacts LS	Impact level would be equal	Impact level would be equal
Noise	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Population and Housing	No Impacts LS	Impact level would be less than the Project	Impact level would be equal
Public Services	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Recreation	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Transportation	Yes Impacts would be Significant	Impact level would be less than the Project	Impact level would be equal the Project
Tribal Cultural Resources	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Utilities and Service Systems	No Impacts LSM	Impact level would be greater than the Project	Impact level would be equal
Wildfire	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal

LSM = less than significant with **MMs**
LS = less than significant without **MMs**

1.7 AREAS OF CONTROVERSY

A detailed discussion of all comments received on the project in response to the Notice of Preparation is provided in Chapter 2, Introduction. Based on this input the following issues were identified as being controversial:

1. IVIC contribution to air and greenhouse gas emissions, and the potential impacts to sensitive receptors in the population.
2. Environmental Justice.

FIGURE 1-1

Tom Dodson & Associates
Environmental Consultants

IVIC Area Projects (Current and Future)

CHAPTER 2 – INTRODUCTION

2.1 BACKGROUND

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. In fact, IVDA has facilitated coordination of a number of infrastructure improvements within the IVIC Project area with the participating agencies working with IVDA to implement this Project. The other participating agencies in developing the IVIC include: City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). These stakeholders have jurisdictional and ownership/service interests in the Project area and have invested significant time and resources in supporting the IVDA in completing the IVIC for the benefit of the area. A table outlining the infrastructure improvements—including the stage of development in the planning process, design process, construction phase, and those that are completed—in the Project area is provided below, and **Figure 2-1** also shows a graphic of these infrastructure improvements. It indicates that IVDA has played a coordinating role in several infrastructure improvements within the Project area over the last decade.

Table 2-1
CURRENT & COMPLETED INFRASTRUCTURE IMPROVEMENTS WITHIN THE IVIC PROJECT AREA

Project Name	Agency Partners	Funded By	Status	Project Cost	Project Distance (mi)
3rd Street Drainage Project	IVDA, YSMN	EDA[2]	Complete	$1,440,000.00	0.22
3rd Street Roadway and Infrastructure Improvements	SBIAA,[1] YSMN, City of Highland	EDA	Completed	$3,456,000.00	0.93
3rd Street/5thStreet Corridor Improvement Project	YSMN, City of Highland, IVDA	EDA	In Construction	$11,997,968.00	1.84
Sterling Avenue Upgrade Project	IVDA, YSMN	EDA	In Design	$3,814,391.00	0.01
3rd Street Corridor Project	IVDA	DOT[3]	In Design	$3,000,000.00	1.49
Victoria Avenue Storm Drain Improvement (City Creek Channel to 9th Street) Victoria Avenue Roadway Improvement (City Creek Channel to 6th Street)	City of Highland	YSMN-IGG[4] YSMN-CCF[5] DOT	In Design	$9,450,000.00	0.75
			TOTAL	$33,158,359.00	5.24

[1] SBIAA = San Bernardino International Airport Authority
[2] EDA = Federal Economic Development Agency
[3] DOT = California Department of Transportation
[4] YSMN-IGG = IGG - Indian Gaming Grant
[5] YSMN-CFF = CCF - Community Credit Fund

The Inland Valley Infrastructure Corridor (IVIC) Project area is located approximately 60 miles east of Los Angeles just south of the foothills of the San Bernardino Mountains. It is centrally located between three major freeways (State Route (SR)-210 to the north and east, the I-215 to the west, and the I-10 to the south) and regional attractions including the Loma Linda University and Medical Center (5 miles southwest of Project area), University of Redlands (8 miles southeast

of Project area), the San Bernardino International Airport (SBIA), and commercial shopping destinations in Downtown San Bernardino and the Highland Town Center, both within 5 miles of the Project area (see **Figure 3-1**, Regional Location).

Realizing that a significant transition in the area could not occur one project at a time, a primary goal of group discussions held was to facilitate and encourage potential infrastructure expansion opportunities that could be beneficial to the County, both cities, EVWD, YSMN, the Airport, and existing and future property owners in the Project Area. Collectively, the participants determined that the project area would benefit from the preparation and implementation of the IVIC. The following objectives have been established for the proposed Project to guide the implementation of the infrastructure improvements outlined herein:

- Provide comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs. Infrastructure improvements provide solutions to current issues in the area experienced by residents and businesses and plans for future needs related to:
    - **Water** – Enhance the potable water distribution system and expand the potential for utilization of recycled water in the future
    - **Sewer** – Support wastewater collection capacity and upgrade sewer system to meet projected demand
    - **Roadways** – Improve traffic circulation, safety, mobility, and roadway conditions
    - **Stormwater Drainage** – Address longstanding flooding issues within the IVIC Project area by improving and expanding the capacity of drainage systems
    - **Other Utility Integration –** Strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements
- Efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

The primary goal of the IVIC is to provide the necessary infrastructure improvements to the Project area through a collaborative effort with IVDA partners to benefit the entire Project area, and greater area surrounding the Project utilizing this Inland Valley Infrastructure Corridor.

Based on the preliminary review of the proposed IVIC, IVDA and the Partner Agencies findings concluded that a full scope Environmental Impact Report (EIR) should be prepared for the IVIC in accordance with the procedure outlined in Section 15060(d) of the State CEQA Guidelines (2022 version). A Notice of Preparation (NOP) was distributed to the public for review and comment on November 30, 2023, with the NOP Comment Period ending on January 16, 2024. The State Clearinghouse assigned the IVIC EIR the following tracking number: SCH# 2023110715. The decision to prepare a EIR was based on the finding that the proposed Project may have one or more significant effects on the existing environment as is documented in the NOP, provided as Subchapter 8.1 of this document.

IVDA has prepared the IVIC EIR that evaluates potential broad scope or programmatic environmental impacts that would result from constructing and implementing the IVIC.

2.2 PURPOSE AND USE OF AN EIR

The CEQA was adopted to assist with the goal of maintaining the quality of the environment for the people of the State of California. Compliance with CEQA, and its implementing guidelines, requires that an agency making a decision on a project (defined as a discretionary action that can change the physical environment) must consider its future potential environmental effects/impacts before granting any approvals or entitlements. Further, the State adopted a policy "that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." Thus, an agency, in this case IVDA, must examine feasible alternatives and identify feasible mitigation measures as part of the environmental review process. CEQA also states "that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof." (§21002, Public Resources Code)

When applied to a proposed project, such as the proposed IVIC, the reviewing agency is required to identify the potential environmental impacts of implementing the project; and, where potentially significant impacts are identified, must determine whether there are feasible mitigation measures or alternatives that can be implemented to avoid or substantially lessen significant environmental effects of a project. The first step in this process—determination that an EIR is required and issuance of a NOP—has been completed for the IVIC. Thus, the IVIC constitutes the “project being considered for approval and implementation” by IVDA and the partner agencies.

A EIR has been selected as the appropriate document for compliance with the California Environmental Quality Act (CEQA) based on the definition of a program document contained in Section 15168 of the State CEQA Guidelines which states:

"A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As a logical part in the chain of contemplated actions, (3) In conjunction with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

The IVIC meets several of the preceding requirements for an EIR. Specifically, the IVIC is geographically connected and integrated with the growth of the community; the IVIC consists of several individual projects that would be carried out by the IVDA and partner agencies that will have generally similar environmental effects that can be mitigated in similar ways. A primary goal of the IVIC is to implement a collaborative effort, intended to provide efficient and effective access to freeway corridors, improves infrastructure, including drainage, water supply, sewer, and would integrate other utilities as the IVIC is implemented as a Project.

As stated above, the environmental issues that will be analyzed in this EIR are defined in the standard Initial Study Environmental Checklist Form (Appendix G, State CEQA Guidelines), including: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gases/Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning (Environmental Justice), Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Systems, Utilities and Service Systems, and Wildfire. Of these

issues onl one has have been identified as having the highest potential to experience a potentially significant adverse impact: Transportation (specifically as it related to Vehicle Miles Traveled).

IVDA prepared and circulated a NOP for the Project. The NOP public review period through the State Clearinghouse began on November 30, 2023, with the NOP Comment Period ending on January 16, 2024. Respondents were requested to submit their input as to the scope and content of environmental information and issues that should be addressed in the IVIC EIR no later than 45 days after receipt of the NOP. The NOP was distributed to interested agencies, the State Clearinghouse (SCH), and a list of interested parties compiled by the IVDA and the Partner Agencies. Four responses were submitted in response to the NOP. Comments are summarized below, and a brief response to each issue organized by environmental topic is provided following the summary of comment received. A copy of each NOP comment letter is provided in Subchapter 8.3. The location where the issues raised in the comments are addressed is described in the following text.

NOP Comment Letter #1 from the Native American Heritage Commission, dated December 1, 2023:

- The Native American Heritage Commission (NAHC) outlines the circumstances in which an EIR must be prepared, and specifically relays that the Lead Agency must determine whether there are historical resources within the project area of potential effects (APE), and whether such resources are significant.
- The lead agency must consult with all Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project; the Comment Letter details the AB 52 consultation process.
- The Comment Letter details the provisions of SB 18 and how a lead agency would comply with SB 18.
- The Comment Letter details NAHC recommendations for cultural resource assessments including contacting the appropriate regional archaeological information center for a record search, conducting an archaeological inventory survey if required, and submit report per requirements, contacting the Native American Heritage Commission for a sacred lands file check, as well as suggestions for mitigation to prevent impacts to subsurface resources.

NOP Comment Letter #2 from the Morongo Band of Mission Indians, dated January 18, 2024:

- The Comment Letter requests consultation under AB 52.
- The Comment Letter requests a number of materials to ensure meaningful consultation with the Morongo Band of Mission Indians (MBMI)
    - Project Design and Maps
    - Records Search from the California Historical Resources Information System (CHRIS)
    - Tribal Participation during the pedestrian survey and testing, if the fieldwork hasn't taken place
    - Shapefiles
    - Geotechnical Report
- The Comment Letter requests continued consultation with the MBMI.

NOP Comment Letter #3 from the San Bernardino County Department of Public Works, dated December 29, 2023:

- The Comment Letter indicates that the IVIC is located near the County Maintained Road System (CMRS) at Tippecanoe Avenue, and that a Road Construction Permit, Excavation permit, and Encroachment Permit would be necessary to improve CRMS roadways.
- The Comment Letter notes that any encroachments within San Bernardino County Flood Control District (Flood Control District) right-of-way and facilities, would require encroachment permits from the Flood Control District. The comment also notes that Flood Control District facilities built by the Army Corps of Engineers (USACOE) would require obtainment of regulatory permits (408-Permit) from the USACOE.
- The Comment Letter requires that a Water Quality Management Plan (WQMP) should be prepared for the Project, and mitigation proposed therein should be outlined in the DEIR.
- The Comment Letter notes that the project should be developed in conformance with the Construction General Permit.
- The Comment Letter notes that, when planning for or altering existing or future storm drains, IVDA should be advised that the project is subject to the District's Comprehensive Storm Drain Plan No. 6, dated August 31, 2001. Construction of new or alterations to existing storm drains should be fully evaluated in the DEIR.
- The Comment Letter notes the flood zones within which the IVIC Planning Area lies:
    - FEMA Flood Insurance Rate Map, Panels 06071C8682J, 8701J (dated September 2, 2016) and 8702H, (dated August 28, 2008), the Project lies within Zones AE, X-shaded (500-yr. floodplain, 0.2% annual chance of flooding; protected by a levee), X, and the Regulatory Floodway..
- The Comment Letter recommends that the Cities of Highland and San Bernardino enforce its most recent regulations for development within a Special Flood Hazard Area (SFHA) and floodplains.
- The Comment Letter notes that any encroachments on the District's right-of-way or facilities will require a permit from the District's prior to start of construction.
- The County requests to be included on the circulation list for all project notices, public reviews, and public hearings.

NOP Comment Letter #4 from the San Bernardino Valley Water Conservation District, dated December 21, 2023:

- The Comment Letter notes that the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) boundary is located adjacent to the IVIC Project area. The San Bernardino Valley Water Conservation District (SBVWCD or District) is the lead Permittee for the Wash Plan, which permits and mitigates construction within the Wash Plan area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.
- The District requests that the DEIR consider the Wash Plan.

A brief response to each issue raised is provided below organized by environmental topic.

Aesthetics
No Comments on this topic were received.

Agriculture and Forestry Resources
No Comments on this topic were received.

Air Quality
No Comments on this topic were received.

Biological Resources

NOP Comment Letter #4 San Bernardino Valley Water Conservation District: The Comment Letter indicates that the San Bernardino Valley Water Conservation District owns properties to the east of the IVIC boundary within the Upper Santa Ana River Wash for purposes of groundwater recharge and is the Permittee for the Upper Santa Ana River Wash Habitat Conservation Plan. The Comment Letter requests that inclusion and analysis of the Upper Santa Ana River Wash Habitat Conservation Plan in the Biological Resources, Land Use & Planning, and other applicable sections.

Response: The proximity of the IVIC to the Upper Santa Ana River Wash Habitat Conservation Plan only occurs at the City Creek Channel and is acknowledged in the DEIR. However, the IVIC does not envision any activities that would impact the City Creek Channel (as opposed to the City Creek Bypass Channel). Therefore, any potential for conflict with the Wash Habitat Conservation Plan is negligible to nonexistent.

Subchapter 4.6: Cultural Resources

NOP Comment Letter #1 (NAHC): The comment letter supplied by the NAHC outlines the circumstances in which an EIR must be prepared, and specifically relays that the Lead Agency must determine whether there are historical resources within the project APE, and whether such resources are significant.

Response: This comment is noted, and IVDA has followed through with the preparation of an EIR, within which, under Subchapter 4.6, historical and archeological are considered and analyzed under the thresholds provided by the NAHC.

The Cultural Resources Assessment specific to the development in the IVIC has been prepared in accordance with the NAHC's recommended standards. This report is provided as Appendix 4 to Volume 2 of this DEIR.

NOP Comment Letter #1 (NAHC): The comment letter supplied by the NAHC indicates that the lead agency must consult with all Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project; the Comment Letter details the AB 52 consultation process.

Response: This comment is noted, and IVDA has contacted the Yuhaaviatam of San Manuel Nation—a Tribe that is a partner in the development of the IVIC—the Morongo Band of Mission Indians, and the Gabrieleño Band of Mission Indians – Kizh Nation, under the AB 52 consultation process, as the three Native American tribes that have requested consultation on future projects under the IVDA/SBIAA jurisdiction.

NOP Comment Letter #1 (NAHC): The Comment Letter details the provisions of SB 18 and how a lead agency would comply with SB 18.

Response: This comment is noted, and SB 18 is not applicable to the IVDA as IVDA does not have land use authority to adopt or modify a General Plan or Specific Plan. Furthermore, this Project is an infrastructure program that would not modify the respective General Plans within the IVIC Project Area. SB 18 is not applicable to this Project.

NOP Comment Letter #1 (NAHC): The Comment Letter details NAHC recommendations for cultural resource assessments including contacting the appropriate regional archaeological

information center for record search, conducting an archaeological inventory survey if required, and submit report per requirements, contacting the Native American Heritage Commission for a sacred lands file check, as well as suggestions for mitigation to prevent impacts to subsurface resources.

Response: The "Update to Cultural Resources Survey Inland Valley Infrastructure Corridor Project Cities of San Bernardino and Highland, San Bernardino County, California" that were prepared for the IVIC has been prepared to the specifications provided in this comment. Please refer to Appendix 4 in Volume 2 of this DEIR. Detailed mitigation has been provided to address the potential for subsurface resources to exist within the Planning Area; these measures address the treatment and disposition of subsurface resources, should they be discovered. These mitigation measures can be found under Subsection 4.6.5.

Energy
No Comments on this topic were received.

Geology and Soils
No Comments on this topic were received.

Greenhouse Gases (GHG)
No Comments on this topic were received.

Hazards and Hazardous Materials
No Comments on this topic were received.

Hydrology and Water Quality
NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter describes that the San Bernardino County Flood Control District (Flood Control District) possesses easement and fee-owned right-of-way within and surrounding the perimeter of the IVIC Planning Area, and notes that the IVIC Planning Area is within the Comprehensive Storm Drain Plan (CSDP) No. 6. The Comment Letter notes that, when planning for or altering existing or future storm drains, IVDA should be advised that the project is subject to the District's Comprehensive Storm Drain Plan No. 6, dated August 31, 2001. Construction of new or alterations to existing storm drains should be fully evaluated in the DEIR.

*Response: A discussion of the applicability of and compliance with the District's Comprehensive Storm Drain Plan No. 6 can be found in **Subchapter 4.11, Hydrology**. The proposed project intends to improve the City Creek Bypass Channel to ensure sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Warm Creek Channel. This is discussed in detail in **Subchapter 4.11, Hydrology.***

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter notes the flood zones within which the IVIC Planning Area lies:

- FEMA Flood Insurance Rate Map, Panels 06071C8682J; 8701J, dated September 2, 2016, and 06071C8702H, dated August 28, 2008, the Project lies within Zones A, AE, X-shaded (500-year floodplain; protected by a levee), X-unshaded, and the Regulatory Floodway.

*Response: The listed FIRM panels and flood zones are noted and fully analyzed in relationship to IVIC implementation under the analysis provided in **Subchapter 4.11, Hydrology**.*

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter recommends that the Cities of Highland and San Bernardino enforce its most recent regulations for development within a Special Flood Hazard Area (SFHA) and floodplains.

*Response: The most recent regulations for development within SFHA and floodplains are analyzed in **Subchapter 4.11, Hydrology**; however, it should be noted that the improved capacity of the City Creek Bypass Channel would minimize the existing flood hazards throughout the IVIC Project area.*

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter notes that any encroachments including, but not limited to access for grading, side drain connections, utilities crossing, street improvements, and channel improvements on the District's right-of-way or facilities will require a permit from the District's prior to start of construction. Additionally, District's facilities built by the Army Corps of Engineers (ACOE) will require the District to obtain approval (408-Permit) from the ACOE. These impacts should be discussed in the DEIR.

*Response: The District permit requirements are discussed and analyzed in **Subchapter 4.11, Hydrology**. The need for a 408-Permit from the ACOE is discussed therein as well, but is analyzed in more detail under **Subchapter 4.5, Biological Resources**. **MMs BIO-13 and BIO-14** will be implemented if and when the City Creek Bypass Channel is disturbed.*

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter requires that a Water Quality Management Plan (WQMP) should be prepared for the Project, and mitigation proposed therein should be outlined in the DEIR. The Comment Letter notes that the project should be developed in conformance with the Construction General Permit (CGP).

*Response: The development of project-specific WQMPs and compliance with the CGP is discussed under **Subchapter 4.11, Hydrology**, but is also analyzed under **Subchapter 4.10, Hazards and Hazardous Materials**. **MMs BIO-13 and BIO-14** will be implemented if and when the City Creek Bypass Channel is disturbed.*

Land Use and Planning
No Comments on this topic were received.

Mineral Resources
No Comments on this topic were received.

Noise
No Comments on this topic were received.

Population and Housing
No Comments on this topic were received.

Public Services
No Comments on this topic were received.

Recreation
No Comments on this topic were received.

Transportation and Traffic
NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter indicates that the IVIC is located near the County Maintained Road System (CMRS) at Tippecanoe Avenue, and that a Road Construction Permit, Excavation permit, and Encroachment Permit would be necessary to improve CRMS roadways.

Response: The impacts to these residences and Multi-Family land use designations, including support for relocation of residents, are fully analyzed in Subchapter 4.15, Population and Housing.

Tribal Cultural Resources
NOP Comment Letter #2 Morongo Band of Mission Indians: The Comment Letter requests consultation under AB 52 and requests a number of materials to ensure meaningful consultation with the MBMI. The Comment Letter requests continued consultation with the MBMI.

Response: The IVDA initiated AB 52 on April 3, 2024 with MBMI and the other two tribes that requested consultation under AB 52. The materials requested in the Comment Letter have been provided to MBMI to the extent that the materials are available for the IVIC Project.

Utilities and Service Systems
No Comments on this topic were received.

Wildfire
No Comments on this topic were received.

As noted above copy of the Notice of Preparation and NOP Distribution list are provided in Subchapter 8.1 of this DEIR. A copy of the referenced comment letters/comments is provided in Subchapter 8.3 of this DEIR.

The IVIC DEIR was prepared in order to address all of the issues identified in the NOP as potentially significant and to provide information intended for use by the IVDA, Partner Agencies and stakeholders, interested and responsible agencies and parties, and the general public in evaluating the potential environmental effects of implementing the proposed Project.

CEQA requires that IVDA decision-makers to consider the environmental information in the Project record, including this DEIR, prior to making a decision on the proposed Project. The Cities of Highland and San Bernardino may also consider the contents of the DEIR as Responsible Agencies under CEQA when implementing individual projects considered in this IVIC DEIR. IVDA must consider and decide whether to approve the IVIC as proposed and described in Chapter 3, Project Description of this DEIR.

As stated above, IVDA will serve as the CEQA Lead Agency pursuant to the CEQA Guidelines Section 15051(b)(1). The IVIC EIR has been prepared by Tom Dodson & Associates (TDA). TDA was retained to assist IVDA to perform the independent review of the Project required by CEQA before the IVIC DEIR is adopted. IVDA staff have reviewed the content of the IVIC DEIR and concurs in the conclusions and findings contained herein.

2.3 SCOPE AND CONTENT OF THIS EIR

As stated previously, the IVIC EIR evaluates the environmental effects of the proposed Project based on the current (2024) Appendix G of the State CEQA Guidelines. In addition to evaluating

the environmental issues listed above, the IVIC EIR contains all of the sections mandated by the CEQA and CEQA Guidelines. **Table 2.3-1** provides a listing of the contents required by CEQA in an EIR along with a reference to the chapter and a page number where these issues can be reviewed in the document. This DEIR is contained in two volumes. Volume 1 contains the CEQA mandated sections and some pertinent appendices. Volume 2 contains the technical appendices.

Table 2.3-1
REQUIRED EIR CONTENTS

Required Section (CEQA)	Section in EIR	Page Number
Table of Contents (Section 15122)	same	ii
Summary (Section 15123)	Chapter 1	1.1
Project Description (Section 15124)	Chapter 3	3.1
Environmental Setting (Section 15125)	Chapter 4	Beginning 4.1
Significant Environmental Effects of Proposed Project (Section 15126a); Environmental Impacts	Chapter 4	Beginning 4.1
Unavoidable Significant Environmental Effects (Section 15126b)	Chapter 4	Beginning 4.1
Mitigation Measures (Section 15126c)	Chapter 4	Beginning 4.1
Cumulative Impacts (Section 15130)	Chapter 4	Beginning 4.1 and 6.2
Alternatives to the Proposed Action (Section 15126d)	Chapter 5	Beginning 5.1
Growth-Inducing Impacts (Section 15126g)	Chapter 6	6.1
Irreversible Environmental Changes (Section 15126f)	Chapter 6	6.1
Effects Found Not to be Significant (Section 15128)	Chapter 2 & 8	2.1
Organizations and Persons Consulted (Section 15129)	Chapter 7	7.1
Appendices	Chapter 8	8.1

2.4 IVIC EIR FORMAT AND ORGANIZATION

The IVIC DEIR contains eight chapters in Volume 1 and a set of technical appendices in Volume 2, which, when considered as a whole, provide the reviewer with an evaluation of the potential significant adverse environmental impacts from implementing the proposed Project. The following paragraphs provide a summary of the content of each chapter of the IVIC DEIR.

Chapter 1 contains the Executive Summary for the IVIC DEIR. This includes a short overview of the proposed Project and a tabular summary of the potential adverse impacts and mitigation measures.

Chapter 2 provides the reviewer with an Introduction to the document and additional summary information about the Project. This chapter of the document describes the background of the proposed Project, its purpose, and its organization. The CEQA process to date is summarized and the scope of the IVIC EIR is identified.

Chapter 3 contains the Project Description used to forecast environmental impacts. This chapter describes for the reviewer how the existing environment will be altered by implementation of the proposed Project. Chapter 3 sets the stage for conducting the environmental impact forecasts contained in the succeeding several chapters. A copy of the Draft IVIC is provided as **Subchapter 8.4** of the EIR.

Chapter 4 presents the environmental impact forecasts for the issues considered in the IVIC EIR. For each of the environmental issues identified in **Subchapter 2.3**, the following impact evaluation is provided for the reviewer: the potential impacts forecast to occur if the Project is implemented; proposed mitigation measures; unavoidable adverse impacts; and cumulative impacts.

Chapter 5 contains the evaluation of alternatives to the proposed Project. Included in this section is an analysis of the No Project Alternative and any other "feasible" or "reasonable" Project alternatives (15126.6(a)).

Chapter 6 presents the topical issues that are required in an EIR. These include any significant irreversible environmental changes and growth inducing effects of the proposed Project.

Chapter 7 describes the resources used in preparing the IVIC DEIR. This includes persons and organizations contacted; list of preparers; and bibliography.

Chapter 8 contains those materials referenced as essential appendices to the IVIC DEIR, such as the NOP and comments on the NOP. Technical Appendices are provided in Volume 2 of the IVIC EIR, under separate cover. All Appendix material is referenced at appropriate locations in the text of this document.

2.5 AVAILABILITY OF THE INLAND VALLEY INFRASTRUCTURE CORRIDOR EIR

The IVIC DEIR has been distributed directly to all public agencies and interested persons identified in the NOP mailing list (see **Subchapter 8.3**), the State Clearinghouse, as well as any other requesting agencies or individuals. All reviewers will be provided the 45 days required by CEQA to review the DEIR and submit comments to the IVDA for consideration and response. The IVIC DEIR is also available for public review at IVDA's website at the following location during the 45-day review period:

Inland Valley Development Agency
1601 E. Third Street, Suite 100
San Bernardino, CA 92408
Point of Contact: Myriam Beltran (mbeltan@sbdairport.com)
Website: www.ivdajpa.org

2.6 REVIEW PROCESS

After receiving comments on the IVIC DEIR, IVDA will prepare a Final EIR for certification prior to making a recommendation to the IVDA Governing Board regarding approval of the IVIC. Information concerning the EIR public review schedule and IVDA meetings for this Project can be obtained by contacting Ms. Myriam Beltran. Questions and comments submitted by mail shall be addressed to:

Inland Valley Development Agency
1601 E. Third Street, Suite 100
San Bernardino, CA 92408
Attn: Ms. Myriam Beltran
Phone: (909) 382-4100
Email: mbeltran@sbdairport.com

Certain aspects of the proposed Project may be subject to review and approval by other agencies. Implementation of future individual project(s) to support the IVIC will require a variety of approvals from other agencies (future actions) for which this environmental document may be referenced, cited or utilized. The following summarizes those agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds, so it should not be considered exhaustive.

- Future site-specific projects may be enacted by the Partner Agencies, including the City of Highland, City of San Bernardino, San Manuel Band of Mission Indians, and East Valley Water District. This DEIR and subsequent environmental documents may be reviewed by each City or Stakeholder (Agency) as part of the review process for future IVIC-related projects.
- San Bernardino County Flood Control District.
- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Santa Ana River Regional Water Quality Control Board and San Bernardino County enforce the BMP requirements contained in the NPDES permit by ensuring construction activities adequately implement the SWPPP. Implementation of the SWPPP is carried out by the construction contractor under contract to IVDA or a Partner Agency, with the Regional Board and County providing enforcement oversight.
- The project includes the potential discharge of fill into or alterations of "waters of the United States," "waters of the State," and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the Regional Board, and California Department of Fish and Wildlife (CDFW) over the life of the IVIC. A Section 404 permit for the discharge of fill material into "waters of the United States" may be required from the ACOE; a Section 401 Water Quality Certification may be required from the Regional Board; a Waste Discharge Report (WDR) may be required from the Regional Board to comply with the Porter-Cologne Act; and a 1600 Lake or Streambed Alteration Agreement may be required from the CDFW.
- There is a low probability that the U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within the general area of potential direct or indirect impact for future individual projects.
- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD) for future industrial projects that operated with equipment that can be considered stationary sources of air emission
- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the County (San Bernardino), flood control agencies, and private parties such as Southern California Edison, The Gas Company, or others.

This is considered to be a partial list of other permitting agencies for future IVIC individual projects considered under this Project.

FIGURE 2-1

Tom Dodson & Associates
Environmental Consultants

IVIC Area Projects (Current and Future)

CHAPTER 3 – PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The Inland Valley Infrastructure Corridor (IVIC) Project area is located approximately 60 miles east of Los Angeles just south of the foothills of the San Bernardino Mountains. It is centrally located between three major freeways (State Route (SR)-210 to the north and east, the I-215 to the west, and the I-10 to the south) and regional attractions including the Loma Linda University and Medical Center (5 miles southwest of Project area), University of Redlands (8 miles southeast of Project area), the San Bernardino International Airport (SBIA), and commercial shopping destinations in Downtown San Bernardino and the Highland Town Center, both within 5 miles of the Project area (see **Figure 3-1**, Regional Location).

The IVIC Project area is located immediately north of the SBIA and the Project area extends to the north side of 6th Street. The western boundary extends to the terminus of the City Creek Bypass Channel, where it joins with Twin Creek, which is about a quarter of a mile to the east of Waterman Avenue. The IVIC Project area is bounded to the east by the SR-210 freeway. Third Street in both cities and Fifth Street in the City of Highland serve as the southern boundary of the Project area.

The north side of the Project area is predominantly bordered by a mix of vacant lands and low to medium density residential uses. The IVIC Project area is located directly across the street from several public facilities including Indian Springs High School, Cypress Elementary School, Highland Community Park, the Highland Branch Library, and the SBIA.

3.2 BACKGROUND

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. In fact, IVDA has facilitated coordination of a number of infrastructure improvements within the IVIC Project area with the participating agencies working with IVDA to implement this Project. The other participating agencies in developing the IVIC include: City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). These stakeholders have jurisdictional and ownership/service interests in the Project area and have invested significant time and resources in supporting the IVDA in completing the IVIC for the benefit of the area. A table outlining the infrastructure improvements—including the stage of development in the planning process, design process, construction phase, and those that are completed—in the Project area is provided below, and **Figure 3-2** also shows a graphic of these infrastructure improvements. It indicates that IVDA has played a coordinating role in several infrastructure improvements within the Project area over the last decade.

Table 3-1
CURRENT & COMPLETED INFRASTRUCTURE IMPROVEMENTS WITHIN THE IVIC PROJECT AREA

Project Name	Agency Partners	Funded By	Status	Project Cost	Project Distance (mi)
3rd Street Drainage Project	IVDA, YSMN	EDA[2]	Complete	$1,440,000.00	0.22
3rd Street Roadway and Infrastructure Improvements	SBIAA,[1] YSMN, City of Highland	EDA	Completed	$3,456,000.00	0.93
3rd Street/5thStreet Corridor Improvement Project	YSMN, City of Highland, IVDA	EDA	In Construction	$11,997,968.00	1.84
Sterling Avenue Upgrade Project	IVDA, YSMN	EDA	In Design	$3,814,391.00	0.01
3rd Street Corridor Project	IVDA	DOT[3]	In Design	$3,000,000.00	1.49
Victoria Avenue Storm Drain Improvement (City Creek Channel to 9th Street) Victoria Avenue Roadway Improvement (City Creek Channel to 6th Street)	City of Highland	YSMN-IGG[4] YSMN-CCF[5] DOT	In Design	$9,450,000.00	0.75
			TOTAL	$33,158,359.00	5.24

[1] SBIAA = San Bernardino International Airport Authority
[2] EDA = Federal Economic Development Agency
[3] DOT = California Department of Transportation
[4] YSMN-IGG = IGG - Indian Gaming Grant
[5] YSMN-CFF = CCF - Community Credit Fund

3.3 PROJECT OBJECTIVES

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. The IVIC represents a long-range infrastructure Project that would be installed over a 20 year horizon. The IVIC Project area covers territory within three jurisdictions—within the City of Highland and City of San Bernardino and County of San Bernardino—and the coordination of infrastructure concurrent with land development of the Project area is necessary to serve the whole of the area harmoniously. The IVIC would ensure that infrastructure improvements necessary to support the development of this area that has been forecast to occur pursuant to the respective jurisdictions' General Plans are implemented consistently across jurisdictional lines by the two cities. After conferring with the participating agencies, a group of local agencies and stakeholders agreed that the Inland Valley Development Agency (IVDA or Agency, a joint powers agency with responsibilities in both cities and intervening unincorporated areas) would assume the lead in managing the preparation of the IVIC and the environmental documentation required to comply with the California Environmental Quality Act (CEQA). Collectively, the participants determined that the Project area would benefit from the preparation of the IVIC. The following objectives have been established for the proposed Project to guide the implementation of the infrastructure improvements outlined herein:

- Provide comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs. Infrastructure improvements

provide solutions to current issues in the area experienced by residents and businesses and plans for future needs related to:

- **Water** – Enhance the potable water distribution system and expand the potential for utilization of recycled water in the future
- **Sewer** – Support wastewater collection capacity and upgrade sewer system to meet projected demand
- **Roadways** – Improve traffic circulation, safety, mobility, and roadway conditions
- **Stormwater Drainage** – Address longstanding flooding issues within the IVIC Project area by improving and expanding the capacity of drainage systems
- **Other Utility Integration –** Strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements

- Efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

The primary goal of the IVIC is to provide the necessary infrastructure improvements to the Project area through a collaborative effort with IVDA partners to benefit the entire Project area, and greater area surrounding the Project utilizing this Inland Valley Infrastructure Corridor.

3.4 ENVIRONMENTAL SETTING

The IVIC Project area extends west to east on the north side of the SBIA as shown in **Figure 3-3.** The IVIC Project area occupies a visually prominent and heavily trafficked location as the roadways internal to the IVIC facilitate access to the northern entrance to the Airport from the SR-210 freeway.

Over the last couple of years, the IVIC has seen growth in development, primarily in the City of Highland, which has led to far less vacant land within the IVIC Project area than in years past. The land uses in the Highland and San Bernardino General Plans within the IVIC area generally envisioned light industrial, business park, general commercial and residential uses, as shown on **Figure 3-4a and 3-4b**, which depicts the existing land uses within the IVIC Project area.

Existing land uses surrounding the IVIC Project area include:

North:	Immediately north of 6th Street, single- and multi-family residential properties
East:	Immediately west of Interstate 210, industrial land uses
South:	SBIA and industrial uses
West:	Commercial, residential, and institutional

Elevations within the Project area range from approximately 1,470 feet to 1,500 feet above mean sea level (amsl). The terrain is essentially level, with a gradual increase in elevation to the north and east. No distinctive topographic features exist within or adjacent to the Project area. Surface runoff within the Project area generally flows to the south and west. Under present circumstances the area contains a mix of uses, with the majority of recent growth consisting of warehouses, logistics centers, and other business park uses, consistent with the City of Highland's existing General Plan. Much of the land in the center of the Project area is designated for residential use by the City of San Bernardino's current General Plan—which is presently being updated. Most natural vegetation has been removed by past agricultural activities, and most trees and shrubs are found where limited human landscaping occurs. No rock outcrops are located in the Project

area. A small man-made drainage channel, City Creek Bypass, crosses through the central-southern portion of the Project area and continues west to a confluence with Twin Creek, which is located beyond the western limit of the IVIC Project area. See **Figure 3-5** for an aerial photograph of the Project area.

Resource specific descriptions of the environmental setting are provided in the "Environmental Setting" subsections of each subchapter of Chapter 4.

3.5 PROJECT CHARACTERISTICS

3.5.1 Existing and Proposed Water Infrastructure

3.5.1.1 Water

a. Existing Supply & Distribution

EVWD's existing supply sources consist of local groundwater, surface water from the Santa Ana River obtained through the North Fork Mutual Water Company, and imported water from the State Water Project (SWP). The Project area is in a portion of EVWD's Lower Zone but mostly the Project is in EVWD's Intermediate Zone. There is enough supply to meet existing demands under maximum day demand (MDD) conditions. The largest single source analysis from EVWD's 2019 Water Supply Master Plan (WSMP) indicates that there are supply deficiencies in the Lower Zone and Intermediate Zone if the largest single source is out of service during MDD conditions. However, the ability to transfer water from other zones would allow these supply deficiencies to be mitigated in the unlikely event that these extreme conditions occur.

EVWD operates existing water distribution infrastructure located throughout the Project area with major east-west pipelines in 6th Street, some pipelines in 5th Street and some pipelines in 3rd Street. Within the Project area there are six (6) active wells and four (4) pump stations all within the Lower and Intermediate Zones. The Lower Zone is west of Sterling Avenue and the Intermediate Zone is east of Sterling Avenue to Palm Avenue (refer to **Figure 3-6** and **3-7**). The backbone water system in the Project area includes:

- A 12-inch cement line and coated water main located in 6th Street traverses the length from Tippecanoe Street to Sterling Street.
- A 36-inch ductile iron line starting at Indian Springs High School located along 6th Street and the pipeline traverses east to Grape Street. As part of the SNRC Project, the segment of this ductile iron line west of Sterling Avenue will be converted to a recycled water line.
- An 8-inch ductile iron line located in 6th Street from Victoria Avenue to Alabama Avenue.
- A 6-inch ACP line located in 6th Street from Victoria Avenue to Alabama Avenue.
- A 12-inch ductile iron line located in 5th Street traverses the length from Tippecanoe Street to 1,000 feet east of Del Rosa Drive.
- A 6 5/8-inch cement line and coated water main located in 5th Street immediately north of San Bernardino Airport supplied by Plant 141.
- A combination of 8-inch and 16-inch ductile iron line located in 4th Street transverses the length from Tippecanoe Street to the termination at San Bernardino International Airport.
- A 12-inch ductile iron line located in 3rd Street traverses the length from Tippecanoe Street to Shirley Avenue.
- A 16-inch ductile iron line located in 3rd Street immediately north of San Bernardino International Airport is supplied by Plant 141.

- An 8-inch ACP and ductile iron line located in 3rd Street from Victoria Avenue to Alabama Avenue.

The existing water infrastructure systems are shown generally in **Figure 3-6** and existing water pipelines by diameters are shown in **Figure 3-7**.

b. Proposed Supply & Distribution

Based on the 2019 WSMP Build-Out Water System Improvements, which are outlined in Chapter 8 therein, there are no transmission pipeline recommendations. The water system improvements based on the 2019 WSMP build-out evaluation within the Project area include the following projects:

- **Project 1** - 3.5 MG storage reservoir located in the Lower Zone;
- **Project 2 -** New Well 01 in the Intermediate Zone.

These recommended improvements to the existing EVWD system will be installed to enhance the existing robust distribution system to meet modern industry standards. The specific locations for these improvements have not yet been determined; however, **Figure 3-6** shows the general zones within which these improvements are anticipated to be installed. The horizon for installation of these water facilities is within the next 20 years.

3.5.1.2 Wastewater

a. Existing Wastewater Collection System

The existing sewer system consists of approximately 213 miles of pipeline, 4,500 sewer manholes, 7 siphons, and 5 diversion structures. The existing sewer system conveys flows into the East Trunk Sewer which presently outlets to the San Bernardino Water Reclamation Plant (SBWRP) or, once operational, the Sterling Natural Resource Center (SNRC) is completed. The existing sewer system including transmission and collection pipeline, siphons, and manholes has been evaluated. The evaluation included existing and future conditions for deficiencies and to identify areas for improvements.

EVWD's sewer pipeline network includes approximately 213 miles of pipeline ranging in size from 4 inches to 24 inches in diameter. The East Trunk Sewer is approximately 9 miles long ranging in size from 8 inches to 54 inches in diameter. EVWD's system, including the East Trunk Sewer, encompasses nine siphons to convey flows under creeks and flood control channels. EVWD has five diversion structures in its sewer collection system. Diversion structures are generally installed in manholes to divert flows along a specific route in case of a blockage in the system or during times of high flow. EVWD's sewer system does not include any lift stations or force mains. All flow is conveyed by gravity to the East Trunk Sewer.

EVWD maintains all of the sewer pipes in the Project area, which are gravity collection system pipelines made of a variety of sizes and made mostly of vitrified clay pipe (VCP). The majority of the pipelines were installed between 1960 and 1980. A few segments were built at a later date. The backbone wastewater system in the Project area includes:

- A 24-inch VCP located in 6th Street traverses the length from Tippecanoe Street to Elm Street.
- A 21-inch VCP located in 6th Street traverses the length from Elm Street to Victoria Avenue.

- A 10-inch VCP located in 6th Street traverses the length from Victoria Avenue to Cunningham Street.
- An 8-inch VCP located in 6th Street traverses the length from Cunningham Street to Central Avenue.
- An 8-inch VCP located in 5th Street starting at Marilyn Avenue to 214 feet east of Shirley Avenue.
- A 21-inch VCP located in 5th Street traverses the length from Victoria Avenue to Cunningham Street.
- A 24-inch VCP located in 5th Street traverses the length from Cunningham Street to Route 10
- An 8-inch VCP located in 4th Street starting at Marilyn to 214 feet east of Shirley Avenue.
- There are new sewer pipes in 3rd Street.

b. Proposed Collection System

EVWD Sewer System Master Plan (SSMP) was updated in early 2019. According to the SSMP the objective was to evaluate the collection system capacity and provide a general assessment of the condition of the existing sewer collection system in order to develop a comprehensive 20-year CIP. The 20-year CIP includes pipeline condition and capacity improvement projects, long range maintenance program considerations, as well as conveyance needs. The recommended CIP was the basis for wastewater rate evaluations and long-range financial plans to be completed in separate financial studies. The final recommendations of the SSMP are located in Chapter 8 of the SSMP. In Chapter 9 of the SSMP, unit costs were developed for pipelines. Engineering, construction, and total project costs were developed for the capacity and condition projects. The recommended CIP includes both capacity and condition related capital projects and recommendations on further studies.

Within the Project area, the recommended projects are shown on :

Project E-1 would upsize 5,900 feet of 27 to 48-inch pipe with 36 to 54-inch pipe, including a possible siphon upsize

Project E-4 would upsize 15,000 feet of 21 to 24-inch pipe with 30-inch pipe starting at Tippecanoe Street on 6th Street which would traverse east to Victoria Street then south to 5th Street then traverse east on 5th Street to Palm Avenue.

Project B-2 would upsize 2,200 feet of 15-inch pipe with 18-inch pipe, including a possible siphon upsize.

Refer to **Figure 3-8** for the Recommended Capacity Projects as outlined in the 2019 EVWD Sewer Master Plan. Chapter 6 of the SSMP describes how the new interceptor sewer that would direct flows to the Sterling Natural Resource Center will relieve flows from the pipelines associated with the projects **E-1, E-4, and B-2** listed above. Consequently, these projects are not anticipated to be necessary, and are not being considered as part of the IVIC Project. However, as a contingency measure, it is forecast that up to 5,000 Feet of sewer may be installed to support the infrastructure needs of the IVIC area.

3.5.1.3 Recycled Water

EVWD has constructed the Sterling Natural Resource Center (SNRC), but the facility is not yet operational. It will be a state-of-the-art water recycling facility in the City of Highland that will provide a sustainable new water supply to boost the region's water independence. The SNRC is

located on a 14-acre parcel of land located at North Del Rosa Drive between East 5th Street and East 6th Street. The SNRC Treatment Facility is located on the eastern property while the Administration Center, which is fully operational, is located on the western parcel. The recycled water conveyance pipelines would be constructed along the existing rights-of-way within 6th Street. SNRC will be capable of treating up to 10 million gallons a day, the SNRC is being implemented to recharge the local Bunker Hill Groundwater Basin and will provide community education, training space, neighborhood improvements, and new habitat for the Santa Ana Sucker fish. The SNRC will produce Title 22 recycled water and at this time the recycled water produced at the SNRC is proposed to be used solely for groundwater recharge.

No new recycled water infrastructure would be installed as part of the IVIC.

3.5.2 Existing and Proposed Dry Utilities / Services

3.5.2.1 Electricity

Electricity for the Project area is provided by Southern California Edison (SCE). The Project area is linked to the state power grid, and the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County have had a number of power interruptions during the peak energy crisis in 2001. Under an agreement with the California Independent System Operator (ISO), SCE must reduce its load if instructed to do so by the ISO during a Stage III power emergency. Such an emergency occurred most recently in March 2001, requiring SCE to temporarily interrupt electric service to some of its customers.

While the IVIC does not propose the installation of any electrical infrastructure, one of the goals of the IVIC is to accommodate the installation of other utilities and emerging technologies that could be integrated concurrently with the infrastructure improvements proposed under the IVIC Project to avoid multiple rounds of trenching to install infrastructure within the roadways within the IVIC Project area.

3.5.2.2 Natural Gas

Natural gas for the Project area is currently being served by the Southern California Gas Company (SoCal Gas). SoCal Gas has a number of underground pipelines in the Project area including:

- An 8-inch pipeline located in 6th Street traverses east the length from Tippecanoe Avenue to Victoria Avenue.
- A 3-inch pipeline located in 6th Street traverses east the length from Cunningham to Central Avenue.
- A 2-inch pipeline located in 5th Street traverses east the length from Tippecanoe Avenue to Roberts.
- A 2-inch pipeline located in 5th Street traverses east the length from Victoria Avenue to 500 feet from Central Avenue.
- A 2-inch pipeline located in 5th Street traverses east the length from Central Avenue to Palm Avenue.
- A 4-inch pipeline located in 5th Street traverses east from Church Avenue to Route 210.
- A 2-inch pipeline located in 4th Street traverses east the length from Tippecanoe Avenue to the termination of 4th Street.
- A 2-inch pipeline located in 3rd Street traverses the length from Tippecanoe Avenue to Sterling Avenue.

- An 8-inch pipeline located in 3rd Street traverses east the length from Victoria Avenue to Alabama Street.
- A 6-inch pipeline located in 3rd Street traverses east the length from Alabama Street/Palm Avenue to Church Avenue/5th Street intersection.

No new natural gas infrastructure is planned to be installed under the IVIC Project.

3.5.2.3 Telecommunications

Time Warner has above and underground utilities in 6th Street from Tippecanoe Street to Sterling Avenue as well as above ground utilities in 5th Street from Tippecanoe Street to residences located between Del Rosa Drive and Sterling Avenue. Time Warner has above ground utilities in 6th Street from Lankershim Avenue to Central Avenue. MCI (Verizon) and Terradex have no above or underground utilities in the Project area.

AT&T has above ground utilities (via cables) and underground utilities within conduits within the Project area located in 3rd Street, 5th Street and 6th Street. Both above ground and underground utilities are located in 6th Street from Tippecanoe Street to Victoria Avenue as well as conduit located in 5th Street starting at Victoria Avenue traversing east terminating before Cunningham. Conduit is located within Central Avenue and Palm Street from 6th Street to 4th Street. Conduit and underground utilities are located in 5th Street from Church Avenue to Route 210. Conduit is located in 3rd Street starting at Victoria Avenue and terminates at Palm Avenue.

No new telecommunications infrastructure is planned to be installed under the IVIC Project.

3.5.3 Existing and Proposed Drainage System

The existing drainage system in the Project area is fairly rudimentary. **Figure 3-9** identifies the overall watershed area of the Project, the existing storm drain systems, and the proposed storm drain systems and infrastructure storm drain systems identified by Comprehensive Storm Drain Plan #6 (CSDP #6) prepared by San Bernardino County Flood Control District. Storm water runoff within the area flows to the south over a very shallow grade. The information that follows is abstracted from a study of the area hydrology by JLC Engineering & Consulting, Inc, titled "Preliminary Hydrology and Channel Design for City Creek By-Pass Channel," April 20, 2020. The City Creek Bypass Channel is located along 3rd and 5th Streets and extends from Warm Creek (Twin Creek) Channel on the west (terminus) and begins at City Creek Channel just north of the State Route 30 (SR-210) and 5th Street Interchange. Refer to **Figure 3-10** for a depiction of the City Creek Bypass Channel alignment. Additionally, the watershed area has existing storm drains that collect runoff from the watershed area located within Palm Avenue and Central Avenue. The existing storm drains and street sections collect surface runoff and convey the runoff into City Creek.

Coordination with local agencies has resulted in the identification of a proposed storm drain system that is located within Victoria Avenue (extending from 9th Street to the City Creek Bypass in the Victoria Avenue right-of-way). The storm drain system is currently under a Plan, Specification, and Estimate (PS&E) process with the City of Highland. The intent of the PS&E process is to develop a package that obtains CEQA clearances, design approvals and construction estimate to allow the Project to be constructed.

The study describes the existing channel and concludes that downstream of the Victoria Avenue-City Creek Bypass Channel, the Channel is insufficient to convey the 100-year flood flows in its

current configuration. The study includes a new channel design (two alternatives) that will need to be installed to have sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Twin Creek Channel (terminus). **Figures 3-11a** through **3-11d** show the alternative channel designs and acknowledges that these designs are preliminary and not ready for construction. The channel alternatives are defined in detail in the study. For planning and impact forecast purposes it is assumed that a maximum of one-half mile of new channel will be installed in any given year. Moreover, **Figure 3-10** has identified the storm drain infrastructure that will be required to provide flood protection for future development that may occur consistent with the existing General Plan land use designations, based on the CSDP #6. The purpose of the storm drain infrastructure is to provide flood protection and to meet the street design policies within the City of San Bernardino and the City of Highland. The following CSDP #6 system that protects the Project area are as follows:

- 6-C1-01 which is a storm drain system that varies in diameter from 36-inches to 48-inches in diameter. The system extends along Tippecanoe Avenue to 5th Street.
- 6-C1-03 which is a storm drain that varies in diameter from 42-inches to 81-inches in diameter. The storm drain extends along Sterling Avenue and 6th Street.

It should be noted that 6-WA-03, located within 6th Street, is adjacent to the northerly boundary of the IVIC Project area. Based on the topographic contours for the watershed area, the runoff flows to the west toward Twin Creek. The IVIC Project area will not require this system to ensure flood protection since 6th Street separately collects and conveys the runoff to the Twin Creek Channel.

Finally, the CSDP #6 is a conceptual design that identifies regional infrastructure required to accommodate existing and future development that may occur consistent with each jurisdictions' existing General Plan land use designations. The conceptual design provides a potential solution that would provide flood protection for an area and where the runoff from the watershed area needs to be directed.

Note that, the IVDA's Sterling Project (reference **Figure 3-2**) includes the installation of a storm drain that would ultimately connect with the City Creek Bypass.

This document evaluates the installation of the drainage improvements to occur on the whole over a period of 20 years. The horizon for installation of the drainage improvements is within the next 20 years.

3.5.4 Existing and Proposed Circulation System Infrastructure

The IVIC Project area contains an established circulation system, which currently has many roadways with older, deteriorating pavement. **Figure 3-12** shows the circulation system in the area surrounding the Project area. The City of San Bernardino General Plan Circulation Plan and the City of Highland General Plan Circulation Element provide roadway designations for the roadway system serving the Project area and the surrounding vicinity. A copy of the City of San Bernardino Circulation Plan and Standard Cross Sections are provided on **Figures 3-13a** and **3-13b**. A copy of the City of Highland Circulation Element and Standard Cross Sections are provided on **Figures 3-14a** and **3-14b**. Regional access to the IVIC area is provided primarily by the Interstate 215 (I-215) Freeway, located approximately 2 miles to the west of the Project area. In addition, the I-10 Freeway is located approximately 3 miles to the south of the Project. State Route 210 (SR-210) is oriented in an east-west direction approximately 2.5 miles to the north of the

Project area, and then turns southward and is oriented in a north-south direction adjacent to the IVIC Project area eastern boundary.

3.5.4.1 Current Street System

The existing street system in the general area and in the Project area is described in the following text. The roadway system considered under the IVIC Project extends from Tippecanoe to the west to the SR-210 to the east, and remains bound by 6th Street to the north and 3rd Street to the south.

Waterman Avenue is a north-south roadway that provides two to three lanes in each direction, with either a raised median or a center two-way left-turn lane in the Project vicinity. The speed limit is 40 miles per hour (MPH) and on-street parking is prohibited on both sides. Waterman Avenue is designated on the City of San Bernardino's Circulation Plan as a Major Arterial.

Tippecanoe Avenue is a north-south roadway that provides two to three lanes in each direction, with either a raised median or a center two-way left-turn lane. Tippecanoe Avenue will form the westernmost boundary of the Project area. The speed limit ranges from 30 to 45 MPH and on-street parking is prohibited on both sides of the roadway. Tippecanoe Avenue is designated on the City of San Bernardino's Circulation Plan as a Secondary Arterial north of 3rd Street and a Major Arterial south of 3rd Street; Tippecanoe Avenue is designated on the City of Highland's Circulation Element as a Secondary Highway.

Del Rosa Drive is a north-south roadway that provides one to two lanes in each direction, with either a raised median or a center two-way left-turn lane in the Project vicinity. Del Rosa Drive extends through and beyond the Specific Plan boundary in both the north and south directions. The speed limit ranges from 35 to 45 MPH, with a 25-MPH school zone from Baseline Street to 6th Street. Del Rosa Drive is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Secondary Highway.

Sterling Avenue is a north-south roadway that provides two lanes in each direction, with a center two-way left-turn lane in the Project vicinity. Sterling Avenue starts at 3rd Street, and extends northward through and beyond the Specific Plan boundary. The speed limit is 40 MPH. Sterling Avenue is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Major Highway.

Victoria Avenue is a north-south roadway that provides two lanes in each direction, with a center two-way left-turn lane in the Project vicinity. Victoria Avenue extends through and beyond the Specific Plan boundary in both the north and south directions. The speed limit ranges from 40 to 45 MPH and on-street parking are prohibited on both sides. Victoria Avenue is designated on the City of San Bernardino's Circulation Plan as a Secondary Arterial and is designated on the City of Highland's Circulation Element as a Major Highway.

6th Street is an east-west undivided roadway that provides one travel lane in each direction. 6th Street will form the northern boundary of the Project area from Tippecanoe Avenue to Central Avenue. The posted speed limit is 40 MPH, with a 25-MPH school zone from Tippecanoe Avenue to Del Rosa Drive. 6th Street is designated as a Collector Street on the City of San Bernardino's Circulation Plan and on the City of Highland's Circulation Element.

5th Street is an east-west roadway that provides one to two lanes in each direction in the Project

vicinity, with a center two-way left-turn lane in some sections. 5th Street provides a direct connection to both the I-215 Freeway to the West and the SR-210 Freeway to the East. 5th Street will traverse the entire length of the Project area and will have development on both sides of the street. The speed limit ranges from 40 to 45 MPH, with a 25-MPH school zone to the east of Waterman Avenue. 5th Street is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Major Highway.

3rd Street is an east-west roadway that provides two lanes in each direction, with a center two-way left-turn lane. The speed limit ranges from 45 to 50 MPH. 3rd Street is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Primary Arterial. 3rd Street will form the southern boundary of the Project area from Tippecanoe Avenue to its eastern terminus.

3rd Street was recently connected to 5th Street just to the east of Church Avenue. The future connection to the east of Church Avenue allows eastbound traffic on 3rd Street to merge onto eastbound 5th Street. The connection to the west of Church Avenue allows limited access from 5th Street to westbound 3rd Street, but ultimately connects traffic utilizing 3rd Street with a direct approach via 5th Street to SR-210.

3.5.4.2 Existing Transit Service

Transit service within and to Project area is provided by OmniTrans, which serves the Cities of San Bernardino, Highland and other surrounding cities. Currently, only OmniTrans Route 15 travels on any of the streets within the Project area.

OmniTrans Route 15 operates between the City of Redlands and the City of Fontana, traveling through the Project area along Tippecanoe Avenue, Del Rosa Avenue, Central Avenue, and Palm Avenue. Key stops along Route 15 include the San Bernardino County Court Building, Redlands Mall, San Bernardino Stadium, San Bernardino Valley College, Fontana Metrolink, and the San Bernardino Transit Center. At the San Bernardino Transit Center, passengers can transfer to other OmniTrans routes, as well as to Riverside Transit (RTA), Mountain Transit, Pass Transit, and Victor Valley Transit Authority (VVTA) routes, or to Metrolink.

Route 15 operates on weekdays from 6:40 AM to 10:40 PM with approximately 30-minute headways (the time between bus arrivals), and on Saturdays and Sundays from approximately 6:40 AM to 7:25PM with approximately 1-hour headways.

The OmniTrans bus stops located closest to the Project area are as follows:

- Tippecanoe Avenue at 3rd Street
- Del Rosa Drive at 3rd Street
- Del Rosa Drive at 6th Street
- Central Avenue at 5th Street

3.5.4.3 Future Street System

The following summary of the differences between current and general plan build-out capacities for roadways within the IVIC Project area. The roadways shown on Figure 3-3 are being considered under the IVIC Project, and roadways outside of this boundary fall outside of the scope of this Project Description.

DEL ROSA DRIVE

Roadway Segment:	Within the IVIC area beginning at 3rd Street (to the South), extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Arterial (up to 8 lanes; may have raised medians)

6th STREET

Roadway Segment:	Within the IVIC area beginning at Church Avenue (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

5th STREET

Roadway Segment:	Within the IVIC area beginning at SR-210 (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
Current Configuration:	2 Lanes Undivided (Waterman Avenue to Marilyn Avenue); 4 Lanes Divided (Marilyn Avenue to Sterling Avenue); 2 lanes (Sterling Avenue to Victoria Avenue), and, 4 lanes (Victoria to SR-210 Eastbound Ramps)
General Plan Buildout Configuration:	Major Highway Tippecanoe Avenue to Palm Avenue (4 Lane, 80-foot roadways; Primary Arterial Palm Avenue to SR-210 (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way)

3rd STREET

Roadway Segment:	Within the IVIC area beginning at SR-210 (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
Current Configuration:	4 Lanes Undivided (Tippecanoe Avenue to Palm Avenue); 2 Lanes (Palm Avenue to Church Avenue/5th Street)
General Plan Buildout Configuration:	Major Highway Victoria Avenue to Church Avenue (4 Lane, 80-foot roadways; Primary Arterial Tippecanoe to N Leland Norton Way (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way); Major Arterial N Leland Norton Way to Victoria Avenue (up to 8 lanes; may have raised medians)

TIPPECANOE AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Secondary Highway 3rd Street to 9th Street (4 Lane roadway with a raised median and has a typical right-of-way width of 88 feet and a curb-to-curb pavement width of approximately 64 feet)

STERLING AVENE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Arterial 3rd Street to the City of San Bernardino's Boundary just south of 6th Street (up to 8 lanes; may have raised medians); Major Highway City of Highland's boundary just south of 6th Street (4 Lane, 80-foot roadways)

LANKERSHIM AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Secondary Arterial from 3rd Street to 5th Street (up to 4 lanes); Collector Street from 5th Street north to the City of Highland's Boundary (up to 2 lanes; 66-feet road right-of-way)

VICTORIA AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 9th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Highway 3rd Street to Highland Avenue (4 Lane, 80-foot roadways (including a 12-foot median) curb-to-curb, within 104-foot rights-of-way)

CUNNINGHAM STREET

Roadway Segment:	Within the IVIC area beginning at 5th Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

CENTRAL AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

PALM AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 5th Street.
Current Configuration:	4 Lanes with a center queueing lane
General Plan Buildout Configuration:	Major Highway 3rd Street to Base Line (4 Lane, 80-foot roadways (including a 12-foot median) curb-to-curb, within 104-foot rights-of-way)

CHURCH AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

The preceding roadway segments within the IVIC Project area represent about 10 miles. Thus, it is anticipated that up to about 20 miles of new and or repaired lane additions (single lane) will need to be installed over the estimated 20-year period to reach the General Plan Buildout Configuration of the above roadways. It is anticipated that as the area experiences growth in development, that roadway improvements will be installed gradually as the need for expanded roadway capacity becomes evident. However, IVDA and/or the local jurisdictions will seek opportunities to obtain grants or funding for specific roadway segments as identified above. This document evaluates the installation of up to 20 miles of new and/or repaired lanes, plus curb and gutter improvements, per year, as a baseline to conduct the impact analysis.

3.6 PHASING AND CONSTRUCTION

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

3.6.1 Roadway Installation

About 5,280 lineal feet of roadway (one mile) would be installed each year. Equipment will include one or more of the following: bull dozer, hydro-hammer, front-end loader, dump truck, chipper, water truck, and service truck. Major pieces of equipment to be engaged during construction will include one or more of the following: pavement grinder and saw cut machines, earth excavators, backhoe, boom truck, grader, water truck, front-end loader, compaction equipment, and service truck and delivery vehicles for deposit of aggregate base and asphalt concrete and Portland cement concrete. Up to 20 persons would be working the construction site per day, though the number of construction workers required will range from 10 to 20 persons per day.

3.6.2 City Creek Bypass Channel Improvement Installation

Construction is anticipated to require a maximum of 30 employees each day, though the number of construction workers required will range from 10 to 30 persons per day.

Installation of the City Creek Bypass Channel Improvements are anticipated to require one or more of the following equipment types: bull dozer, hydro-hammer, front-end loader, dump truck, chipper, water truck, and service truck. Major pieces of equipment to be engaged during construction will include one or more of the following: pavement grinder and saw cut machines, earth excavators, backhoe, boom truck, grader, water truck, front-end loader, compaction equipment, and service truck and delivery vehicles for deposit of aggregate base and asphalt concrete and Portland cement concrete.

For any construction that would encroach within the roadway, the contractor(s) will maintain one lane open in each direction throughout the construction process, as well as access at all times for emergency vehicles and access to all driveways, mailboxes, and bus stop(s).

3.6.3 Extraction Well

It is assumed that the average pumping capacity for the new extraction well will be up to 2,500 gallons per minute (gpm).

It is anticipated that about five persons will be on the well site at any one time to support drilling a well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 15 roundtrips per day. The types of trips including about 10 daily trips for employees plus, at various points of construction: two roundtrips for drill rigs (total for entirety of construction); between 6 and 12 roundtrips for cement trucks (total for the entirety of construction); and about 5 trips to deliver pipe (total for the entirety of construction).

For analysis purposes it is assumed that the well would be drilled using the direct rotary or fluid reverse circulation rotary drilling methods. The average area of disturbance of each well site is estimated to be one-half an acre or less. Access to the drilling site for the drilling rig and support vehicles would be from adjacent roadways. Typically, well drilling requires only minimal earth movement and/or grading.

The drilling and development of the well will require drilling up to 1,500 feet below ground surface (bgs). The proposed schedule for constructing the well would be as follows: drilling, construction, and testing of the well would require approximately six weeks to complete (about 45 days, of which 15 to 20 days would include 24-hour, 7-day a week drill activity). For planning purposes, a construction and testing schedule duration of 60 days for the well is assumed to account for unforeseen circumstances (e.g., extreme weather, equipment break downs, etc.) that could affect the drilling and testing schedule. The well casings are expected to be welded and it will be assumed that well development and installation will require a two-week use of a diesel generator.

The borehole for the well would be drilled using at least two separate drilling passes. The first pass, or pilot borehole, would be drilled using a 17.5-inch diameter bit to an estimated maximum depth below the ground surface, which would correspond to the top of the consolidated bedrock in the area, or a depth selected by the project hydrologist/hydrogeologist. Upon completion of the geophysical logs, the pilot borehole would be enlarged (reamed) to a diameter of 24 inches to approximately the same depth to accommodate the well casing, screen and filter pack.

Once the well is constructed it would immediately be developed through a process of swabbing and airlifting. During this process, drilling fluids and suspended sediment would be removed from the well. After the drilling fluids are removed along with most of the suspended sediment, the well would be further developed through pumping.

3.6.4 Storage Reservoir

A 3.5 MG water storage reservoir would be designed in accordance with the California Building Code (CBC), the Occupational Safety and Health Administration (OSHA), American Concrete Institute (ACI), and AWWA's design standards. AWWA's design standards require that water storage reservoirs be operated at fill levels below their maximum physical height in order to prevent roof damage which may be caused by a "sloshing wave" during a seismic event. As a result, the usable capacity of the new water storage reservoirs will be reduced when compared to the water storage reservoir physical capacity by approximately 30% (the physical capacity would be about 4.55 MG).

Grading: The size of the water storage reservoir site is anticipated to be greater than one acre, with approximately one acre of disturbance required per water storage reservoir. Fine grading of the site will be completed after the water storage reservoir and piping are installed. It is assumed that a maximum of five to twelve workers will be on the site during grading, which would take place for about 10 days.

Foundation Construction: Following mass excavation, the reservoir foundation will be installed. The foundation will consist of concrete/steel/aggregate. It is assumed that a maximum of five to twelve workmen will be on the site during foundation construction for a maximum of about 25 days.

Reservoir Construction: The water storage reservoir will be constructed to be circular in the following fashion: floor; walls and columns; roof; prestressing; and appurtenances. It is assumed that a maximum of 12 employees will be on the site during water storage reservoir construction for a maximum of about 120 days.

Overall, water storage reservoir construction is anticipated to require about 6 months from start to finish.

3.6.5 Sewer Installation

Construction is anticipated to require a maximum of 20 employees each day, though the number of construction workers required will range from 10 to 20 persons per day.

Installation of the sewer would be anticipated to require one or more of the following equipment types: bull dozer, hydro-hammer, front-end loader, dump truck, chipper, water truck, and service truck. Major pieces of equipment to be engaged during construction will include one or more of the following: pavement grinder and saw cut machines, earth excavators, backhoe, boom truck, grader, water truck, front-end loader, compaction equipment, and service truck and delivery vehicles for deposit of aggregate base and asphalt concrete and Portland cement concrete.

For any constriction that would encroach within the roadway, the contractor(s) will maintain one lane open in each direction throughout the construction process, as well as access at all times for emergency vehicles and access to all driveways, mailboxes, and bus stop(s).

3.7 PROJECT APPROVALS AND RESPONSIBLE AND TRUSTEE AGENCIES

It is anticipated that the Inland Valley Development Agency, functioning as the CEQA Lead Agency, will approve the final IVIC and CEQA document. It is anticipated the cities of Highland and San Bernardino, and East Valley Water District will serve as responsible agencies for infrastructure components that would be installed under the respective jurisdiction. Additionally, the San Bernardino County Flood Control (Department of Public Works) may consider and approve the design for the City Creek Bypass channel. To install the support infrastructure within the Project area, encroachment permits may be required by various agencies. Finally, in order to make modifications to the City Creek Bypass channel, it will be necessary to obtain regulatory permits for discharge of fill or streambed alteration. In this instance both the Santa Ana Regional Water Quality Control Board and the California Department of Fish and Wildlife would function as CEQA Responsible Agencies.

Other agencies that may have permitting authority over the Project may include:

- State Water Resources Control Board
- South Coast Air Quality Management District
- U.S. Army Corps of Engineers
- East Valley Water District
- Caltrans District 8
- U.S. Fish and Wildlife Service
- San Bernardino County Transportation Agency

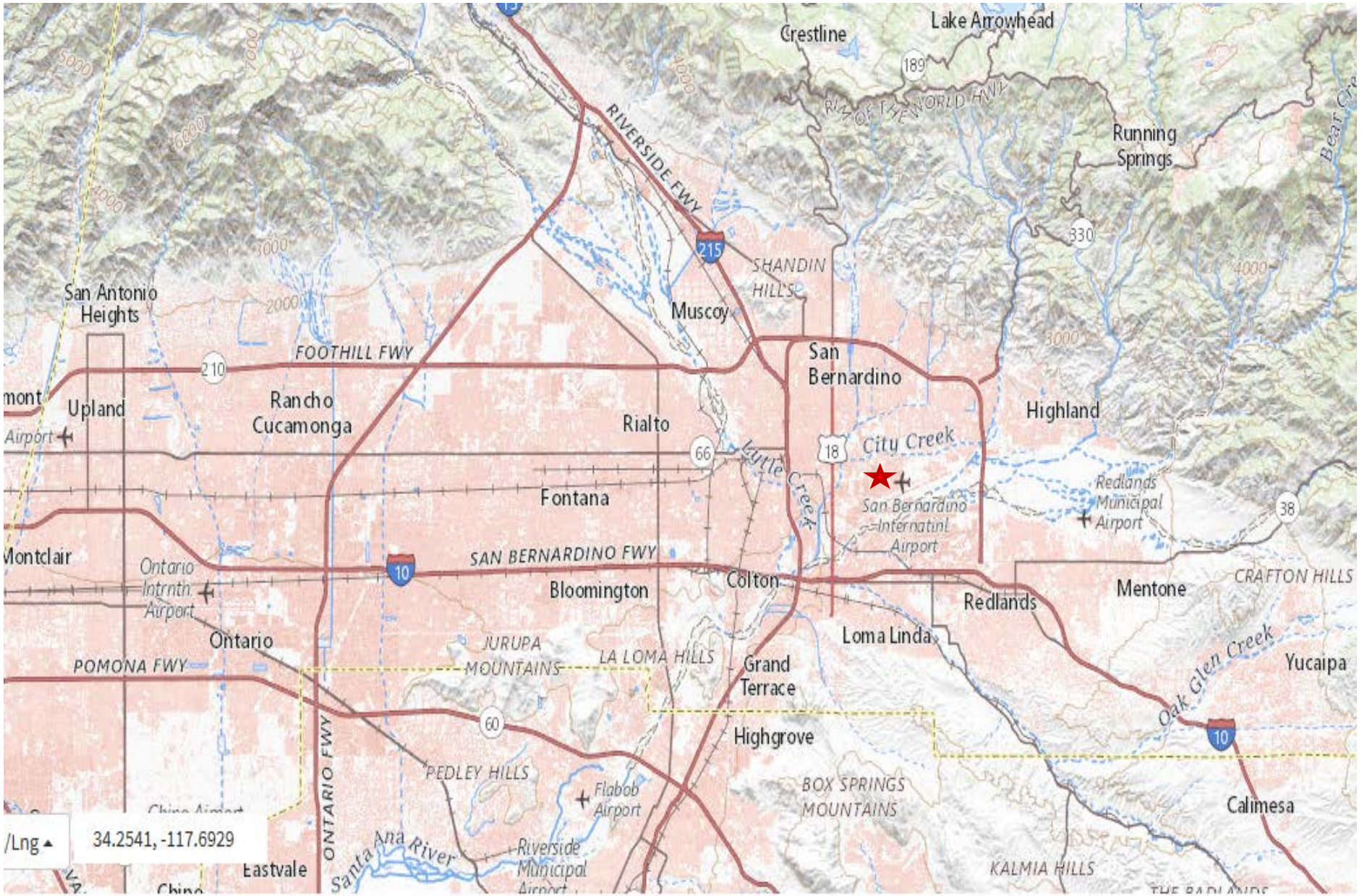


FIGURE 3-1

Tom Dodson & Associates
Environmental Consultants

Regional Location

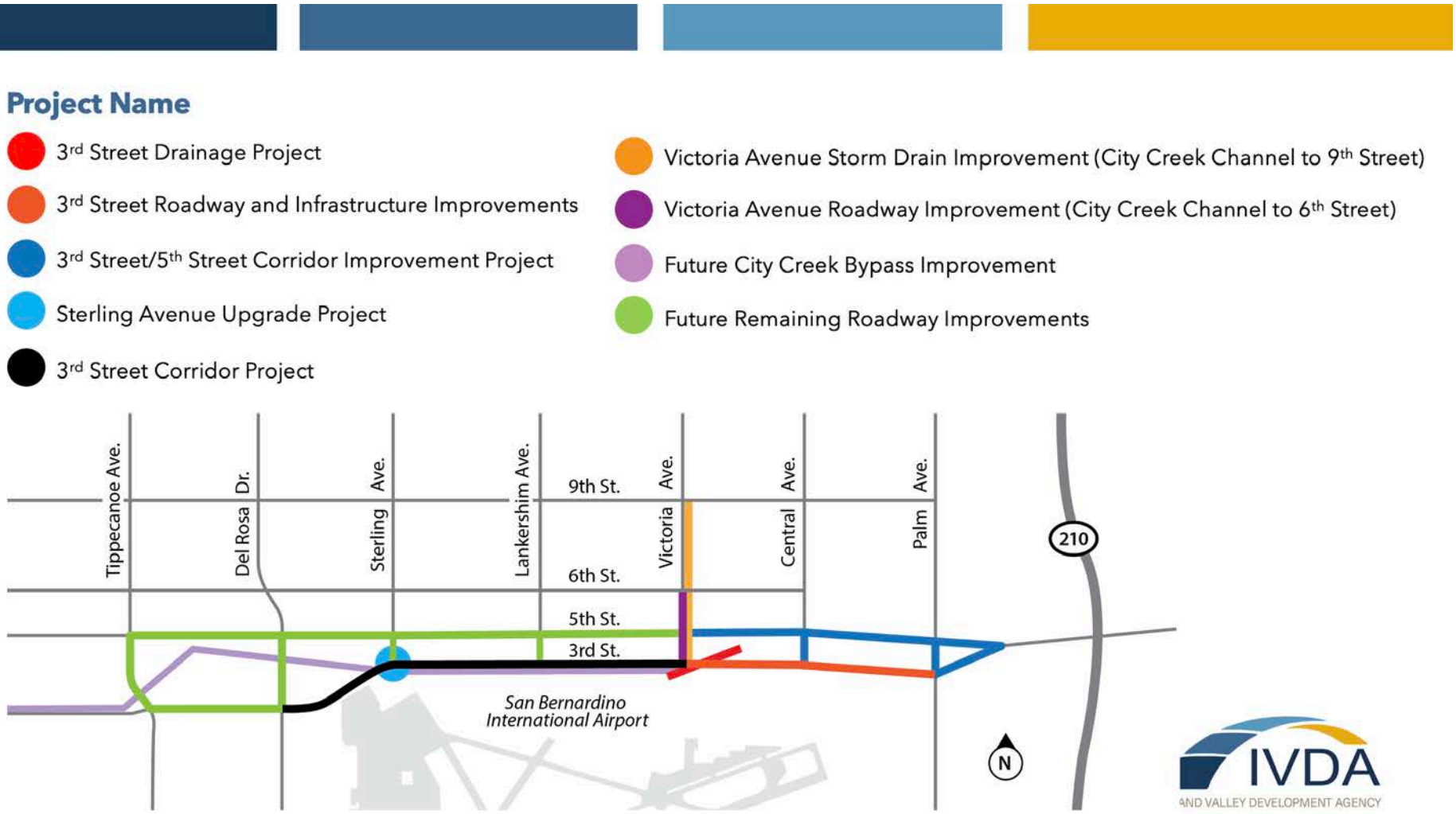


FIGURE 3-2

Tom Dodson & Associates
Environmental Consultants

IVIC Infrastructure Improvements

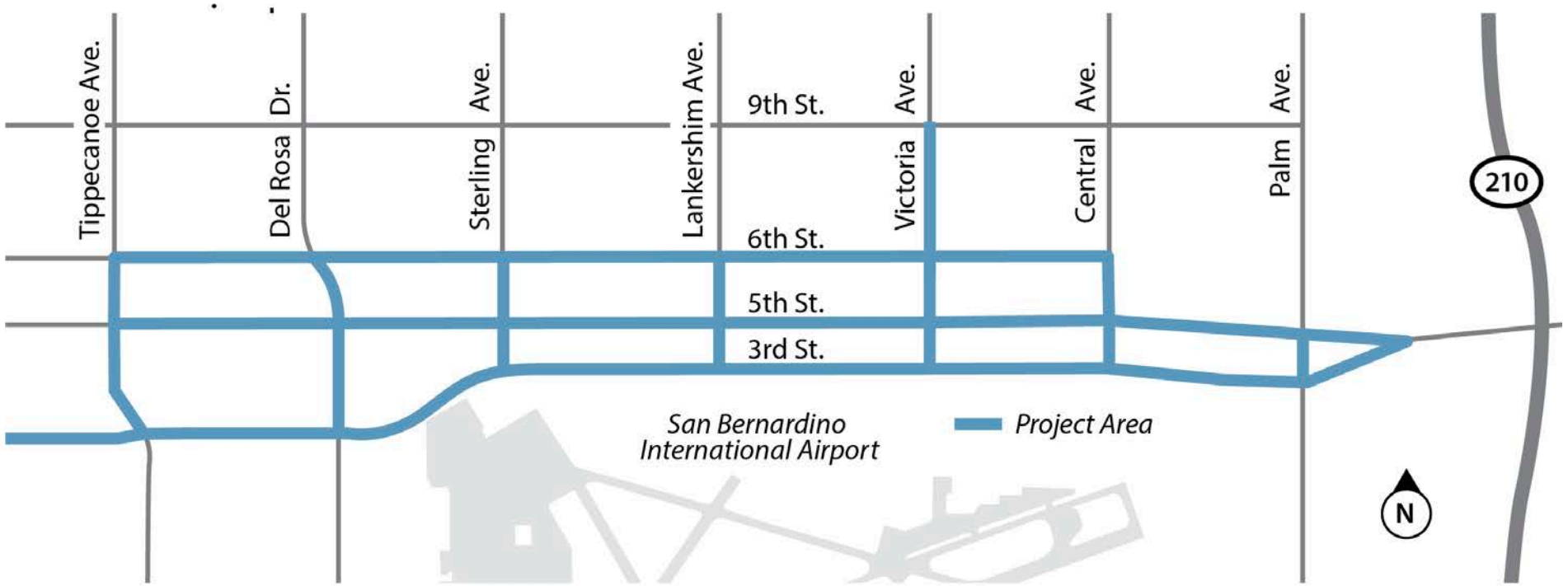


FIGURE 3-3

Tom Dodson & Associates
Environmental Consultants

Project Area

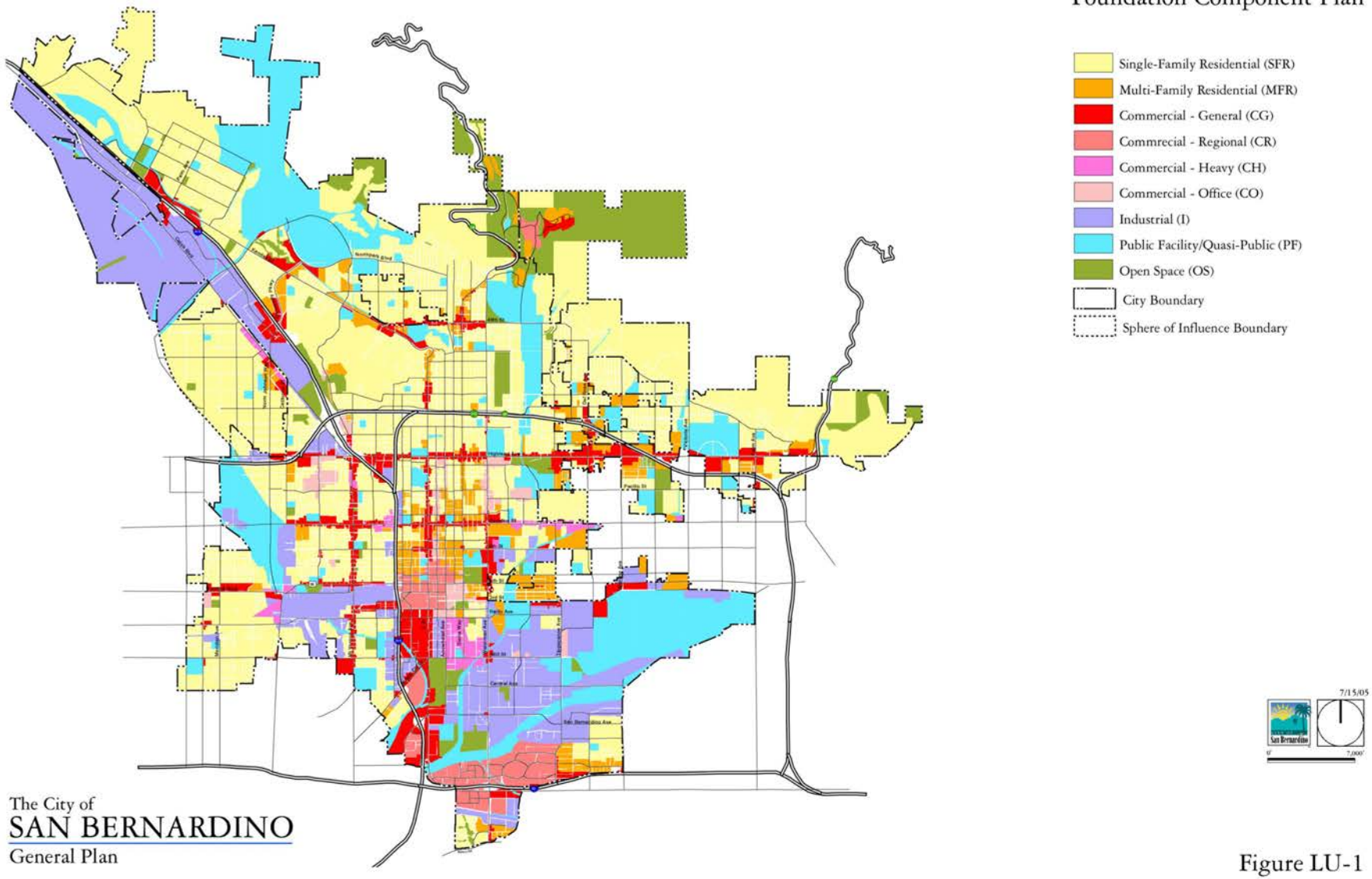


FIGURE 3-4a

Tom Dodson & Associates
Environmental Consultants

City of San Bernardino Land Uses

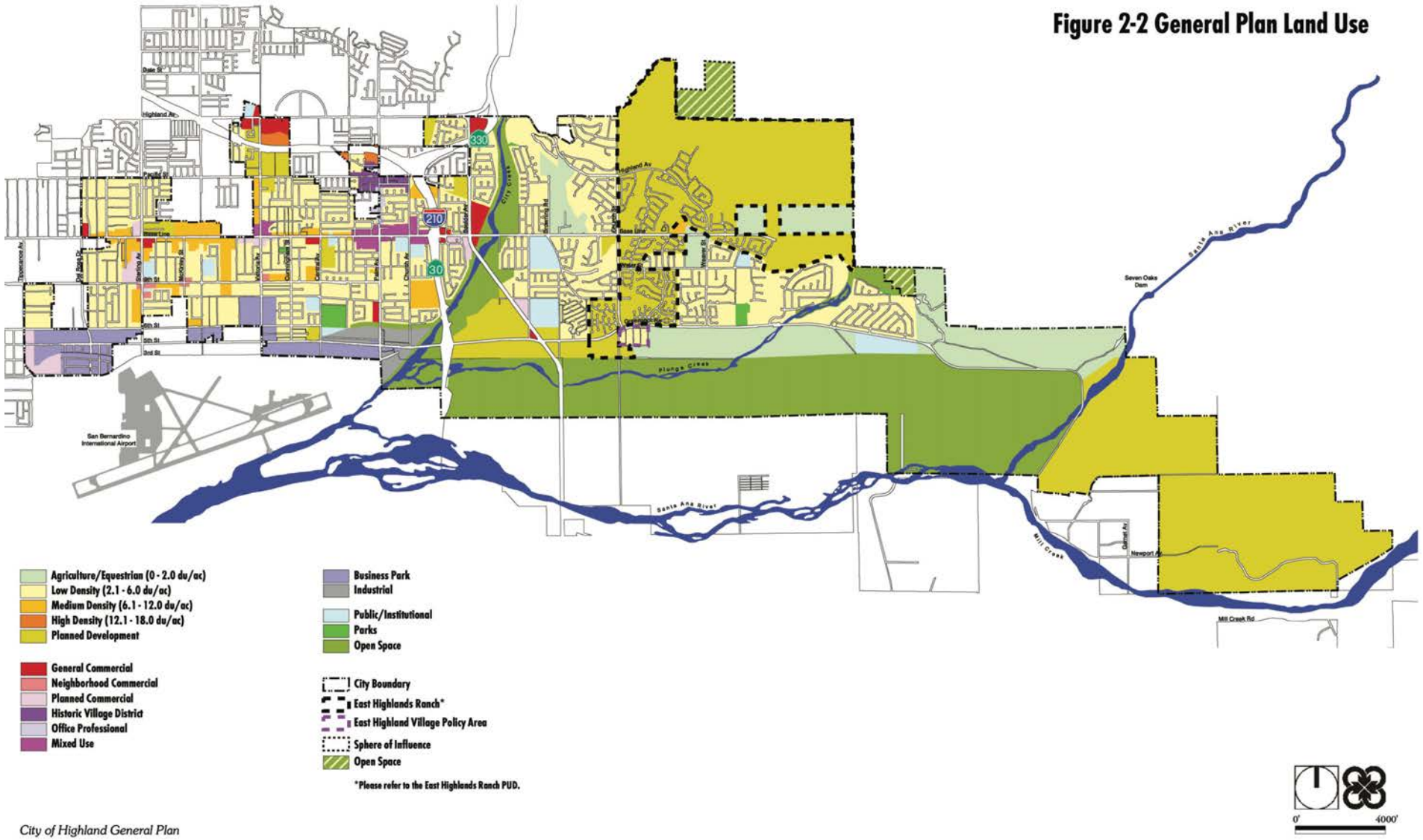


FIGURE 3-4b

Tom Dodson & Associates
Environmental Consultants

City of Highland Land Uses

FIGURE 3-5

Tom Dodson & Associates
Environmental Consultants

Aerial of IVIC Area

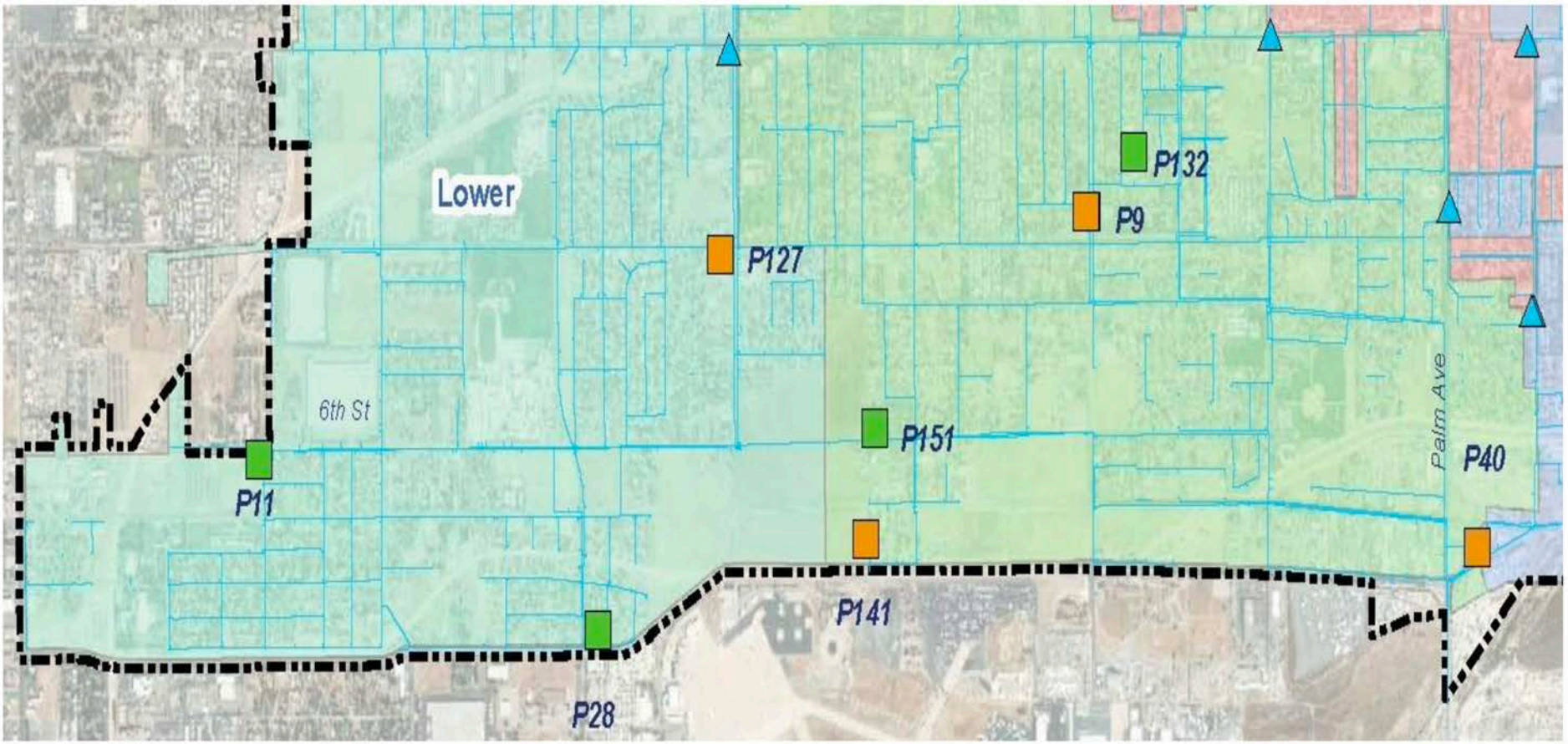


FIGURE 3-6

Tom Dodson & Associates
Environmental Consultants

Existing EVWD Water Infrastructure

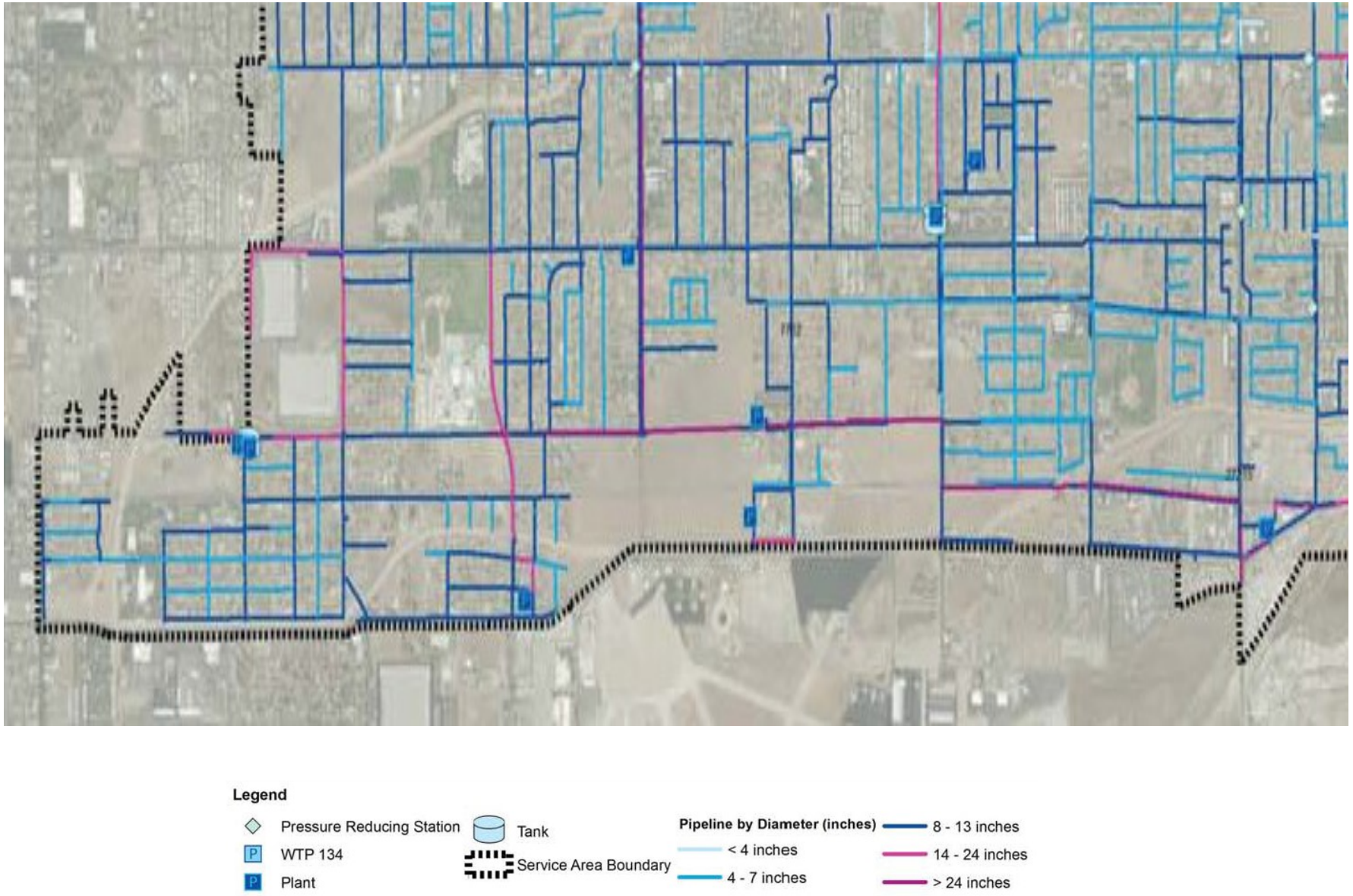


FIGURE 3-7

Tom Dodson & Associates
Environmental Consultants

Existing Water Pipelines by Diameters

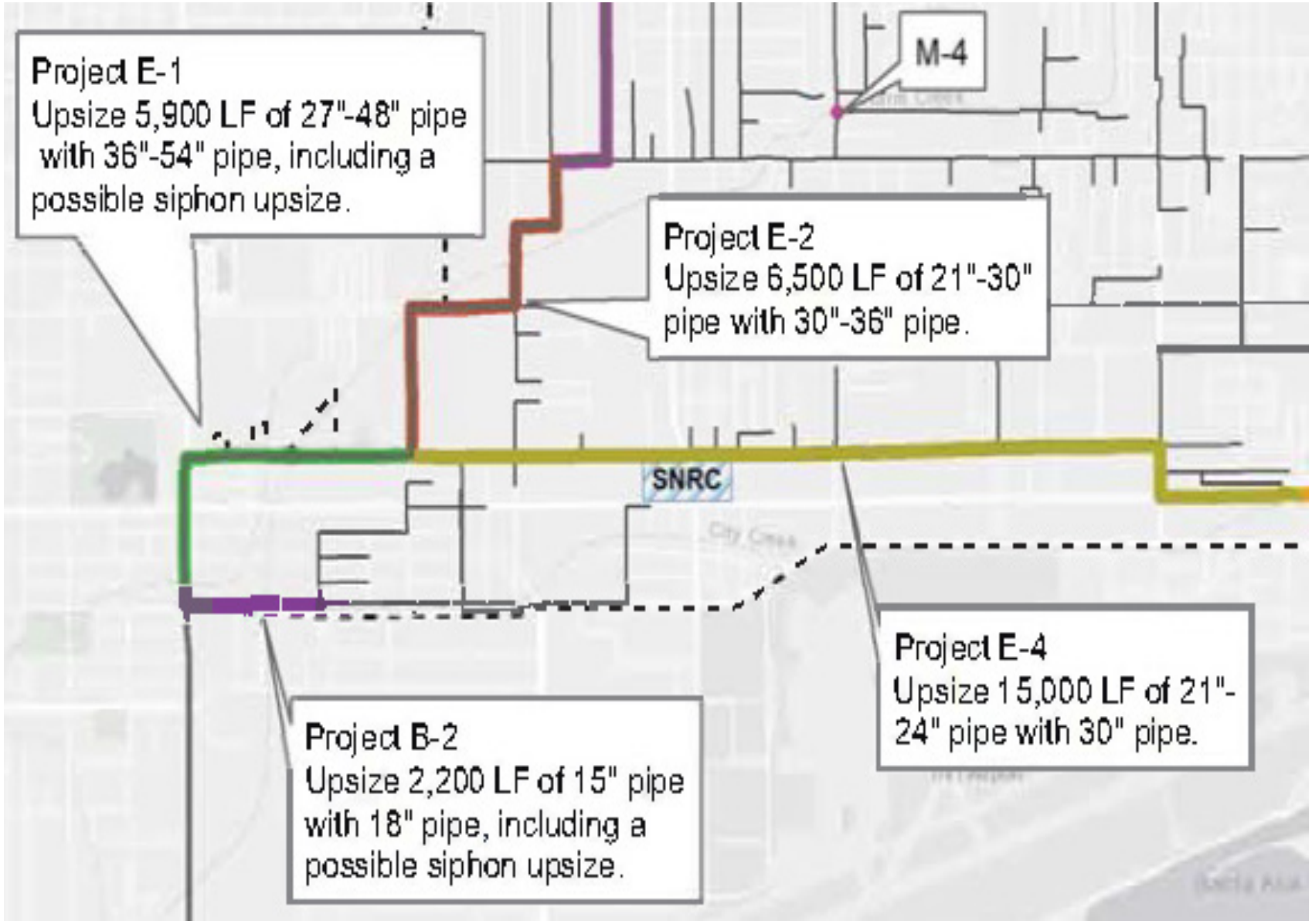


FIGURE 3-8

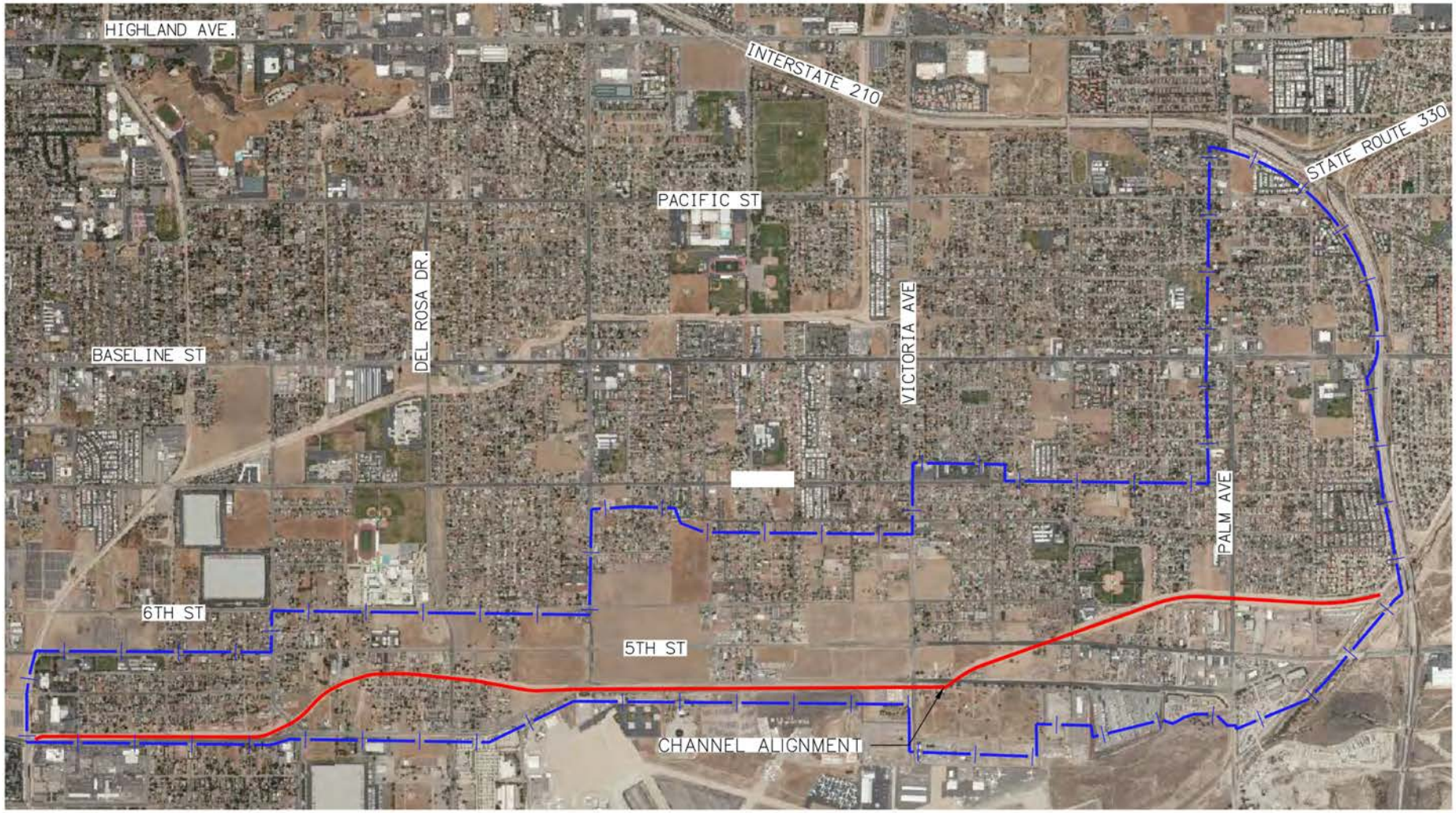
Tom Dodson & Associates
Environmental Consultants

Recommended Capacity Projects as Outlined in the 2019 EVWD Sewer Master Plan

FIGURE 3-9

Tom Dodson & Associates
Environmental Consultants

Watershed Map



CHANNEL ALIGNMENT AND WATERSHED

FIGURE 3-10

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alignment

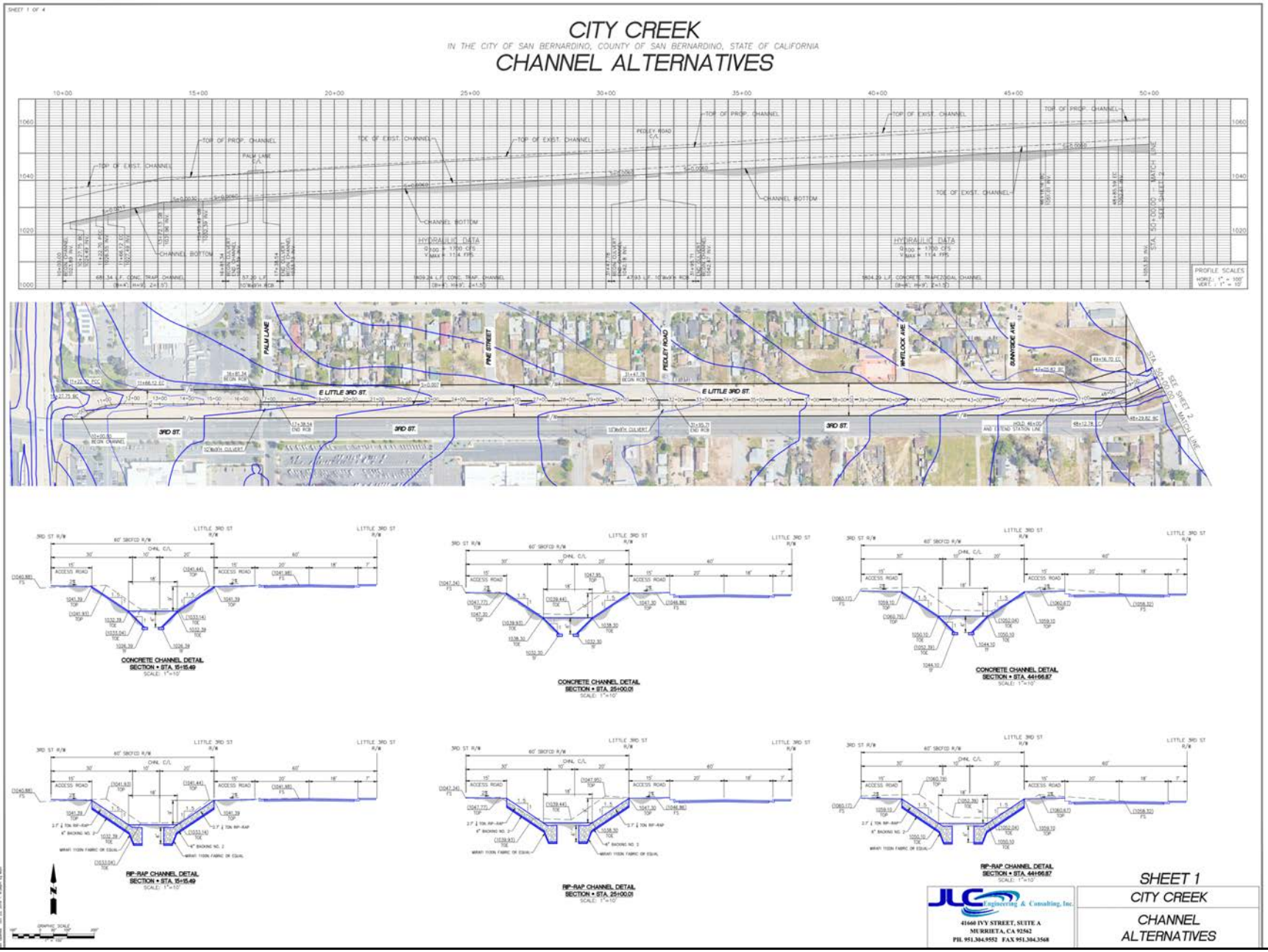


FIGURE 3-11a

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternative Alignments

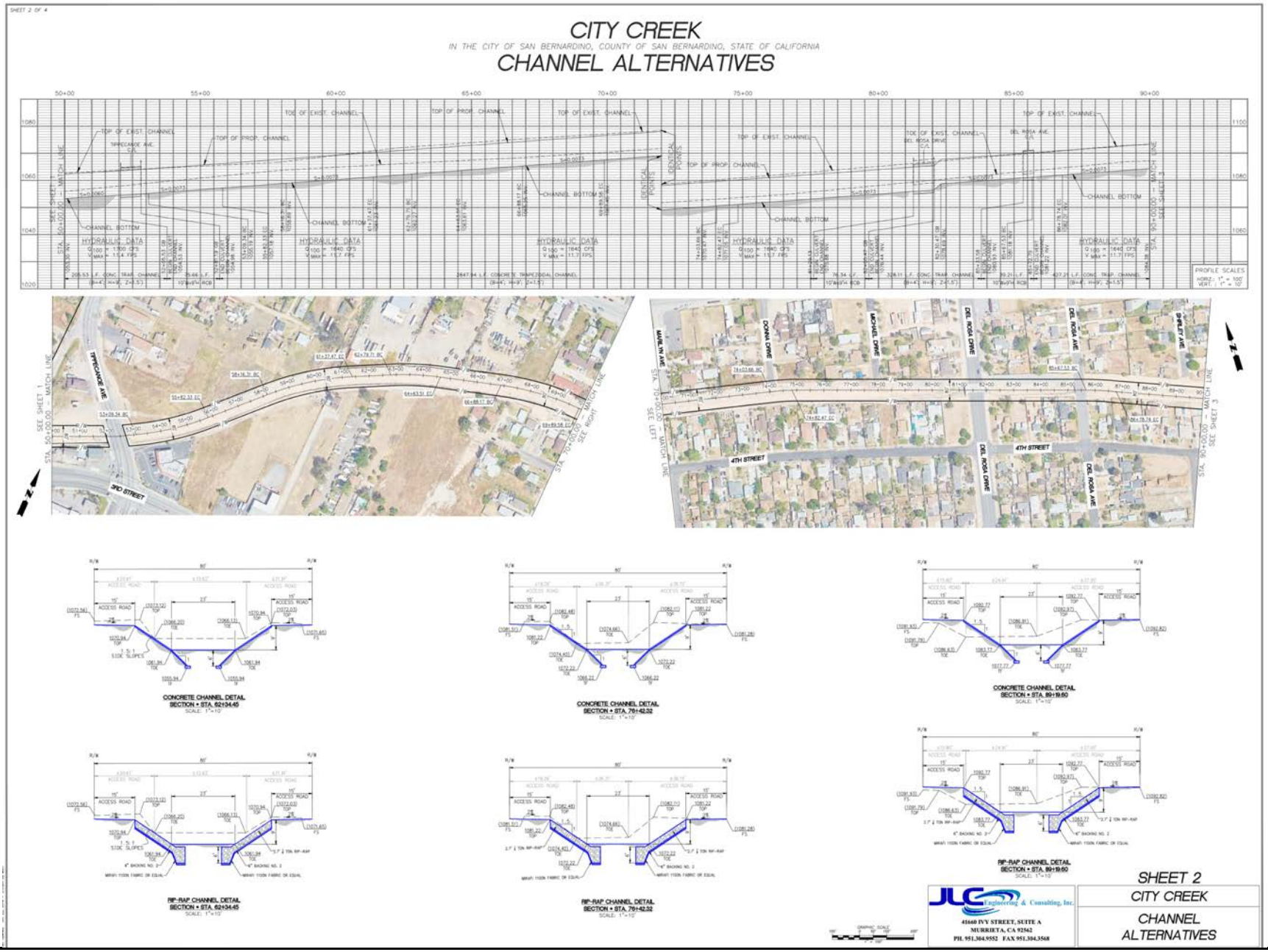


FIGURE 3-11b

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternative Alignments

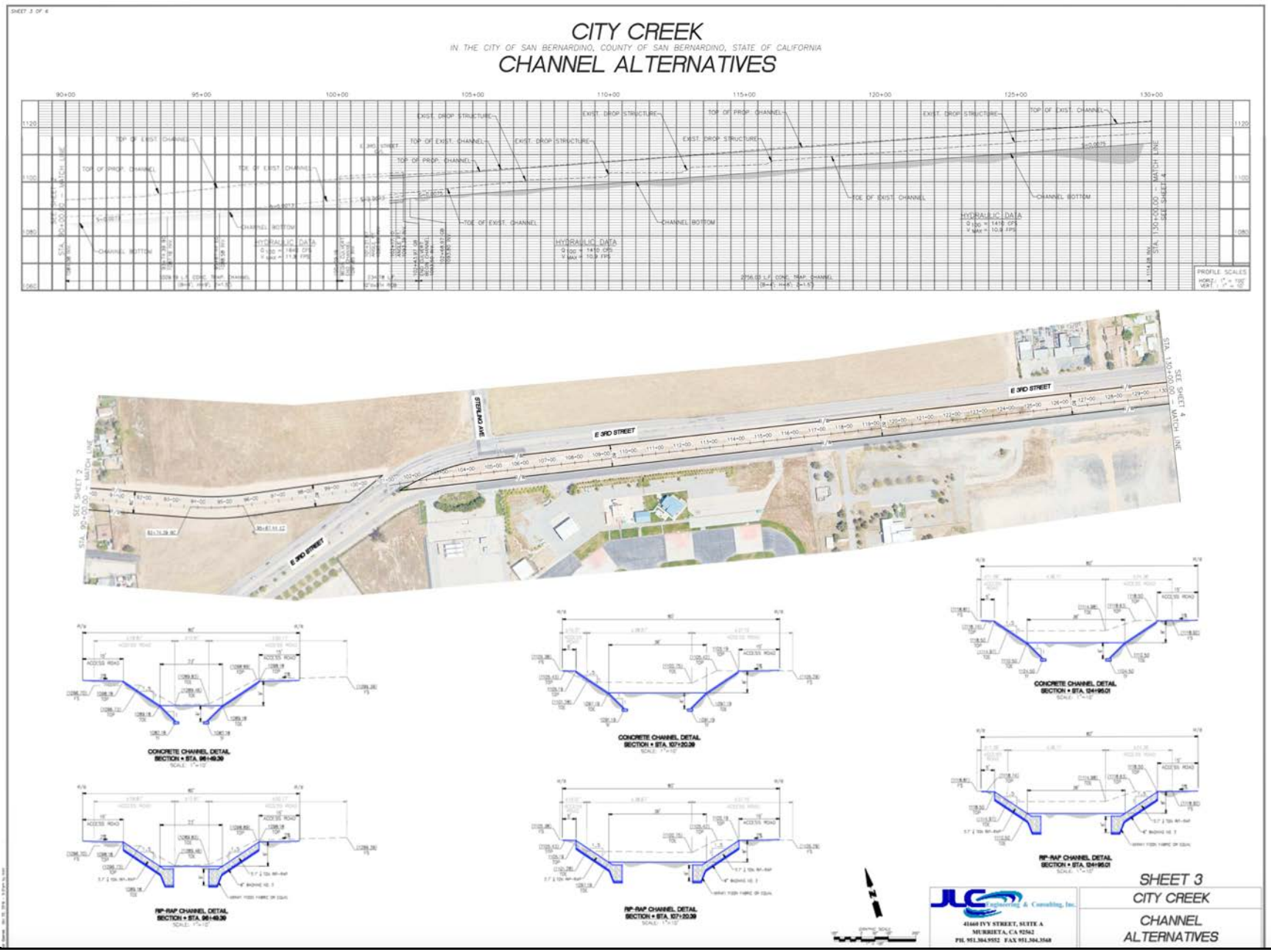


FIGURE 3-11c

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternative Alignments

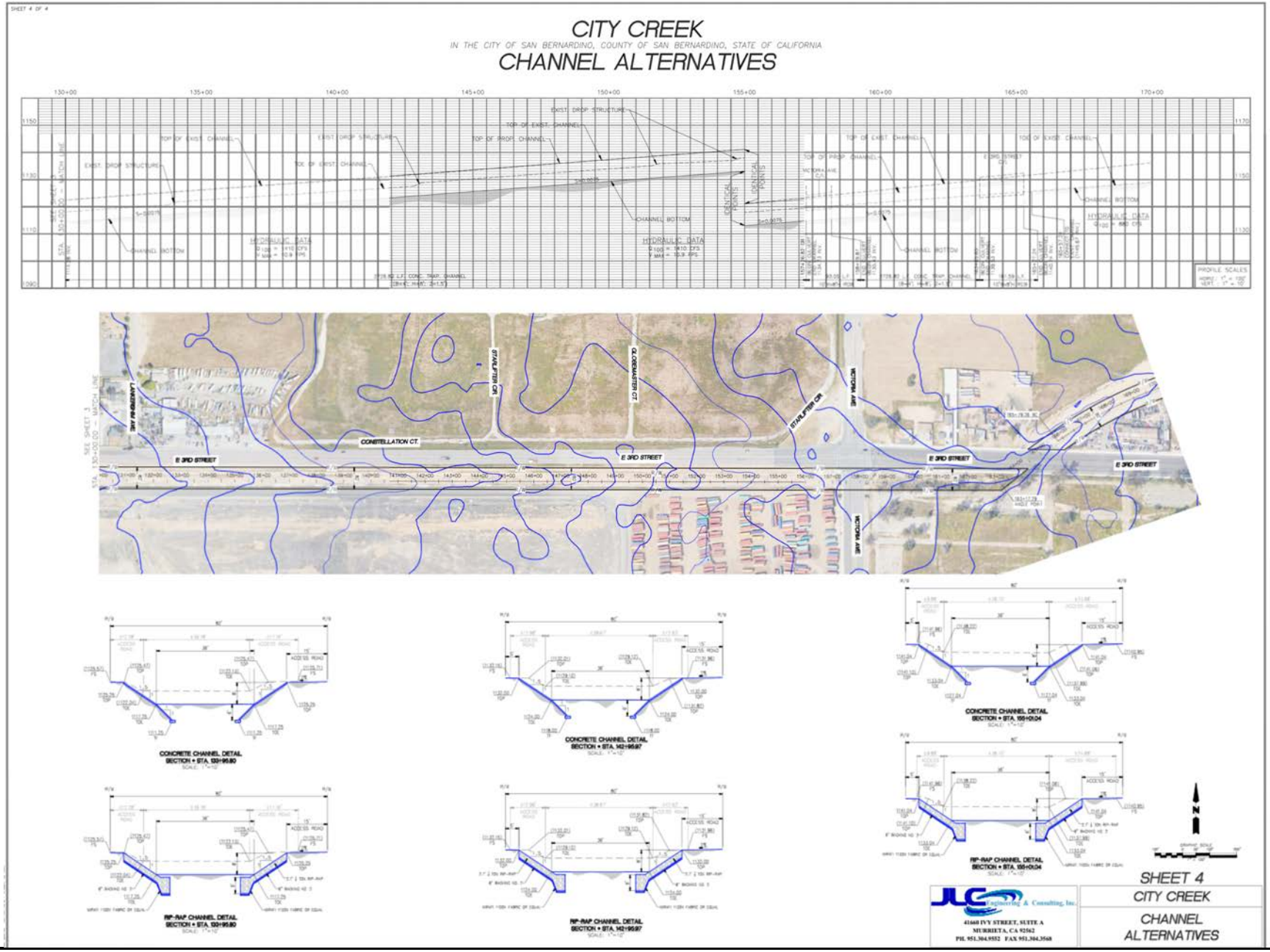


FIGURE 3-11d

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternative Alignments

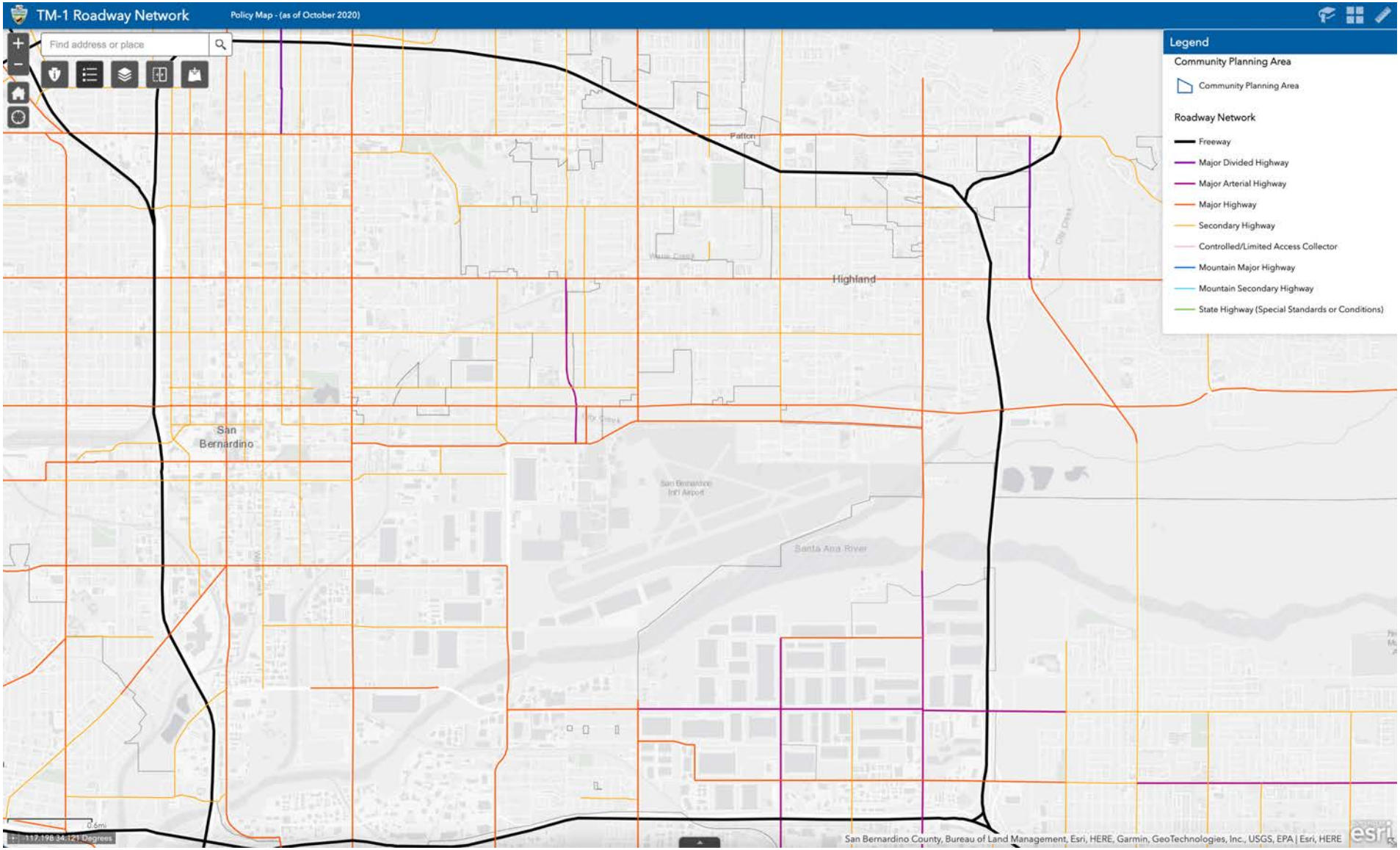


FIGURE 3-12

Tom Dodson & Associates
Environmental Consultants

IVIC Project Area Roadway Network

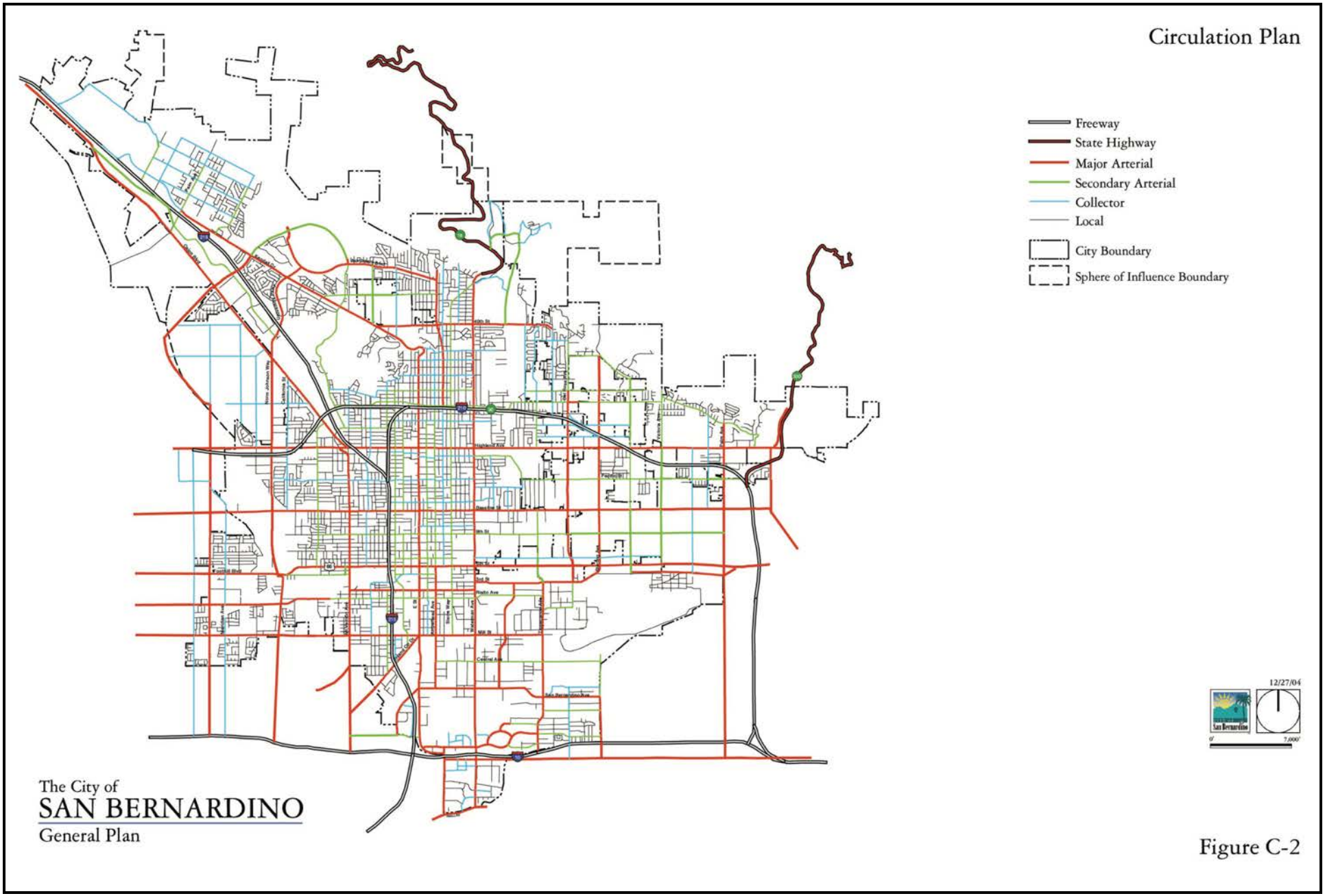
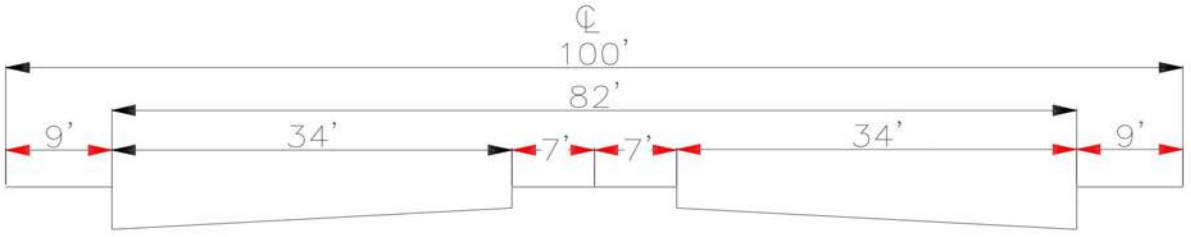


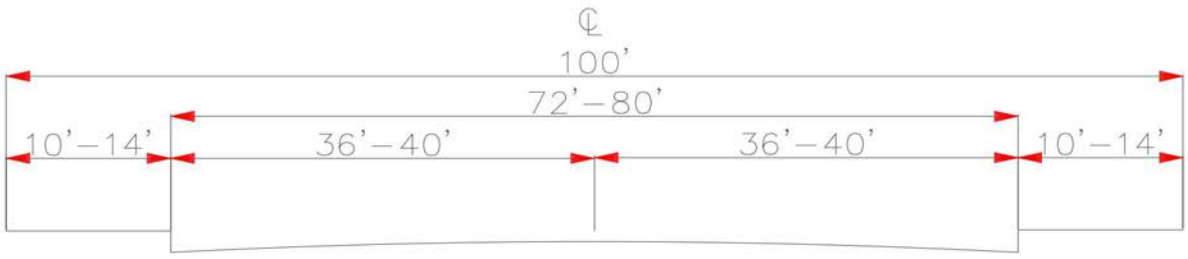
FIGURE 3-13a

Tom Dodson & Associates
Environmental Consultants

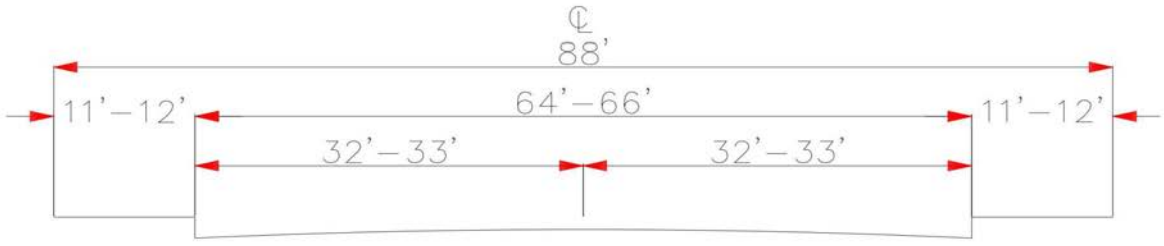
City of San Bernardino Circulation Network



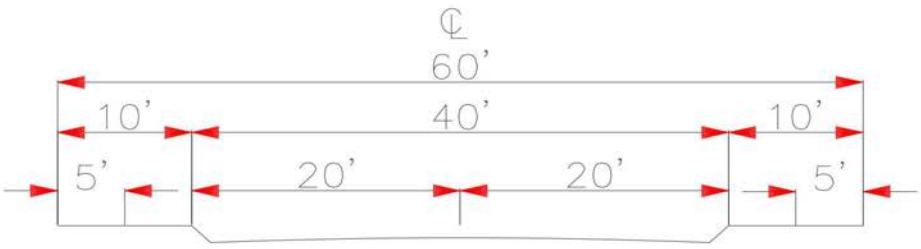
MAJOR DIVIDED HIGHWAYS



MAJOR HIGHWAY



SECONDARY HIGHWAY



COLLECTOR STREET

FOR USE IN QUARTER MILE STREETS,
SCHOOL AND INDUSTRIAL AREAS.

FIGURE 3-13b

Tom Dodson & Associates
Environmental Consultants

City of San Bernardino Standard Cross Sections

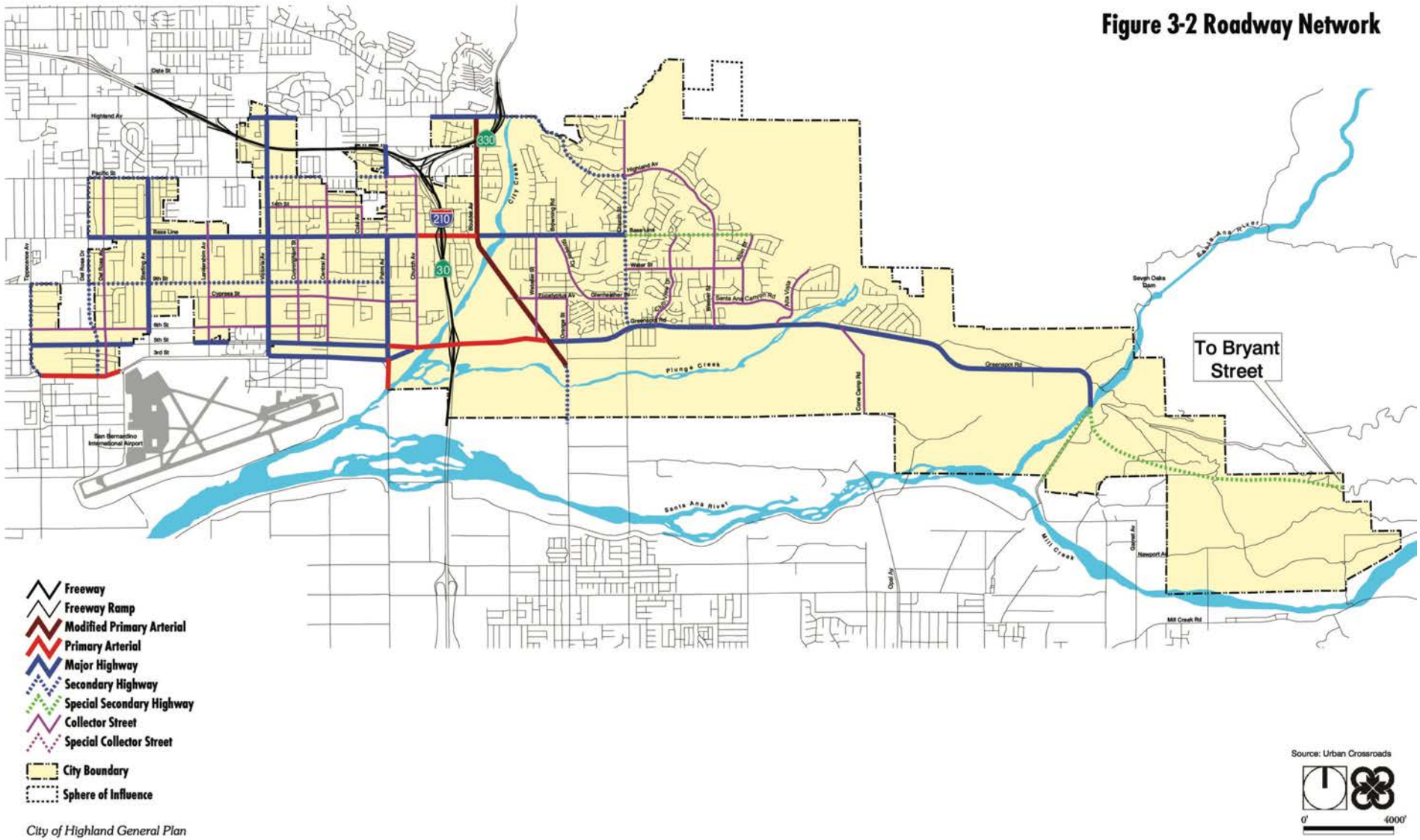


FIGURE 3-14a

Tom Dodson & Associates
Environmental Consultants

City of Highland Circulation Network

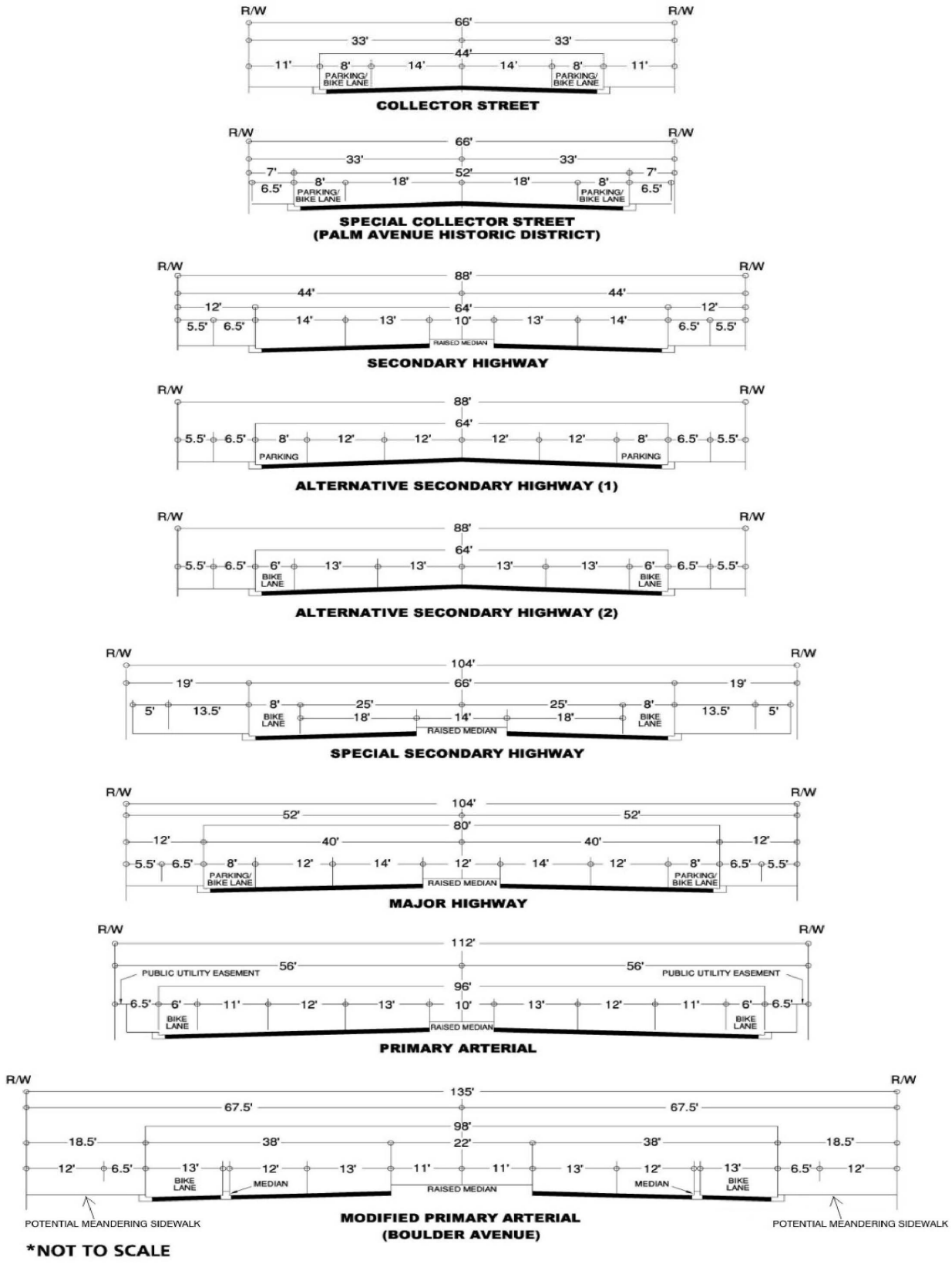


FIGURE 3-14b

Tom Dodson & Associates
Environmental Consultants

City of Highland Standard Cross Sections

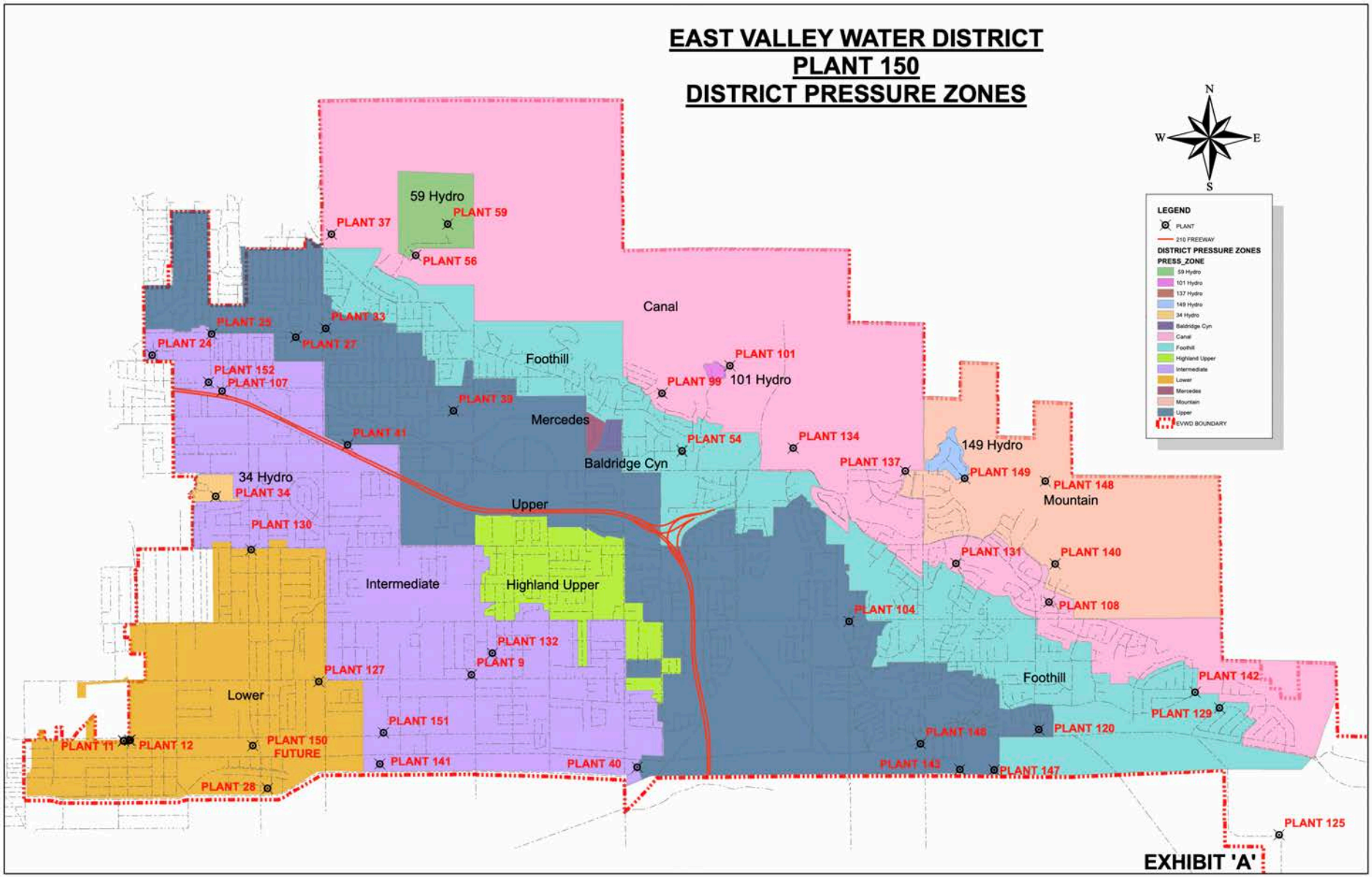


FIGURE 3-15

Tom Dodson & Associates
Environmental Consultants

EVWD Pressure Zones

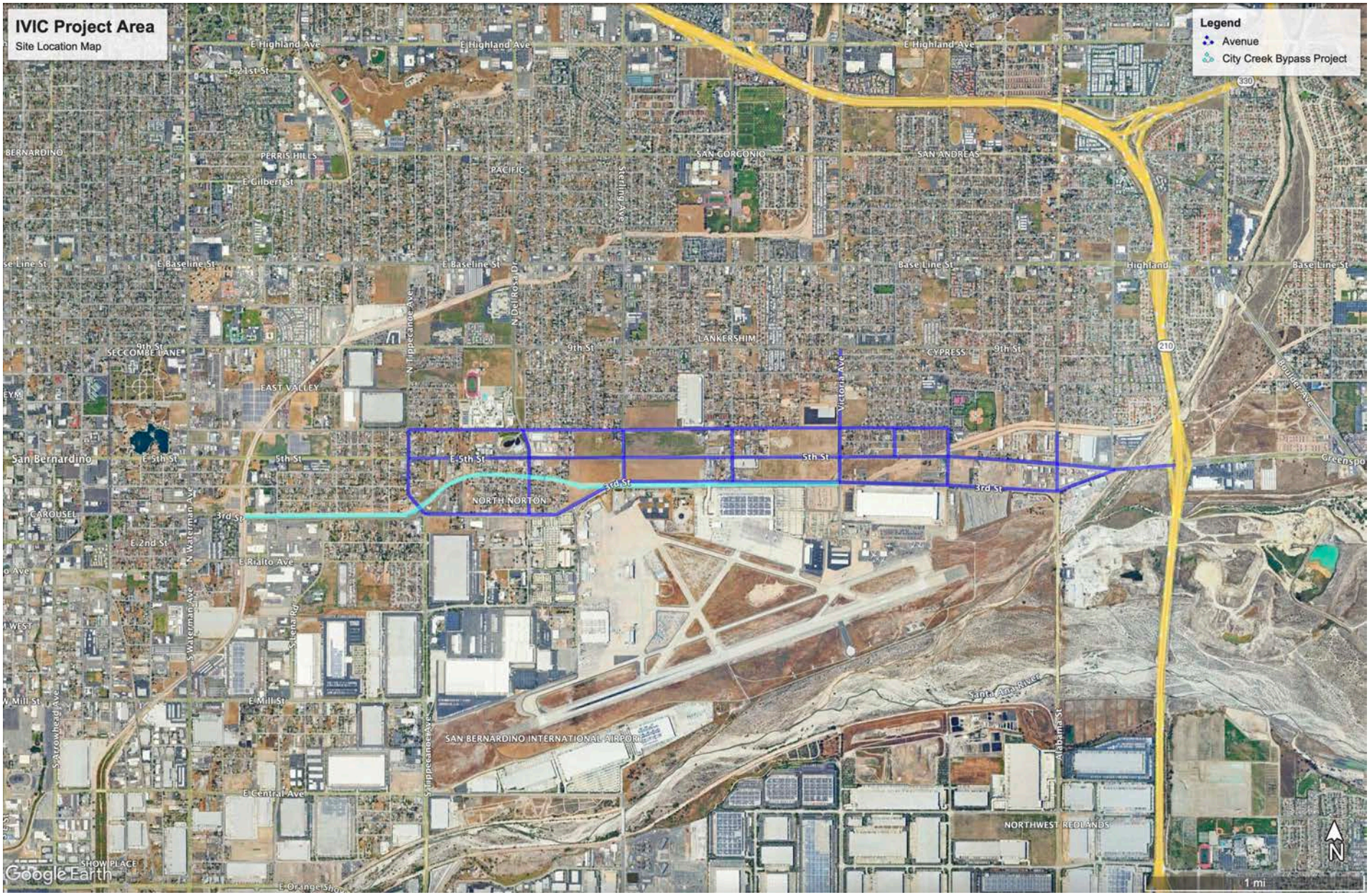


FIGURE 3-16

Tom Dodson & Associates
Environmental Consultants

Project Linear Features

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Chapter 4 figures are located at the end of each subchapter; not immediately following their reference in text.

4.1 BACKGROUND

The Inland Valley Development Agency (IVDA or Agency) is a joint powers agency in the west San Bernardino Valley that was created to facilitate redevelopment of the former Norton Air Force Base and the surrounding area in the early 1990s. The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. In fact, IVDA has facilitated coordination of a number of infrastructure improvements within the IVIC Project area with the participating agencies working with IVDA to implement this Project. The other participating agencies in developing the IVIC include: City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). These Partners have jurisdictional and ownership/service interests in the Project area and have invested significant time and resources in supporting the IVDA in completing the IVIC for the benefit of the area. The IVDA has prepared a Draft Environmental Impact Report (DEIR) to evaluate the potential significant environmental impacts that may result from implementing the IVIC.

As the agency that has compiled the IVIC, IVDA will serve as the Lead Agency for purposes of complying with the CEQA. IVDA has prepared the IVIC DEIR as the Lead Agency, in cooperation with the City of Highland, City of San Bernardino, and East Valley Water District as responsible agencies. Other agencies that may be Responsible Agencies or Trustee Agencies are listed under Subsection 3.6 of the Project Description.

IVDA has prepared the Inland Valley Infrastructure Draft Environmental Impact Report that evaluates the potential environmental impacts that would result from implementing the proposed Project. This chapter of the DEIR provides the detailed information used to forecast the type and significance of potential environmental impacts that implementation of the proposed Project and related actions could cause if the Project is implemented as described in Chapter 3, the Project Description.

In the following subchapters, as discussed in Chapter 2 of this document, each of the 20 topics identified in Appendix G of the CEQA Guidelines will be analyzed as follows: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire. The environmental impact analysis section for each environmental topic is arranged in the following manner:

a. An introduction that summarizes the specific issues of concern for each subchapter, as identified in the NOP scoping process;
b. The regulatory setting that applies to the environmental issue, looking at local, State and federal laws and regulations that may establish thresholds for use in evaluating potential significance of the issue;
c. A summary of the current or the existing environmental setting or conditions for each physical resource or human infrastructure system is presented as the baseline from which impacts will be forecast;
d. Using the questions provided in Appendix G of the state CEQA Guidelines, the specific thresholds of significance used to evaluate each environmental issue are identified;
e. The methodology used to evaluate the environmental issue in a subchapter is explained;

f. Based on stated assumptions and identified criteria or thresholds of significance, the potential direct and indirect impacts of the proposed Project are forecast and the significance of impacts is assessed without applying any mitigation; where mitigation is required to reduce a potential impact to a less than significant impact level, this need is explained.
g. Recommended measures that can be implemented to substantially lessen potential environmental impacts are spelled out, and their effectiveness in reducing impacts to non-significant levels is described;
h. Potential cumulative environmental impacts may occur, they are characterized and are assessed under each environmental topic, where applicable; and,
i. Any significant and/or unavoidable environmental impacts and any significant impacts that may be caused by implementing mitigation measures are addressed.

To provide the reviewer with a criterion or set of criteria with which to evaluate the significance of potential environmental impacts, this document provides issue specific criteria, i.e., thresholds of significance, for each topic considered in this DEIR. These criteria are either standard thresholds, established by law or policy (such as ambient air quality standards or thresholds of significance established by the South Coast Air Quality Management District) or project-specific evaluation thresholds used specifically for this Project. After comparing the forecasted physical changes in the environment that may be caused by implementing the proposed Project with the issue specific significance threshold criterion or criteria, a conclusion is reached on whether the proposed Project has the potential to cause a significant environmental impact for the issue being evaluated.

Where appropriate and feasible, mitigation measures to reduce potential significant environmental impacts are identified and described in this section of the DEIR. Over the past several years, mitigation has evolved in scope and complexity. As environmental issues are addressed in a progressive and adaptive manner, previous measures developed to mitigate project specific impacts are eventually integrated into local, regional, state and federal statutes, rules and regulations, such as the Uniform Building Code or Water Quality Management Plans. Mitigation measures that are incorporated into statutes or rules and regulations become mandatory requirements (not discretionary) and they no longer need to be identified as discretionary mitigation measures applicable to the Project, although they are often referenced to demonstrate that identified environmental impacts can and will be mitigated.

The text in the following subchapters summarizes all of the various measures anticipated to be incorporated into the Project to reduce potential significant environmental effects, either to the extent feasible, or to a level of less than significant impact. After determining the degree of mitigation that can be achieved by the proposed measures and after identifying any potential adverse impacts that the mitigation measures may cause, a conclusion is provided regarding the remaining level of impact, such as less than significant and/or unavoidable significant adverse impact for each environmental topic, if any.

To the extent feasible, this document utilizes conservative assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them. The many technical studies that were prepared for this document are incorporated into this chapter by summarizing the technical information to ensure technical accuracy. These technical studies themselves are compiled in a separate volume of the DEIR (Volume 2) which will be distributed in electronic form and made available to all parties upon request. The information used and analyses performed to make impact forecasts are provided in depth in this document to allow reviewers to follow a chain of logic for each

impact conclusion and to allow the reader to reach independent conclusions regarding the significance of the potential impacts described in the following subchapters.

4.2 AESTHETICS

4.2.1 Introduction

This subchapter evaluates the environmental impacts to aesthetic issues from implementation of the Inland Valley Infrastructure Corridor (IVIC) (proposed Project). The Inland Valley Development Agency (IVDA) proposes to analyze the following Aesthetic environmental issues as potentially significant impacts in this Draft Environmental Impact Report (DEIR): Have a substantial adverse effect on a scenic vista; Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from a publicly accessible vantage point); If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality; Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

These Aesthetic issues will be discussed in this subchapter in the following framework:

4.2.1 Introduction
4.2.2 Regulatory Setting
4.2.3 Existing Conditions
4.2.4 Thresholds of Significance
4.2.5 Methodology
4.2.6 Environmental Impacts
4.2.7 Mitigation Measures
4.2.8 Cumulative Impact
4.2.9 Significant and Unavoidable Impacts

References utilized for this section include:

- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*

No comments were received regarding this issue from the public in response to the Notice of Preparation.

4.2.2 Regulatory Setting

State and local laws, regulations, plans, or guidelines that are applicable to the proposed Project are summarized below.

State

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) ("CEC") in June 1977 and most recently revised in 2022 (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The CEC adopted the 2020 Building Energy Efficiency Standards, which went into effect on

January 1, 2020. Title 24 requires outdoor lighting controls to reduce energy usage; in effect, this reduces the intensity of outdoor lighting.

California Scenic Highways Program

The California Scenic Highways program was established in 1963 to "preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways." The state laws governing the Scenic Highway Program are found in the Streets and Highway Code, Section 260 *et seq*. No State designated or eligible scenic highways exist within the Project area.

California Supreme Court

The question regarding guarantee of views is one of the few qualitative environmental issues that the California Supreme Court has addressed. The California Supreme Court addressed this issue in the later 19th century in the case of *Kennedy v. Burnap* when it made the following ruling: "*The simplest rule that is best suited to a country like ours, in which changes are taking place in the ownership and the use of lands, is that no right [to views] can be acquired without the express grant of an interest in, or covenant relating to, the lands over which the right is claimed."* According to an article by Attorney David Swedelson (undated) "*one's ownership of land does not imply a right to force owners of land to refrain from obstructing the view from the land or the light and air reaching the land. This law has not changed all that much since the case was decided in 1898."*

Other State Courts

On the other-hand several lower court cases have addressed "view" or "vista" issues of potential impacts to views or vistas in the context of CEQA. These cases have concluded that if a public or private development may create a significant alteration (impact) to an existing view (which is part of the existing physical environment), then an EIR must be prepared, analyzing the potential impacts and possible mitigation measures or alternatives. The three pertinent court cases regarding impacts to views/vistas are:

- *Ocean View Estates Homeowners Association, Inc. v. Montecito Water District (2004) 116 Cal.App.4th 396*
- *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas (1994) 29 Cal.App.4th 1597*
- *Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 477*

The first issue of focus regarding potential view impacts discussed in these court cases is whether a view is public or private. Based on the information presented in the referenced cases, the lead agency preparing the EIR has the discretion to determine what qualifies as a significant visual impact. In general, public views are given higher priority of importance, but a lot depends on what priority a lead agency assigns views and scenic vistas within its policy documents, General Plan and Development Code. To quote a portion of the Mira Mar text: "the lead agency preparing the EIR has discretion as to what qualifies as a "significant" impact, based on the nature of the affected area." "In exercising its discretion, a lead agency must necessarily make a policy decision in distinguishing between substantial and insubstantial adverse environmental impacts based, in part, on the setting." *Id.* at 493.

The following text, abstracted from the *Mir Mar* appellate court decision, characterizes the flexibility and constraints that a local jurisdiction has when considering significance of scenic vista impacts from a CEQA perspective.

Based on this evidence, plaintiffs assert the City abused its discretion by certifying the Final SEIR without analyzing the impacts the project would have on views from their adjacent private property.

Under CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons. (Association for Protection etc. Values v. City of Ukiah (1991) 2 Cal.App.4th 720, 734.) Additionally, California landowners do not have a right of access to air, light and view over adjoining property. (Wolford v. Thomas (1987) 190 Cal.App.3d 347, 358.) Plaintiffs concede this authority, but claim they are merely attempting to enforce CEQA's requirement that the City identify and mitigate the significant environmental effects of a project before approving it. (CEQA Guidelines, §§ 15002, 15021.)

An EIR must identify the "significant environmental effects" of a proposed project. (§ 1100, subd. (b)(1); CEQA Guidelines, § 5126, subd. (a).) For purposes of CEQA, "environment" means physical conditions existing "within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance." (§ 21060.5.) Thus, aesthetic issues, such as public and private views, are properly studied in an EIR to assess the impacts of a project. (§ 21100, subd. (d); Ocean View Homeowners Ass'n, Inc. v. Montecito Water Dist. (2004) 116 Cal.App.4th 396, 402-403.) However, a lead agency has the discretion to determine whether to classify an impact described in an EIR as "significant," depending on the nature of the area affected. (CEQA Guidelines, § 15064, subd. (b); National Parks & Conservation Assn. v. County of Riverside (1999) 71 Cal.App.4th 1341, 1357 [varying thresholds of significance may apply depending on nature of area affected].) In exercising its discretion, a lead agency must necessarily make a policy decision in distinguishing between substantial and insubstantial adverse environmental impacts based, in part, on the setting. (CEQA Guidelines, § 15064, subd. (b).) Where the agency determines that a project impact is insignificant, an EIR need only contain a brief statement addressing the reasons for that conclusion. (CEQA Guidelines, § 15128.)

Based on the threshold criteria for significance presented in the Final SEIR, the City concluded the project would have no significant effects on "Aesthetics/Landform Alteration." Plaintiffs challenge this conclusion, claiming the significance criteria set forth in the Final SEIR did not distinguish between public and private views and the City abused its discretion because substantial evidence revealed that Mira Mar residents would lose their ocean view. While use of the term "scenic vista" in the Final SEIR could possibly refer to views from both public and private vantage points, review of the underlying plans and policies reveal that the City drew a distinction between public and private views, determine that only impairment of the former would constitute a significant impact.....

The Final SEIR indicated that the project was within the river specific plan, specifying that visual qualities must be considered and protected as a resource of public importance. After reviewing the project from four public vantage points, the Final SEIR concluded that the project complied with the City's policy "in that [it] has been designed and sited to protect public views." Because Mira Mar is not a "public vantage point," the Final SEIR concluded that any impact on plaintiffs' private views was not significant and that the project conformed to the policies regarding impact on public views and would have no significant adverse impact on visual quality.....

Moreover, as the City indicated in its written response to public comments, neither state nor local law protects private views from private lands and the rights of one private landowner cannot prevail over the rights of another private landowner, except in accordance with uniformly applied standards and policies as expressed in the City's general plan, redevelopment plan, local coastal program and zoning ordinances. Because the City applied the policies contained in the local coastal program, we conclude it did not abuse its discretion by concluding that the project would have no significant effects on aesthetics, including views.

Local

An in-depth review of the General Plans of the City of Highland and San Bernardino was conducted to identify those goals or policies that discuss or describe the City's position regarding scenic views or scenic vistas. Both City General Plans highlight the exceptional visual setting created by the San Bernardino Mountains and the Santa Ana River floodplain that bracket each City's visual setting. Each of the General Plan Elements and the Introductions to the General Plans were reviewed for references or discussions of visual settings, resources and any

protections of these resources. Where an element is not discussed it does not have any specific goals or policies regarding scenic views, vistas or resources.

City of Highland

Chapter 1: Introduction: *"We have always been grateful for the natural frame which Highland nestles the expansive San Bernardino National Forest and the upper reaches of the Santa Ana River, just as it drops down out of the San Bernardino Mountains at Seven Oaks Dam. Some of this natural terrain defines important spaces within Highland as well. Along with other Inland Empire communities that are realizing how crucial this natural setting is to their long-term community identity, we expand the priority for these areas in our new policies*." Page 1-2

This text identifies the important visual setting and resources that help define the City and focuses on protecting them as resources. It does not focus on protection of either public or private views of these resources in this text. However, it acknowledges the importance of the San Bernardino Mountains as the City's backdrop to the north and east and the Santa Ana River floodplain to the south.

Chapter 2: Land Use Element: About the City's Vision as expressed in the General Plan, the City seeks to: "*Preserve natural resources."* Page 2-19

A primary focus of the Land Use Element is to ensure quality design where development is permitted and to protect the natural environmental (visual) setting. Community priorities did not focus on views or vistas, but instead focus on protecting the natural beauty of the natural resources (mountains, hills, and waterways) themselves, i.e., to minimize changes in the beauty of the natural resources themselves, not the views to them.

Neighborhoods are a major source of pride for Highland residents and are defined by the quality of their homes, the diversity of their residents, the beauty of their streetscapes, the views of the natural landscape, and the availability of and access to open space and recreation opportunities. Page 2-23

This comment occurs in the section regarding "Protecting and Enhancing Neighborhoods" in relation to Land Use Goal 2.2. It references neighborhood views of the natural landscape, but neither the goal or the policies reference protection of such views, either public or private.

"Many, if not most, residents of Highland moved here because of the City's extraordinary environmental setting, which provides recreational, ecological and scenic value. The City's natural resources are one of the primary defining aspects of Highland's livability and character." Page 2-29

> **Land Use Element: Goal 2.7**
> Encourage natural resource and open space preservation through appropriate land use policies that recognize their value and through the conservation of areas required for protection of public health and safety.
>
> > **Land Use Element: Policy 4**
> > Preserve areas designated as Open Space to provide for recreation, preservation of scenic and environmental values, managed production of resources (agriculture, water reclamation and conservation, mineral extraction) and protection of public safety.

In the preceding text the primary focus is on preserving areas with scenic resources or that serve as open space from development that would directly modify (adversely impact) the visual quality

of the scenic resource itself. The focus is not on preserving existing scenic views to such scenic resources, but preventing modifications to the scenic resource itself.

Chapter 3: Circulation Element: *"Scenic Roadways: The existing roadway system is primarily designed to be an efficient circulation system to move people and goods. Enhancement and viewing of aesthetic and scenic resources were not factors which contributed to the design of existing roadways.*

Scenic resources within the City and its planning area include unique visual features that provide attractive views within or from the study area. Major visual resources include topographic features, local flora, and historic buildings. In general, views of local topographic features, such as the San Bernardino Mountains or the Santa Ana River area, should be considered in any roadway design. Roadway development in the north/central part of the City must be sensitive to existing, and potentially significant, historical resources included in the Historic Village District.

Because of their importance as community resources, scenic opportunities should be improved along Boulder Avenue, Base Line and Palm Avenue. In addition to these proposed scenic routes, the following local roadways also should be considered as potential scenic routes, due to the significance of resources which can be viewed from Greenspot Road and Base Line (from Boulder Avenue to Weaver Street). Page 3-15

Circulation Element: Goal 3.3
Preserve and enhance uniquely scenic or special visual resource areas along appropriate routes for the enjoyment of all travelers.

Circulation Element: Policy 1
Designate the following roadways as Scenic Highways and establish guidelines that protect visual resources in the community and allow for the development of additional recreational opportunities: Boulder Avenue; Base Line (east of City Creek); Palm Avenue; Greenspot Road; Church Street; and Highland Avenue (east of City Creek).

Circulation Element: Policy 2
Attractively landscape and maintain Highland's Secondary Highways, Special Secondary Highways, Major Highways, Primary Arterials, and Modified Primary Arterials and prepare/implement distinctive streetscape plans.

Circulation Element: Policy 3
Take actions as may be necessary to protect scenic routes, including but not limited to: regulation of land use and intensity of development; detailed land and site planning; control of outdoor advertising; careful attention to and control of grading and landscaping; and careful design and maintained appearance of structures and equipment.

It is under the Scenic Roadway section that we see the first General Plan references to "preserve and enhance" scenic views/vistas. Of the roadways identified for scenic views, only one occurs within the IVIC Project area. This is Palm Avenue (north-south, between the City Creek Bypass channel on the north and just south of Third Street on the south). West of the 210 Freeway, Greenspot Road is designated as 5th Street. Policy 2 does require "attractive" landscaping and distinctive streetscape plans for many of the roadways within the Specific Plan, but no other roadways are identified as scenic roadways designed to protect and/or enhance access to scenic views.

Chapter 5: Conservation and Open Space Element: "*Perhaps nothing is as important to maintaining the small-town character and natural setting in Highland as the preservation of open-space land. Due to its unique setting, the City of Highland has a special duty to protect and*

enhance its many natural gifts—its land, water, air quality and biological resources. It is bordered on the north and east by the San Bernardino Mountains and San Bernardino National Forest. The City is traversed by two significant watersheds, contains important habitat areas and has large areas of open land on the east, including mining and agricultural activities." Page 5-1

This is a restatement of one element of the City's primary vision of maintaining its relationship with the surrounding natural environment.

"*The citizens of Highland have always been proud of their city's rural character and have consistently expressed a desire to preserve and enhance open space and recreational values. The following issues have been identified as most important: … Protect and enhance scenic vistas…"* Page 5-2

"*Scenic Resources: Highland enjoys a beautiful and dramatic setting at the base of the San Bernardino Mountains. The view and vistas that this area affords are among Highland's most treasured assets and contribute greatly to its rural, natural character. Although the City does not regulate private views, it has long realized the importance of view corridor planning in both public and private development. Preserving views of the San Bernardino Mountains and stretches of open space along City Creek and the Santa Ana River will continue to be very important to creating and maintaining a sense of community in Highland. View preservation also includes careful regulation of hillside development by encouraging low profile massing and natural colors and building materials.* Page 5-4

Conservation and Open Space Element: Goal 5.1
Preserve, maintain and create views and vistas throughout the community to enhance the visual experience of Highland.

Conservation and Open Space Element: Policy 1
Incorporate view corridor planning in related development efforts and capital improvement programs.

Conservation and Open Space Element: Policy 2
Along roadway-based view corridors, frame views of attractive features of the natural and built environment with appropriately placed median and street tree landscaping.

Conservation and Open Space Element: Policy 3
Enforce hillside development standards that call for natural contour grading, environmentally sensitive design, shape and siting techniques, and fire-retardant building materials.

Conservation and Open Space Element: Policy 4
Work with San Bernardino County and the City of San Bernardino to develop consistent regulations for the protection of ridgelines, slope areas and hilltops within surrounding foothill communities.

Conservation and Open Space Element: Policy 9
Preserve mature trees, natural hydrology, native plant materials and areas of visual interest.

The preceding section states the City's primary policy regarding scenic views and vistas within the community. Views are considered an essential element within the City, but the City does not intend to regulate private views. The focus on protecting views and vistas is to protect existing public views, primarily along existing street corridors; to minimize adverse alteration to existing elements of scenic views (ridgelines, hilltops, slope areas and other elements, such as stream floodplains); and to incorporate protection of views to the extent feasible when reviews of proposed new development in the community are carried out.

"*Trails and equestrian use have a strong tradition in Highland… The proximity of mountains, rivers and open space has made equestrian, hiking and biking uses both popular and practical. The views afforded from area trails and bikeways are some of the finest in the region…"* Page 5-45

This is an acknowledgment that trails can also provide important access to scenic visual resources in the community.

Chapter 10: Community Design Element: "*Highland is a great place to live, and the City is working to make it an even better place. Part of that appeal is based on community aesthetics—combining a beautiful physical setting with attractive development. To guide this process, this Community Design Element describes the goals, policies and actions designed to improve the image, character and quality of the City…*

Community or urban design is the process that creates the visual identity of the City and its communities…the Community Design Element focuses more specifically on the form and character of the built environment—groupings of buildings, public spaces, neighborhoods, streetscapes and public improvements…" Page 10-1

As the preceding statement indicates, the focus of the Community Design Element is not on surrounding visual natural resources, but on the man-made character of the City and its neighborhoods.

"…*The Community Design Element…establishes policy on community-wide design features such as gateways, arterials, signage, as well as crafting special policies for specific districts within the City."* Page 10-2

This statement identifies the Design Elements' broad or community-wide expectations from future development within the City. This is not a focus on open space and the natural visual setting but instead is a focus on the future man-made community features that establish the City's identify. The City Development Code handles the project-by-project design requirements mandated by the City. Figure 4.2-1 (Figure 10.1 of the General Plan) contains the Community Design Map that shows the community-wide features identified is important to the City. The goal of the Design Element is to build on the existing City-wide man-made and natural settings and strengthen the City's physical image/identity.

Some of the specific goals, policies and actions contained in the Highland Community Design Element that will affect either important views or future development within the AGSP include the following:

Community Design Element: Goal 10.1
Create a unified and attractive community identity within the context of diverse neighborhoods and land uses.

Community Design Element: Policy 3
Identify, preserve and enhance view corridors of major landmarks, community facilities and natural open space in the planning and design of all public and private projects.

*Enhanced Arterial Corridors: "**3rd and 5th Streets**. As major corridors into and through the industrial/business park districts and providing access to the San Bernardino International Airport, these arterials will receive more formal, skyway landscape treatment. In keeping with high traffic volumes, formal placement of trees, light standards, banners and signage will provide a distinctive, "international parkway" image. **Victoria Avenue**. Serving as a major entryway for*

passenger traffic to the San Bernardino International Airport, Victoria Avenue will be improved to reinforce the importance of this arterial as an entryway into the city and as a link to the airport." Page 10-8

Community Design Element: Goal 10.2
Create attractive and visually unified major arterial corridors through specialized streetscape and landscape improvement plans.

Actions (pertinent to the AGSP): 1) Develop plans for design enhancements at key intersections to include specialized paving, enlarged setbacks and accent landscaping and signage. 2) Continue to underground utility lines along the City's arterial corridors. 3) Develop sign guidelines for major arterials. 4) Develop a specialized streetscape plan for 3rd and 5th Streets featuring a formal street and landscape plan along with appropriate gateway and monument signage for the developing industrial/business park area. 5) Develop specialized streetscape plan for Victoria Avenue featuring formalized landscaping and signage that identifies the entrance to Highland and the San Bernardino International Airport. 6) Methodically upgrade existing structures to improve aesthetics and compatibility with adjacent uses along the corridor. 7) Lower the height of street monument signs to street level. and 8) Choose median tree species that reflect the historic traditions of the City and are consistent with indigenous vegetation.

"*The City of Highland has an excellent opportunity to guide quality development in its industrial and business park areas. These areas in the southwestern parts of the City hold tremendous value for future growth and investment. Conveniently located along the 5th Street Corridor, which serves as the primary gateway to the San Bernardino International Airport from SR-30, this industrial area is in a prime location for future development."* Page 10-20

This ends the regulatory goals/policies/action discussion regarding aesthetics for the City of Highland.

City of San Bernardino
Chapter 1: Introduction: "*Since its founding in 1854, San Bernardino has become a vibrant community with an unusual array of features… all situated in a remarkable setting between the foothills of the San Bernardino Mountains and the Santa Ana River."* Page 1-2

"*Our community sits in the edge of a vast wilderness. While this is a blessing in terms of views, recreational, and living opportunities, there is an inherent danger from the fires, earthquakes, and floods, which are the very processes that have helped to create our natural splendor."* Page 1-22

This focus on the City of San Bernardino's "remarkable" visual setting is similar to that found in the City of Highland's General Plan. The San Bernardino General Plan places the same general level of value on these natural topographic features throughout its General Plan, although as the second comment notes, the beauty of the wilderness that surrounds both cities also presents dangers to society and our communities.

Chapter 2: Land Use:

Land Use Element: Goal 2.5
Enhance the aesthetic quality of land uses and structures in San Bernardino.

Land Use Element: Policy 2.5.6
Require new developments be designed to complement and not devalue the physical characteristics of the surrounding environment, including consideration of: a. The site's natural topography and vegetation; c. Linkages to pedestrian, bicycle, and equestrian paths; g. The use of extensive site landscaping; k. The articulation of building facades to provide interest and variation by the sue of offset planes and cubic volumes,

building details, balconies, arcades, or recessed or projecting windows, and other techniques which avoid "box"-like structures; m. the screening of rooftop mechanical equipment; o. The provision of art and other amenities

Land Use Element: Goal 2.6
Control development and use of land to minimize adverse impacts on significant natural, historic, cultural, habitat, and hillside resources.

Land Use Element: Policy 2.6.1
Hillside development and development adjacent to natural areas shall be designed and sited to maintain the character of the City's significant open spaces and historic and cultural landmarks.

This Policy Capitalizes on the recreational and environmental resources offered by the Santa Ana River and Cajon Wash by requiring the dedication and development of pedestrian and greenbelt linkages.

"The Community Design element provides policy guidance that respects San Bernardino's diverse context while seeking to unify the City through carefully crafted design policies. …The element addresses the following aesthetic issues: Community wide design issues, District or neighborhood aesthetic consideration, and Individual land use design considerations." Page 5-1

The focus of this goal and related policies is on controlling development impacts on scenic resources, not protecting views to these scenic resources. The Community Design Element focuses on those community-wide design issues, not on views.

Chapter 6: Circulation: "S*cenic highways and routes are a unique component of the circulation system as they traverse areas of unusual scenic or aesthetic value. As shown on Figure C-1, Scenic Highways/Routes, two roadways within the City have been nominated for official Scenic Highway status. The portions of Stat Rout 30, south of the 330, and State Route 330 that pass through the City are designated as Eligible Scenic Highways.*

Due to the designation as Eligible Scenic Highways, the provisions of the California Scenic Highways program apply to these sections of the roadways in the City… This program provides guidance for signage, aesthetics, grading, and screening to help maintain the scenic value of the roadway." Page 6-7

The map (Figure C-1) showing the scenic highway resources in the City is reproduced here as Figure 4.2-2. Under Goal 6-4, Policies 6.4.4 through 6.4.7, the City establishes a policy to implement the scenic highway design requirements for projects within the eligible scenic highway roadways. Again, the focus is on project design and not protection of scenic views or vistas.

Chapter 12: Natural Resources and Conservation:

Natural Resources and Conservation Element: Goal 12.8
Preserve natural features that are characteristic of San Bernardino's image.

Natural Resources and Conservation Element: Policy 12.8.1
Carefully review new projects on properties that: a. Contain sloping topography; b. Provide limited abilities to provide infrastructure to new development based upon severely sloping terrain; c. Provide natural vistas or views enjoyed by the community; or d. Serve as landmark features within the City.

Natural Resources and Conservation Element: Policy 12.8.2
Condition or modify plans to preserve the City's natural features to the extent possible.

Natural Resources and Conservation Element: Policy 12.8.3
Review grading, access, and site plans for projects to ensure that they are sensitively designed to minimize impacts to the City's natural features.

Natural Resources and Conservation Element: Policy 12.8.4
Explore the designation of open space easements to preserve valuable natural features in the City.

In this chapter of the General Plan, the City elaborates its policies to implement the measures designed to minimize impacts to natural features with the focus on project design and not protection of scenic views or vistas. However, Policy 12.8.4 does express a desire by the City to preserve valuable natural features through the use of open space easements which can preserve such scenic resources in perpetuity.

There may be small areas of unincorporated County area within the IVIC, but this document will utilize the aesthetic goals and policies of the two City General Plans to address the Aesthetic issues within this subchapter of the DEIR.

4.2.3 Existing Conditions: Aesthetics

The Inland Valley Infrastructure Corridor Project area contains a mix of land uses that reflect the past history of the of the property located just north of the former Norton Air Force Base. Among other features, the IVIC Project area currently contains a number of undeveloped parcels. Some were never developed, such as those parcels located just east of Sterling Avenue between 3rd and 6th Streets. On the other hand, the currently undeveloped properties just west of Victoria Avenue, between 3rd and 6th Streets, were previously developed with Air Force housing that has since been cleared from the property. Single-family residences occur in clusters (for example, immediately east of Tippecanoe, along 5th and 6th Streets) with many of these residences constructed in the middle of the 20th Century after the former Air Base was commissioned. Interspersed throughout the IVIC Project area are industrial facilities of varying sizes and types, ranging from small-lot to large-lot industrial activity. Within the IVIC Project area, there are a few new structures/developments, with more activity in the past year than has historically occurred. There are three new light industrial buildings that have recently been constructed. These are located just east of Palm Avenue on 5th Street; located on the north side of 6th Street between Sterling and Lankershim; and just south of 5th Street just east of Lankershim.

To understand the existing man-made environmental setting within the proposed IVIC Project area, please refer to the aerial photo in **Figure 3-3**, the Aerial Photo of the Project area. Under current conditions there are five main types of land uses within the Project area. Spread throughout the approximate 679-acre IVIC Project boundaries, within which only infrastructure is being considered by this Project, are undeveloped parcels, particularly in the middle of the area on both sides (west and east) of Sterling Avenue between 3rd Street and 6th Street. At the intersection of Del Rosa Drive and 6th Street are two large institutional uses: Indian Springs High School and East Valley Water District's Sterling Natural Resources Center (a new tertiary water reclamation facility). There are two areas of concentrated residential uses (primarily older single-family residences with multi-family units). The first area is located south of 6th Street to 3rd Street just east of Tippecanoe. The second residential area is located between 6th and 5th Streets, east of Victoria. There are small industrial, commercial, and some institutional uses located throughout the Project area. The two most important commercial developed areas within the Project area occur along the north side of 3rd Street between Tippecanoe and Del Rosa and in the vicinity of the intersection of Palm Avenue and 5th Street.

Figures 4.2-3 through 4.2-12 show representative photos of the Project area, including the City Creek Bypass alignment (**Figure 4.2-12**). With the exception of the undeveloped areas in the central portion of the Specific Plan area, scenic views or vistas from major east-west streets to the north are compromised by foreground interference of buildings constructed adjacent to these streets. Further, views to the east to San Bernardino Mountain and San Gorgonio Mountain are compromised by overhead power distribution lines. The opposite occurs on the major north-south streets, with adjacent buildings interfering with foreground views to the east and overhead power lines interfering with views toward Crestline, Lake Arrowhead the Running Springs.

In terms of general appearance, the Project area does not have any major scenic resources located within its boundaries. The developed areas may have attractive individual structures, but for the most part the area was developed in the mid-20th Century or earlier, and many areas are showing their age as illustrated in **Figures 4.2-3 and 4.2-12**.

4.2.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a Project would normally have a significant effect on the environment if the Project would:

AES-1 Have a substantial adverse effect on a scenic vista?

AES-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

AES-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?

AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

4.2.5 Methodology

The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refer to the identification of visual resources internal to the Project area and the change in scenic views or scenic vistas that a Project's implementation may cause. This analysis attempts to identify and objectively examine factors that contribute to the perception of aesthetic impacts due to implementation of a specific project, in this case the Inland Valley Infrastructure Corridor Project. Potential aesthetic impacts can be evaluated by considering proposed grade separations, landform alteration, building setbacks, scale, massing, building height, and landscaping features associated with the design of future projects. It should be noted, however, that the cities of Highland and San Bernardino have not adopted locally designated or defined standards or methodologies (such as quantitative emission thresholds) for the assessment of aesthetic impacts. The best available criteria for evaluating aesthetic impacts in the cities of Highland and San Bernardino are each City's policies as defined in their General Plans. These policies are discussed in the following evaluation.

4.2.6 Environmental Impacts

Summary Project Description

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities by individual facility due to the varied nature of the infrastructure proposed by the IVIC Project. However, in some cases, the impacts from the whole of the IVIC Project are discussed as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.2.6.1 Impact Analysis

AES-1 Would the project have a substantial effect on a scenic vista?

The "scenic vista" of concern in this evaluation is that which is currently available to existing residents and motorists using the local roadways that traverse the Project area in both the north-south and east-west directions. The evaluation must first identify the available scenic vistas to the Project area. To the north of the Project area the main ridge of the San Bernardino Mountains extends generally from Cajon Pass on the west to Running Springs on the east. To the east is the continuation of the San Bernardino Mountains that extend from Running Springs to Mt. San Bernardino and Mt. San Gorgonio. Only minimal views exist to the Santa Ana River floodplain from within the Project area due to the level topography, intervening man-made features, and lack of visual access from most of the Project area to the Santa Ana River floodplain.

A series of photos were taken from within the Project area that illustrate the character of the scenic vistas from a variety of locations. All views incorporate foreground and midground urban landscapes with the mountains forming the visual background view. View corridors exist along each of the major roadways (Tippecanoe, Sterling, Victoria and Palm to the north, and 3rd Street, 5th Street and 6th Street (to a lesser extent) to north and the east). However, in most cases foreground structures, overhead power lines and poles diminish the value of the existing scenic vistas. Further, for vehicles traveling on any of these streets, adjacent structures (ranging from residential to industrial buildings and activities) reduce access to and value of existing scenic vistas. On some streets the reduced visual access is already substantial and on others visual

access varies. In particular where undeveloped lots occur, scenic vistas are more accessible but still disturbed by man-made features in both the foreground (power lines and poles) and middle ground general urban development.

Overall, the installation of the majority of the infrastructure will be at or below ground level and once installed will cause minimal change in access to existing scenic vistas after construction is completed. This is discussed in more detail below. This includes widening of the roadways that will enhance east-west and north-south major roadways which will concurrently enhance views to the San Bernardino Mountains. Thus, the implementation of the IVIC is forecast to enhance these view corridors because the overhead power lines and power poles are anticipated to gradually be eliminated due to future undergrounding of power lines throughout the Project area in conjunction with future development. However, at full development a traveler on the IVIC roadways will experience scenic vistas similar to existing areas with the current greatest density of structures, such as residential development near (east of) Tippecanoe and residential development on 6th Street east of Victoria Avenue.

Given the Goals and Policies of both City's General Plans summarized above, implementation of the IVIC infrastructure facilities will not cause direct, significant negative modifications to any scenic resources or views that currently occur within the Project area that could be considered regional scenic resources. But due to the existing level of development within the IVIC Project area and consistency with existing General Plan designations, the forecast modifications to scenic vistas will occur, but will fall below a level of significant impact due to the extent of existing development in the IVIC Project area**.** The following discussion of each of the proposed infrastructure improvements addresses the manner in which the specific proposed facilities may adversely impact scenic vistas.

Roadway Improvements

The proposed roadway improvements will follow existing road alignments and when installation is completed will not alter access to any existing scenic views. By widening roadways and providing pedestrian paths (sidewalks) and possible bike lanes, visual access along future roadways towards scenic vistas may be enhanced. During short-term road construction activities, construction activities and related disturbance can negatively impact scenic views (again no significant scenic resources are located within the Project area to be disturbed). For roadways, this may encompass several months of construction within a specific area in a given year. Due to both the limited time of construction at a specific location and the limited area of construction, one mile in a given year, the impact on scenic vistas will be transitory and is not concluded to be a significant adverse impact.

City Creek Bypass Channel

As the photo in **Figure 4.2-12** illustrates, the City Creek Bypass Channel, is not a visually attractive scenic resource within the Project area. Similar to the proposed roadway improvements, the proposed improvements within the Project area (deepening and reconfiguring the Channel will be below the scenic vista horizon and no alteration of any existing scenic views will be caused by modifying this Channel to meet future storm runoff volumes. Even during construction, the channel view corridor will continue to function due to the lower elevation of the channel relative to the surrounding to topography. The selective use of xeric native landscaping along the Channel can enhance this corridor as a visual asset between Victoria Avenue and the channel's terminus at Twin Creek, just east of Waterman Avenue. Potential scenic vista impacts from the proposed Channel improvements of this infrastructure facility are considered less than significant over both the short- and long-term.

EVWD Well Development

A new groundwater extraction well typically has a small above ground footprint both during construction and after completion. Although the well drill rig is commonly as high as 30 feet, this is a small visual feature that is typically in place for about 30 days during drilling. Horizontally, the drill rig and area of work disturbance is about 100' x 100'. Once a well is installed in the area east of Victoria (intermediate zone), it is typically connected by an underground pipe to the local water distribution system and often enclosed in a small structure (typically a concrete block building) to control pump noise from well operations. Due to the short construction period and the limited size of the well building, the potential to substantially alter scenic vistas is very limited (again no significant scenic resources are located within the Project area to be disturbed). Thus, the potential scenic vista impacts from implementing a new production well is concluded to be a less than significant impact.

EVWD Reservoir

Of all the infrastructure facilities considered in this document, an above ground water storage reservoir will have the biggest footprint, both horizontally and vertically (about 60'+ in diameter and about 40' in height). The siting of this water reservoir within the lower zone has a potential to interfere with a scenic vista, depending of the location selected. If constructed within an existing built out area, particularly near some of the new warehouses, a 3.5 MG reservoir would not loom as such a large feature and would simply be replacing a disturbed scenic vista. Thus, depending on the location, reservoir construction and operation has a potential to substantially reduce access to a scenic vista, but this can be avoided by selecting a location within the community that already functions with reduced access to such vistas. There exist ample opportunities within the Project area. Mitigation is provided to minimize this potentially significant impact to a level of less than significant.

Sewer Installation

The proposed installation of sewers will mostly follow existing road alignments and when installation is completed will not alter access to any existing scenic views. By installing the sewer pipelines below ground, within roadways, visual access along future roadways towards scenic vistas will not experience adverse impacts. During short-term sewer construction activities, construction activities and related disturbance can negatively impact scenic views (again no significant scenic resources are located within the Project area to be disturbed). For sewers this may encompass a day or two in front of any specific location within a specific area in a given year. Due to both the limited time of construction at a specific location and the limited area of construction, 2,500 linear feet in a given year, the impact on scenic vistas will be transitory and is not concluded to be a significant adverse impact.

Mitigation Measures:

AES-1 ***To mitigate the potential effects of installing a new reservoir within the IVIC project area, the site selected shall either be proximate to existing large structures within the project area or the reservoir shall replace existing structures that already interfere with the view to the north, i.e., the San Bernardino Mountains. The objective is to minimize the modification in views to this scenic resource from east-west roadways within the project area.***

AES-2 ***Each new roadway development within the IVIC in the future shall include an effort to underground the above existing above ground power lines and removal of power poles adjacent to the roadways.***

Level of Significance After Mitigation: Less than Significant

MM AES-1 would require the EVWD Reservoir to be sited in proximity to larger structures so as to ensure that the scale of the EVWD Reservoir does not dwarf adjacent development and modify views of scenic resources, specifically the San Bernardino Mountains. This mitigation measure would result impacts related to the EVWD Reservoir to a level of less than significant. The development of all other facilities as part of the IVIC would result in less than significant impacts on scenic vistas; however, the proposed roadways could further enhance scenic vistas within the IVIC Project area through the implementation of **MM AES-2**, which would require undergrounding of electric power lines to the extent feasible to reduce existing obstructions to the nearby San Bernardino Mountains. Overall, impacts would be less than significant with the implementation of mitigation.

AES-2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Two issues are raised under this topic. The first issue is whether there are State or any other scenic highways within the IVIC Project area. There are none. Refer to **Figures 4.2-1 and 4.2-2**. The IVIC Project area does contain corridors (roadways) with views to background scenic vistas, but these roadways are not designated as "scenic highways." Therefore, implementation of the infrastructure proposed as part of the IVIC Project has no potential to adversely impact scenic resources adjacent to a designated scenic highway.

The second issue addresses the proposed Project's impacts (damage) to potential scenic resources located within the IVIC Project area. Instead of examining each type of infrastructure facility as occurred in the previous section, this section focuses on the general overall lack of scenic resources within the IVIC Project area. Based on detailed field reviews and the pertinent technical studies (cultural resources), the Project area does not contain any rock outcroppings, historic structures of aesthetic significance, or any other intrinsic scenic resources. The IVIC Project area is located on the lower elevation of an alluvial fan with little or no topographic or visual resource diversity. As the existing site photos illustrate (**Figures 4.2-3 through 4.2-12**), the Project area is an older developed area without any overt distinctive features. There are a few mature landscape trees, such as the introduced pines shown on **Figure 4.2-8** (Victoria Avenue), that are notable, but such aesthetic resources can be preserved during future site-specific development review. Given that all of the proposed infrastructure, except the well site and the reservoir site, are located within road ROWs, the potential for loss of trees is low. However, as the roadways are planned to be expanded, there is a possibility that trees could be impacted by the encroachment into the areas adjacent to the existing roadways where trees exist. The EVWD Well and Reservoir sites may be installed within sites that contain trees that may be impacted by the installation of these facilities. A mitigation measure is presented below to address such rare occurrences and minimize impacts under this issue to a level of less than significant. With implementation of mitigation, the proposed IVIC can be implemented without directly causing or indirectly contributing to substantial damage to scenic resources within the Project area itself.

Mitigation Measures:

AES-3 Should the removal of trees be required for a specific project, the Implementing Agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the Implementing Agency shall replace all trees removed at a 1:1 ratio. If this cannot be accomplished a second tier CEQA evaluation shall be completed.

Level of Significance After Mitigation: Less than Significant

The implementation of **MM AES-3** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant.

AES-3 Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?

The IVIC Project area is located in an urbanized area within two cities that has been under slow development since World War II, when former Norton Air Force Base was established. Even the undeveloped lots are already bounded by the existing circulation system that will be retained. More than one-half the area within the IVIC Project boundaries contains structures and urban level service and utility infrastructure. The existing land use designation over most of the IVIC Project area already supports industrial and business park uses. There are three primary scenic quality policy objectives in both cities. The first is to maintain view corridors. The proposed IVIC will facilitate this objective in both Highland and San Bernardino as demonstrated in the analysis under **AES-1,** above. The second primary scenic quality objective is to minimize modifications to scenic resources. Based on the identified lack of high value scenic resources within the IVIC Project area, this evaluation concludes that the proposed Project would not result in modifications to any scenic resources of significance. The third policy issue regarding scenic quality relates to the implementation of design guidelines consistent with City requirements for development. Since the proposed Project focuses on infrastructure, not new private development, this policy does not directly apply to the proposed IVIC facilities. Regardless, the design of all infrastructure, including roads, will be closely coordinated with the local jurisdiction to ensure that the designs meet each jurisdictions' road design requirements, including curbs, gutters, sidewalks and landscaping. Thus, the potential impact of the proposed Project on scenic resources is concluded to be less than significant with no mitigation.

Mitigation Measures: None Required

Level of Significance: No Impact

AES-4 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Of the five types of infrastructure proposed by the IVIC, two of them (City Creek Bypass Channel and sewer lines) do not require any night lighting. The implementation of the proposed roadways, the EVWD Well and Reservoir sites, will require result in new sources of light during the operational phases of the Project components. Light and glare from street lights, interior and safety and security lighting, and vehicular traffic on future roadways will be potentially changed once these Project components are completed and placed in operation. In this instance, roadway improvements, the EVWD Well and Reservoir sites shall implement lighting in accordance with each City's Development Code, which would ensure that any structure or parking area lighting would not significantly impact adjacent uses. Regardless, these proposed infrastructure facilities will introduce a new source of light and glare into the Project areas where they are implemented. It is also important to realize that as the IVIC Project area is developed with industrial and business park uses, fewer and fewer light sensitive uses will remain within the Project area.

To ensure that light or glare (particularly off of structures with glass exteriors) does not result in intrusive lighting or glare to existing or future structures or residences in the Project area, mitigation measures will be implemented to control offsite light and glare impacts of future. However, at the boundary edges of the IVIC Project area, the transition to residential land uses on adjacent land will require implementation of lighting mitigation to adequately buffer this transition in land uses. With the implementation of mitigation measures to control light and glare impacts, the implementation of the IVIC would have a less than significant potential to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Mitigation Measures:

AES-4 ***Prior to approval of the Final Design for future site-specific IVIC projects, an analysis of potential glare from sunlight or exterior lighting to impact vehicles traveling on adjacent roadways shall be submitted to the pertinent City for review and approval. This analysis shall demonstrate that due to building orientation or exterior treatment, no significant glare may be caused that could negatively impact drivers on the local roadways or impact adjacent land uses. If potential glare impacts are identified, the building orientation, use of non-glare reflective materials or other design solutions acceptable to the Cities of Highland and San Bernardino shall be implemented to eliminate glare impacts.***

Level of Significance After Mitigation: Less than Significant

The implementation of **MM AES-4** would ensure that the proposed facilities' light and glare impacts are minimized to a level of less than significant through site specific analyses of light and glare impacts and minimization implemented as part of project design.

4.2.7 Mitigation Measures

The following mitigation measures shall be implemented to eliminate or mitigate aesthetic impacts identified in the preceding impact analysis.

AES-1 ***To mitigate the potential effects of installing a new reservoir within the IVIC project area, the site selected shall either be proximate to existing large structures within the project area or the reservoir shall replace existing structures that already interfere with the view to the north, i.e., the San Bernardino Mountains. The objective is to minimize the modification in views to this scenic resource from east-west roadways within the project area.***

AES-2 ***Each new roadway development within the IVIC in the future shall include an effort to underground the above existing above ground power lines and removal of power poles adjacent to the roadways.***

AES-3 ***Should the removal of trees be required for a specific project, the Implementing Agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the Implementing Agency shall replace all trees removed at a 1:1 ratio. If this cannot be accomplished a second tier CEQA evaluation shall be completed.***

AES-4 ***Prior to approval of the Final Design for future site-specific IVIC projects, an analysis of potential glare from sunlight or exterior lighting to impact vehicles traveling on adjacent roadways shall be submitted to the pertinent City for review and approval. This analysis***

shall demonstrate that due to building orientation or exterior treatment, no significant glare may be caused that could negatively impact drivers on the local roadways or impact adjacent land uses. If potential glare impacts are identified, the building orientation, use of non-glare reflective materials or other design solutions acceptable to the Cities of Highland and San Bernardino shall be implemented to eliminate glare impacts.

The IVDA and cities deem the preceding measures sufficient to reduce or eliminate the adverse aesthetic impacts identified under Subsection 4.2.6.

4.2.8 Cumulative Impacts

Cumulative impacts are those impacts of a proposed Project when combined with other projects that may affect the same resource. The addresses limited areas within approximately IVIC Project area shown on **Figure 3-2**. Within this area it is forecast that the existing visual setting will transition from the mix of undeveloped land and older residential/industrial development to a future area of light industrial warehouses, offices, commercial development, and business park uses. **Figures 4.2-3 through 4.2-12** illustrate these different visual settings. Although there will be a change in the developed visual setting from implementing the IVIC Project, this change generally reflects the existing land use designations for the Project area and no significant aesthetic impacts are forecast to result from the IVIC Project with implementation of mitigation measures. Thus, the future visual setting of the Project area will reflect the expected visual setting as envisioned by both cities' General Plans, with future modifications associated with the IVIC Project to support the ultimate development of the IVIC Project area.

Based on the anticipated change in visual setting within the IVIC Project area and those other projects being developed independently in the general area, the potential aesthetic impacts are determined to less than cumulatively considerable. No cumulatively significant aesthetic impacts will result from implementing the IVIC and other development in the Project area the is designed consistent with each cities' design guidelines.

4.2.9 Significant and Unavoidable Impacts

As the preceding text acknowledges, there will be a change in the visual setting within the IVIC Project area and this change is consistent with the assumptions in both cities' General Plans. Therefore, this forecast change is concluded to be a less than significant impact from both a Project-specific and cumulative standpoint. To mitigate IVIC Project specific impacts to scenic resources within the Project area and the region, mitigation has been identified that is capable of reducing such impacts to a less than significant impact. Based on these mitigation measures regarding the proposed Project's aesthetic impacts, these impacts are concluded to less than significant. No unavoidable significant adverse aesthetic impacts will result from IVIC implementation given the design requirements contained in the two cities' General Plans; the two cities' Development Codes; and the IVIC mitigation measures outlined in the preceding text.

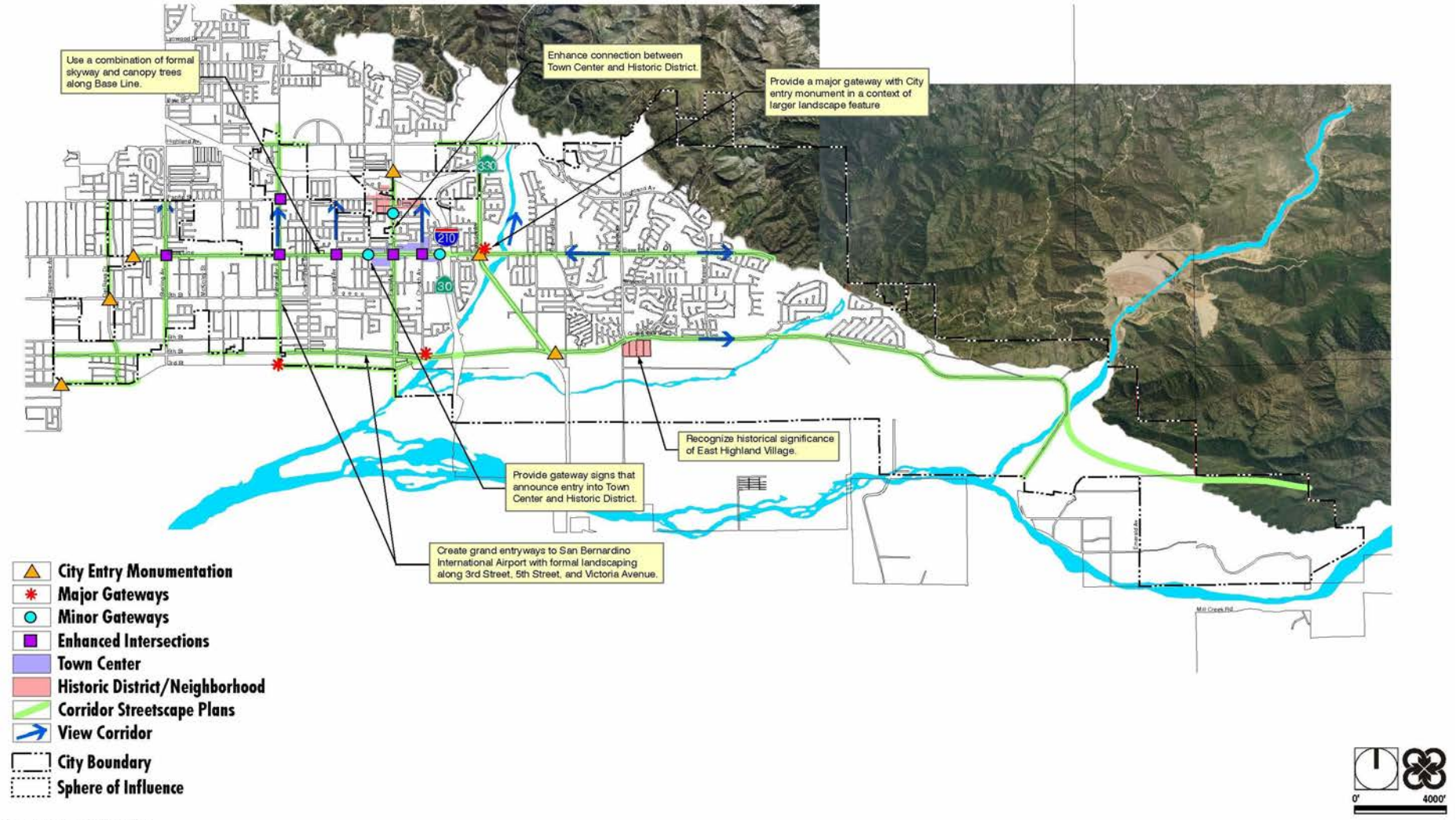


FIGURE 4.2-1

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Community Design Map

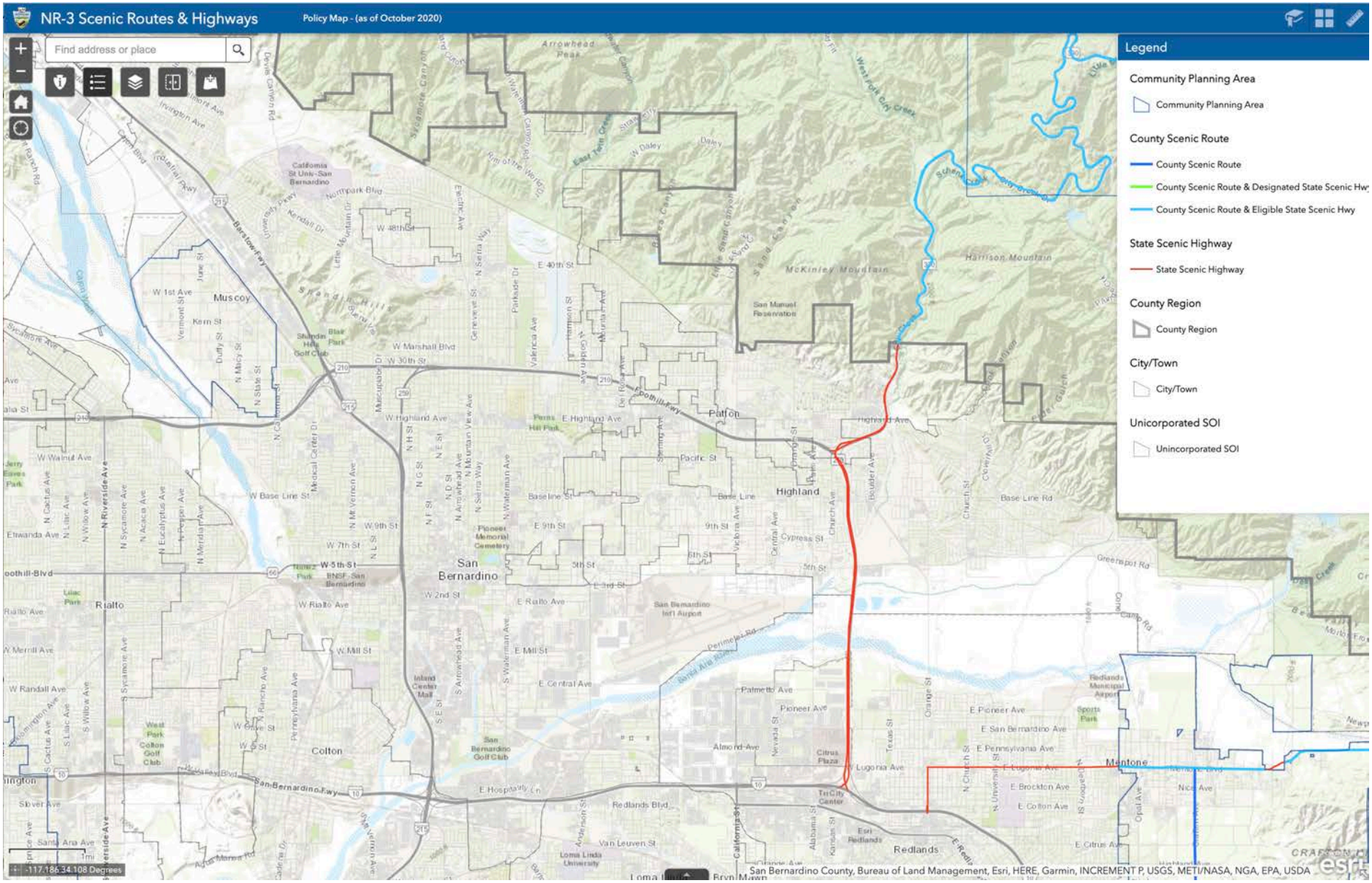

FIGURE 4.2-2

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Scenic Routes

FIGURE 4.2-3

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Tippecanoe south of 6th St looking north

FIGURE 4.2-4

Tom Dodson & Associates
Environmental Consultants

6th St looking east, just east of Tippecanoe

FIGURE 4.2-5

Tom Dodson & Associates
Environmental Consultants

5th St looking east, just west of Sterling; new warehouse on 6th St

FIGURE 4.2-6

Tom Dodson & Associates
Environmental Consultants

Looking north from 6th St on Sterling Ave

FIGURE 4.2-7

Tom Dodson & Associates
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Intersection of Victoria and 3rd St looking east

FIGURE 4.2-8

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Victoria, south of 6th St, looking north

FIGURE 4.2-9

Tom Dodson & Associates
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5th St east of 6th St looking east

FIGURE 4.2-10

Tom Dodson & Associates
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6th St east of Victoria looking east

FIGURE 4.2-11

Tom Dodson & Associates
Environmental Consultants

Palm looking north from south of 3rd Street

Typical bridges and culverts along the City Creek Channel. *Clockwise from upper left*: Third Street crossing, view to the east; Del Rosa Avenue crossing, view to the southwest; Tippecanoe Avenue crossing, view to the east; Pedley Road crossing, view to the southeast. (Photographs taken on December 10, 2019)

SOURCE: CRM TECH, Historical/Archaeological Resources Survey Report, City Creek Channel, January 30, 2020

FIGURE 4.2-12

Tom Dodson & Associates
Environmental Consultants

Views of City Creek Bypass Channel west of Victoria Avenue

4.3 AGRICULTURE AND FORESTRY RESOURCES

4.3.1 Introduction

This subchapter evaluates the environmental impacts to agriculture and forestry resources from implementation of the Inland Valley Infrastructure Corridor (IVIC). The following topics address whether the proposed Project would convert farmland that is considered Prime, Unique, or of Statewide Importance; conflict with agricultural use or a California Land Conservation Act of 1965, also known as the Williamson Act, contract; result in rezone or loss of forestry or timberlands; or otherwise convert farmland and timberlands to non-agricultural use or non-forest land, respectively. The purpose of the agriculture and forestry resources component of this DPEIR is to identify and provide analysis and assessment of the potential for agriculture uses and timberlands to exist within the in the IVIC Project area or the sensitivity for such resources to be encountered at a future specific project site so that they can be incorporated into the planning process for future infrastructure and entitlement compliance considerations.

These issues will be discussed below as set in the following framework:

4.3.1 Introduction
4.3.2 Regulatory Setting
4.3.3 Existing Conditions
4.3.4 Thresholds of Significance
4.3.5 Environmental Impacts
4.3.6 Mitigation Measures
4.3.7 Cumulative Impacts
4.3.8 Unavoidable Adverse Impacts

References utilized for this section include:

- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*
- US Dept. of Agriculture, Natural Resources Conservation Services Web Soil Survey, accessed April 8, 2024 for the Project area.
- The Planning Center, July 25, 2005. *Draft, San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report, SCH #2004111132*
- California Department of Conservation (DOC), 2024. California Department of Conservation Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed 04/08/24).

No comments pertaining to agricultural or forestry resources were received at the Scoping Meeting or in response to the Notice of Preparation.

4.3.2 Regulatory Setting

The agricultural and forestry resources component of this DPEIR is prepared to address implementation of the IVIC if and when it is approved in the future. The location of potential projects range between well-defined to relatively uncertain at this time, but the various components will occur in commercial, industrial, and residential areas in the communities within the Project area.

The impact assessment presented below focuses on physical changes to the landscape within the Project area and any potential adverse impacts these changes may have on any farmland or forest resources that may exist within the Project area. For purposes of evaluating the impacts in

this subchapter, it is assumed that over the next 20 years the whole IVIC Project will be implemented as proposed and described in the Project Description of this document.

This section discusses the potential impacts on Agriculture and Forestry Resources that may be associated with the implementation of the IVIC. However, much of the IVIC Project area has been designated for residential, commercial, and industrial uses through their respective General Plans. The General Plans for each of the cities have already evaluated the potential loss of agriculture and timber resources in the Project area through previous environmental studies.

State

California Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC), under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the State's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of State agricultural land and updates its "Important Farmland Series Maps" every two years. Important farmlands are divided into the following five categories based on their suitability for agriculture:

- **Prime Farmland.** Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at some times within the four years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.
- **Unique Farmland.** Unique Farmland has even lesser quality soils and produces the State's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.
- **Farmland of Local Importance.** Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act

The Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowner's contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The Big Bear Valley has no Williamson Act contracts in place. However, the Lucerne Valley does have Williamson Act contracts in place.

California Public Resources Code Section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526
The California Public Resources Code defines "timberland" as land, other than land owned by the Federal government and land designated as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined after consultation with the appropriate State district. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)
The California Government Code defines "timberland production zone" under Section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Projects may significantly impact timberland resources if a project conflicts with existing areas zoned for timberland production.

California Land Evaluation and Site Assessment Model
The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features.

The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process (California Public Resources Code Section 21095), including in CEQA reviews.

The California LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance.

Local

City of San Bernardino General Plan
The City of San Bernardino General Plan does not address policies regarding agriculture and forestry resources.

City of Highland General Plan
The following General Plan policies addressing agricultural and/or forestry resources are applicable to the project:

Conservation and Open Space Element: Goal 5.2
Achieve an orderly transition from agricultural uses to low-density residential/equestrian uses.

Conservation and Open Space Element: Policy 1
Ensure that farmlands converted to other uses are consistent with the East Highlands Ranch Planned Development.

Conservation and Open Space Element: Policy 2
Incorporate appropriate land use transitions and buffering techniques into new development.

Conservation and Open Space Element: Policy 3
Incorporate appropriate edge treatment between the agricultural/equestrian uses and higher density residential uses through landscaped buffers, greenbelts, view fencing and parkways.

Conservation and Open Space Element: Policy 4
Preserve visual reminders of the City's agricultural heritage in park design, buffer zones, public use areas and landscape plans.

4.3.3 Environmental Setting: Agricultural and Forestry Resources

4.3.3.1 Soils in the Project area

Soils in the Project area are identified as a mix of Tujunga gravelly loamy sand, Tujunga loamy sand, and Hanford coarse sandy loam. Soils within City Creek Bypass channel are primarily classified as Psamments, Fluvents and frequently flooded soils. **Table 4.3-1** identifies the various soil types on site as identified by the USDA and their importance to agriculture as identified by the Natural Resources Conservation Service (NRCS).

Table 4.3-1
SOILS IN IVIC AREA

Soil Map Symbol	Soil Unit	Approximate Acres in the IVIC Project area	Percent of Soils within the IVIC Project area	NRCS Classification
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	372.9	59.8%	Not prime farmland
TuB	Tujunga loamy sand, 0 to 5 percent slopes	85.6	13.7%	Farmland of statewide importance
SpC	Soboba stony loamy sand, 2 to 9 percent slopes	55.5	8.9%	Not prime farmland
HaC	Hanford coarse sandy loam, 2 to 9 percent slopes	50.3	8.1%	Prime farmland if irrigated
Ps	Psamments, Fluvents and Frequently flooded soils	45.2	7.3%	Not prime farmland
SoC	Soboba gravelly loamy sand, 0 to 9 percent slopes	7.4	1.2%	Not prime farmland
GS	Grangeville fine sandy loam, saline-alkali	5.8	0.9%	Farmland of statewide importance
HbA	Hanford sandy loan, 0 to 2 percent slopes	0.9	0.1%	Prime farmland if irrigated

4.3.3.2 Zoning and Land Use in the Project area

According to the City of Highland's General Plan, much of the City of Highland was once devoted to agriculture, primarily citrus production. As the City has urbanized over the past decades, there has been a higher demand for housing and commercial uses, and less demand for agriculture. The City of Highland General Plan has identified approximately 550 acres as "Agriculture/ Equestrian" uses in the eastern portion of the City.

Similarly, the City of San Bernardino's main agriculture production historically was also citrus. Following World War II, what is now known as the San Bernardino International Airport, was once a thriving military installation (Norton Air Force Base) that supported businesses and the need for more housing. Additionally, with the opening of the Kaiser Steel plant in Fontana in the early 1940s, the need for housing within the community also became more important than agriculture. The entire IVIC Project area is generally zoned by the cities of San Bernardino and Highland for commercial, industrial, planned development and medium-density residential land uses. However, existing land uses in the Project area primarily consist of undeveloped land, single- and multi-family residential, and small business/industrial uses. Based on field surveys of the Project area over the past two years, there are currently no farms or active farming activities in the IVIC Project area.

4.3.3.3 Groundwater Wells

According to the East Valley Water District, there are four groundwater wells in the Project area.

4.3.3.4 Land Tenure Status

Land tenure status refers to historical pattern of land uses as depicted by the existing land uses within a Project area. The IVIC plan area is located in an area transitioning to higher intensity suburban and urban uses, as envisioned in the General Plans of the cities of Highland and San Bernardino. Land uses within the plan area consist of a mix of older single-family residential, medium density residential, undeveloped open space, light industrial, and minor amounts of commercial. No large-scale agricultural operations, such as dairies or irrigated agriculture, currently are in operation in the vicinity of the IVIC Project area or have occurred within the area over the past several decades.

4.3.3.5 Forest and Timberland Resources

The site is not located in an area with forest or timberland resources, as the hot, dry summers and lack of sufficient water make it unsuitable for forest and timberland uses.

4.3.4 Thresholds of Significance

The California Environmental Quality Act (CEQA) CEQA Guidelines, Appendix G, a project would normally have a significant effect on the environment if the project would:

AGF-1 Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

AGF-2 Conflict with existing zoning for agricultural use or a Williamson Act contract?

AGF-3 Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

AGF-4 Result in the loss of forest land or conversion of forest land to non-forest use?

AGF-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

This section of Subchapter 4.3 evaluates the level of adverse impact to any site agricultural and forest/timberland resources that is forecast to occur if the project is implemented as proposed. The level of significance is evaluated through the evaluation of the significance of any site identified agricultural resources and forest/timberland resources and the degree of change that will result from implementing the proposed project.

4.3.5 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.3.5.1 Impact Analysis

AGF-1 Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

A search of the California Department of Conservation Farmland Mapping and Monitoring Program website[1] reveals that there is no Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance in the Project area (**Figure 4.3-1**). A portion of the westernmost area of the Project area is classified as Other Land. A field survey of the Project area land uses confirmed that there is no acreage currently being used to support farming or other agricultural activities. Therefore, implementation of the IVIC has no potential to result in the conversion of farmland.

[1] California Department of Conservation, 2024. Farmland Mapping and Monitoring Program https://www.conservation.ca.gov/dlrp/fmmp (accessed 04/15/24)

Neither of the General Plans for the City of Highland and City of San Bernardino designate any of the Project area for agricultural use. However, the locations for the EVWD Reservoir and Well are not presently known, and may be located outside of the overall IVIC Project area shown on **Figure 4.3-2**, which depicts EVWD's pressure zones. Based on a review of the pressure zones within which the proposed well and proposed reservoir would be located (intermediate and lower zones, respectively), no agricultural lands designated by the California Department of Conservation Farmland Mapping and Monitoring Program exist within either of these areas. Thus, even though the specific locations of EVWD's proposed Reservoir and Well are not known, the general locations are known, and would not be developed on land that has been mapped as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Thus, the whole of the IVIC Project would not convert Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance to non-agricultural use. No impacts under this issue are anticipated to occur.

Mitigation Measures: None Required

Level of Significance: No Impact

AGF-2 Conflict with existing zoning for agricultural use or a Williamson Act contract?

The Project area is not now and has not been included in a County Williamson Act contract or an Agricultural Preserve. Further, as noted in the previous section, none of the Project area is currently dedicated to an existing agricultural use. The San Bernardino Countywide Plan Agricultural Resources Map has not identified any Williamson Act lands within the IVIC Project area (**Figure 4.3-3**). Therefore, the proposed Project will not cause a significant direct impact or conflict with any Williamson Act acreage or existing agricultural use. As indicated, land in the Project area is not currently being farmed and the land use designations/classifications (General Plans and Zoning) support higher intensity urban/suburban uses, not commercial farming. Also, the current high value of the land and the low value of return on the property when used for dry land farming makes the Project area unsuitable for initiating agricultural use in the future.

As stated above, the site specific locations for the EVWD Reservoir and Well are not presently known, and may be located outside of the overall IVIC Project area shown on **Figure 4.3-2**, which depicts EVWD's pressure zones. Based on a review of the pressure zones within which the proposed well and proposed reservoir would be located (intermediate and lower zones, respectively), no Williamson Act lands exist within either of these areas. Thus, even though the specific locations of EVWD's proposed Reservoir and Well are not known, the general locations are known, and would not be developed on Williamson Act lands. Thus, the whole of the IVIC Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impacts under this issue are anticipated to occur.

Mitigation Measures: None Required

Level of Significance: No Impact

AGF-3 Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Forest land is defined in Public Resources Code Section 12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." No timberland or lands zoned Timberland Production, as defined above, occur within Project area. The Project is not located in an area zoned for forest land or timber production. Therefore, the Project will not impact the land's ability to support 10 percent native tree cover of any species; thus, no forest lands will be reclassified as non-forest lands under Public Resources Code Section 12220(g).

Additionally, the Project area is located on the lower portion of an alluvial fan emanating from the San Bernardino Mountains. The overlying land uses are largely urban/suburban and there are no forest lands designated within any of the jurisdictions that control land use within the Project area. This was verified during field surveys of the Project area.

As stated above, the site specific locations for the EVWD Reservoir and Well are not presently known, and may be located outside of the overall IVIC Project area shown on **Figure 4.3-2**, which depicts EVWD's pressure zones. Based on a review of the pressure zones within which the proposed well and proposed reservoir would be located (intermediate and lower zones, respectively), no forest lands exist within either of these areas. Thus, even though the specific locations of EVWD's proposed Reservoir and Well are not known, the general locations are known, and would not be developed on forest lands. Thus, the whole of the IVIC Project would not conflict with forest lands. No impacts under this issue are anticipated to occur.

Mitigation Measures: None Required

Level of Significance: No Impact

AGF-4 Result in the loss of forest land or conversion of forest land to non-forest use?

As described in the preceding evaluation, the proposed project has no potential to cause changes in the existing environment that could result in conversion of farmland to non-agricultural uses or forest land to non-forest use. No such agricultural or forest land uses occur in the vicinity of the Project area and the proposed changes in land use have no potential to cause conversion of actively farmed land to non-agricultural uses or forested lands to non-forest use. The land use designations and the value of the land minimize the potential for future dry farming within the Project area. No impacts under this issue are anticipated to occur.

Mitigation Measures: None Required

Level of Significance: No Impact

AGF-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

There is no land designated or being used for farmland, forest land or timberland in the IVIC Project area or in the vicinity of the Project area. Furthermore, the proposed IVIC Project is an infrastructure project intended to improve the infrastructure within the Project area, and does not propose any specific land use projects, other than the development of a Reservoir and Well, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints. Therefore, there are no features in the existing environment

that would conflict with or result in conversion of farmland or forest land to non-agricultural or non-forest use. No impacts under this issue are anticipated to occur.

Mitigation Measures: None Required

Level of Significance: No Impact

4.3.6 Mitigation Measures

No mitigation measures are required because no significant adverse agriculture and forestry impacts have been identified.

4.3.7 Cumulative Impacts

While cumulative development within the region may result in cumulatively significant impacts related to loss of and impacts to agricultural and forestry resources, the cumulative analysis of each Agriculture and Forestry Resources issue evaluated in **Subchapter 4.3** of the DEIR determined that the proposed Project would not result in a considerable contribution to cumulative impacts to agricultural and forestry resources within the Region. There are no agriculture or forestry resources located within the IVIC's area of potential impact. Furthermore, the proposed IVIC Project is an infrastructure project intended to improve the infrastructure within the Project area, and does not propose any specific land use projects, other than the development of a Reservoir and Well, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints. As an infrastructure development Project, the Project's implementation would not prevent the continued operation of any farmland or timber resources within the overall Project area. Therefore, the proposed IVIC has a less than significant potential to result in a cumulatively considerable contribution to any agricultural and forestry resources impacts.

4.3.8 Unavoidable Adverse Impacts

As determined in the preceding evaluation, no significant and unavoidable impacts to agricultural or forestry resources will occur as a result of the proposed Project.

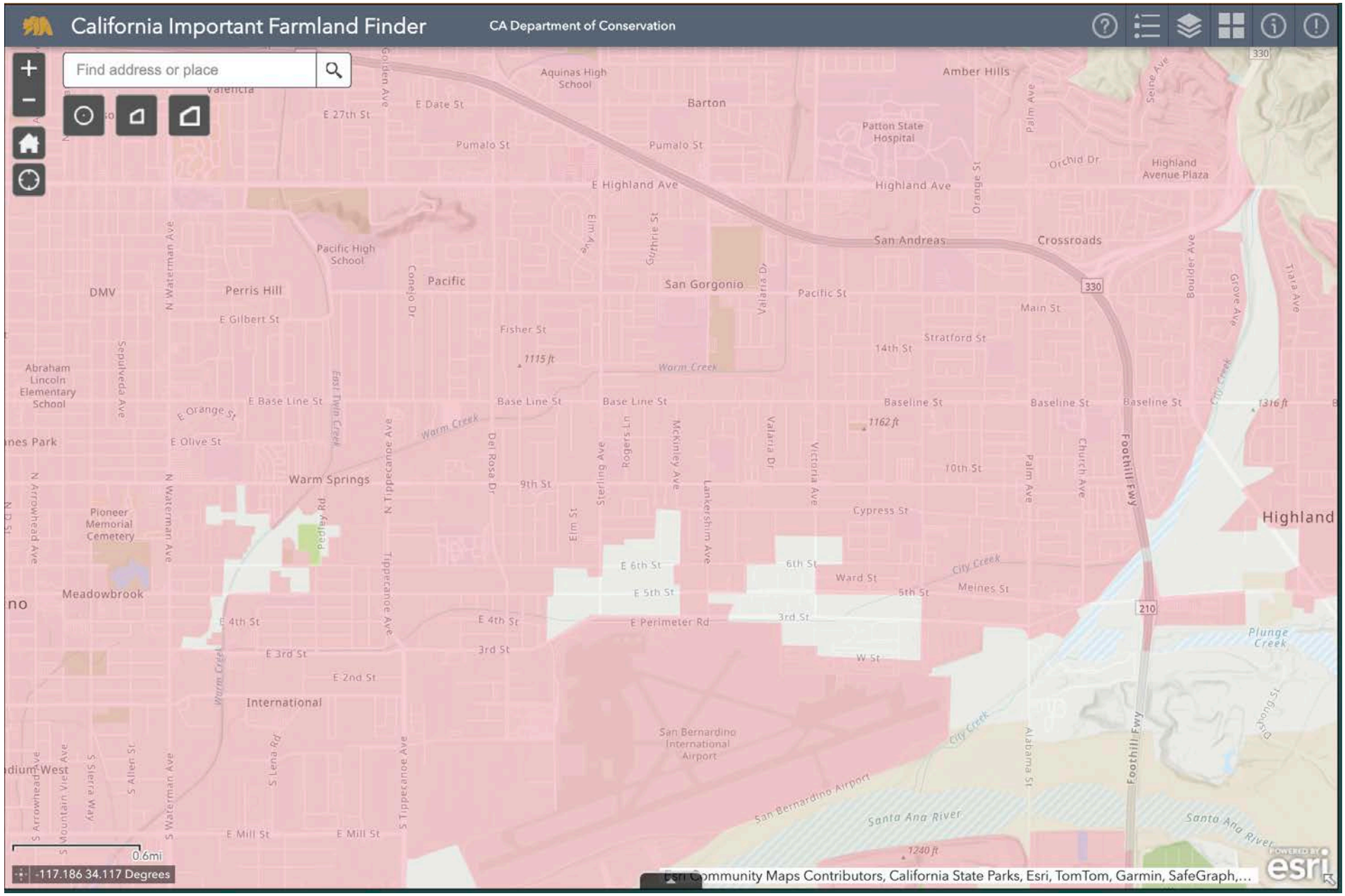

FIGURE 4.3-1

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Agricultural Resources

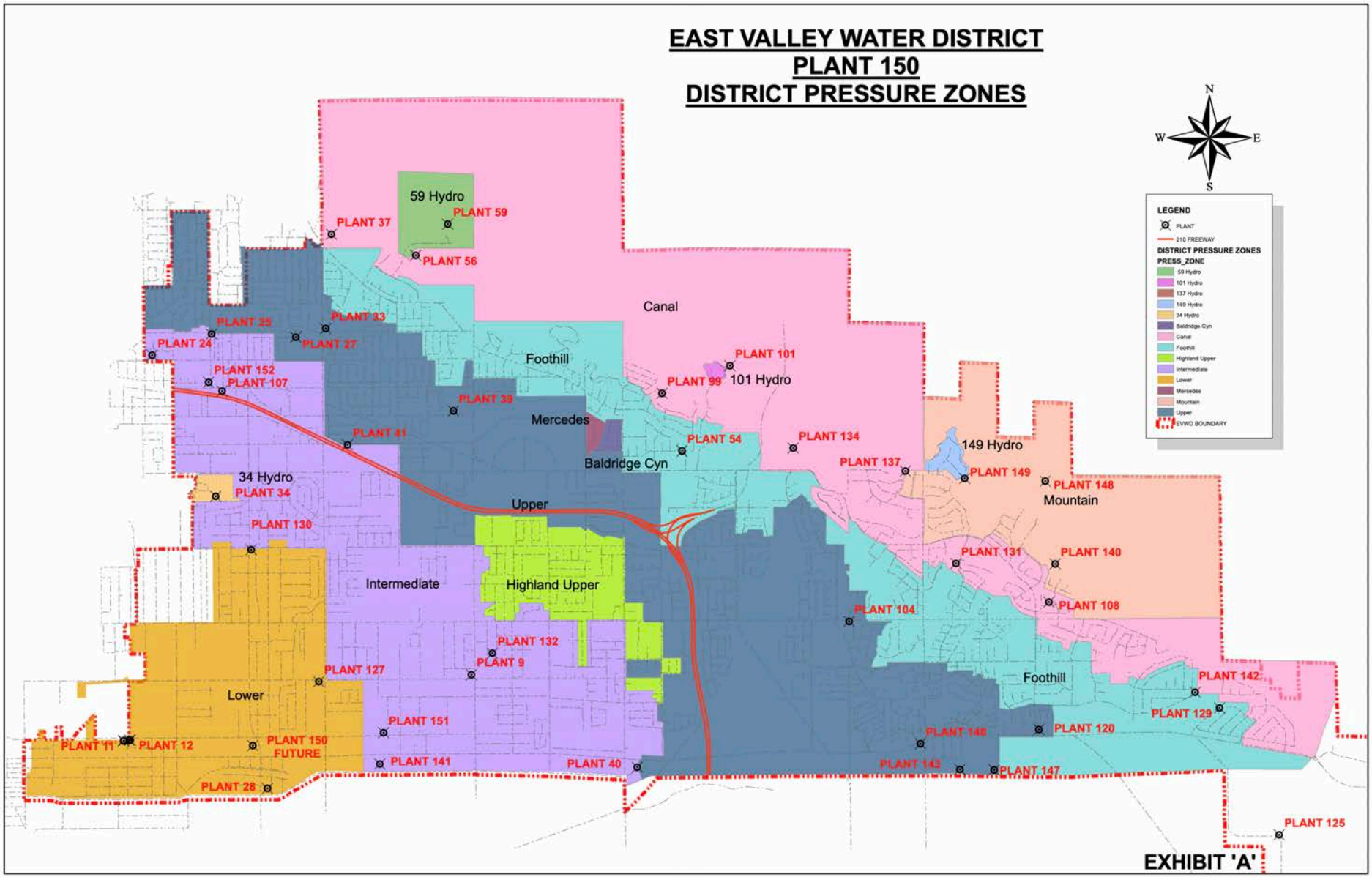

FIGURE 4.3-2

Tom Dodson & Associates
Environmental Consultants

EVWD Pressure Zones

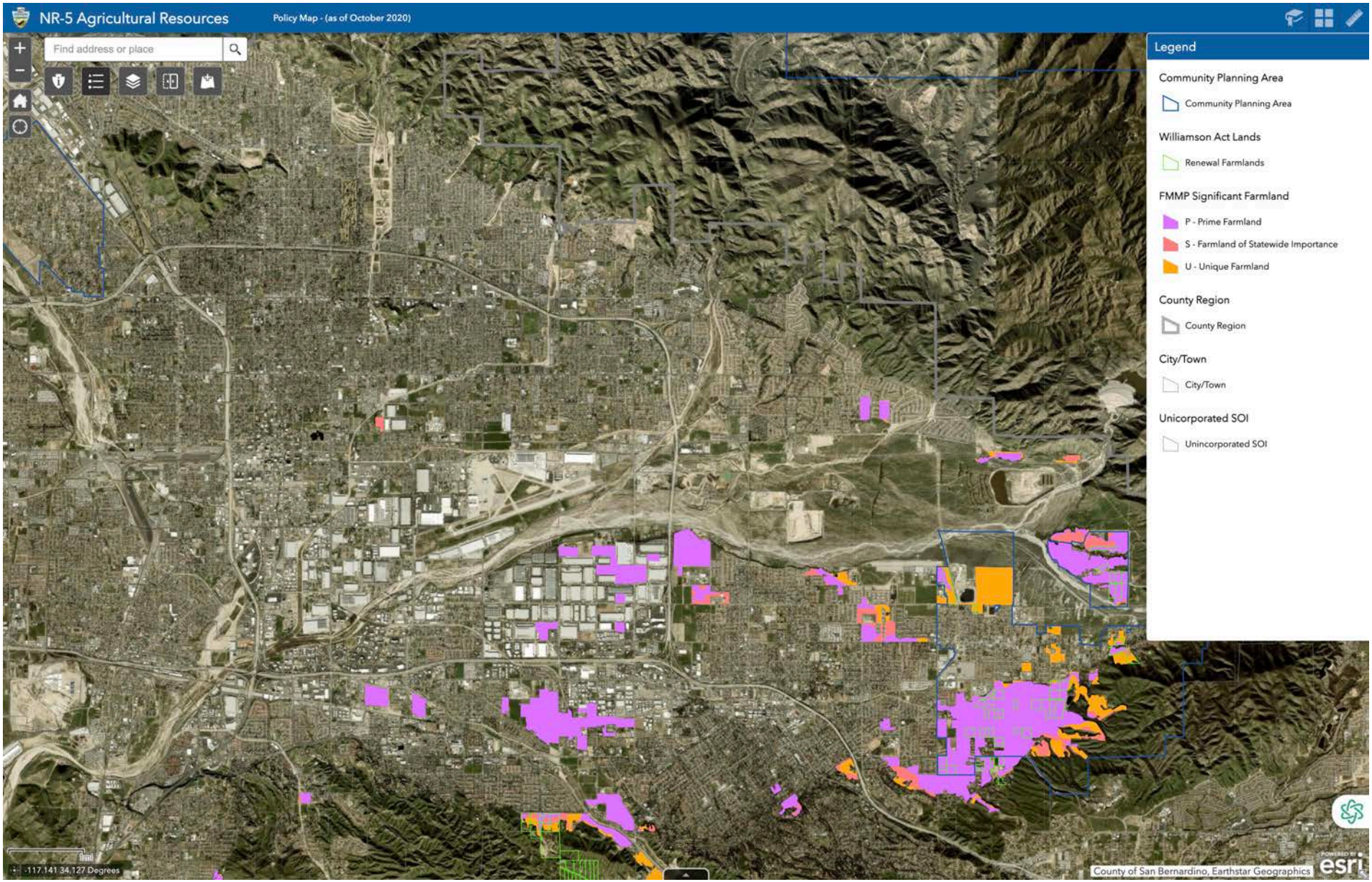

FIGURE 4.3-3

Tom Dodson & Associates
Environmental Consultants

Williamson Act Lands

4.4 AIR QUALITY

4.4.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of air quality from implementation of the proposed Inland Valley Infrastructure Corridor (IVIC).

This document is a full-scope Draft Environmental Impact Report (DEIR) for the above-described project and all of the standard issues related to Air Quality identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC would conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of any criteria pollutant for which the South Coast Air Basin (SCAB) is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The *Inland Valley Infrastructure Corridor Air Quality Impact Analysis* (AQIA) dated June 3, 2024 was prepared by Urban Crossroads to evaluate the potential impacts to air quality associated with construction and operation of the proposed IVIC over an assumed 20+ year planning horizon. A copy of the AQIA is provided as Appendix 1 of Volume 2 of this DEIR. Additionally, a copy of the Health Risk Assessment (HRA) prepared for the IVIC Project, prepared by Urban Crossroads, is provided as Appendix 2 of Volume 2 of this DEIR. Much of the information provided in the following sections is abstracted directly from these technical reports with minor edits.

These issues pertaining to air quality will be discussed below as set in the following framework:

4.4.1 Introduction
4.4.2 Regulatory Setting
4.4.3 Existing Conditions: Air Quality
4.4.4 Thresholds of Significance
4.4.5 Methodology
4.4.6 Air Quality Impact Analysis Data
4.4.7 Mitigation Measures
4.4.8 Cumulative Impacts
4.4.9 Significant and Unavoidable Impacts

The following reference documents were used in preparing this section of the DEIR.

- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*
- Urban Crossroads, June 3, 2024. *Inland Valley Infrastructure Corridor Air Quality Impact Analysis* (AQIA)
- Urban Crossroads, June 1, 2024. *Inland Valley Infrastructure Corridor Construction Health Risk Assessment City of Highland, City of San Bernardino, and County of San Bernadino* (HRA)
- SCAQMD, 2022. *Air Quality Management Plan* (AQMP)

No comments were received during the NOP comment period on this topic.

4.4.2 Regulatory Setting

4.4.2.1 Federal Regulations

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for O_3, CO, NO_X, SO_2, PM_{10}, and Pb. The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of California Air Resources Board (CARB).

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the IVIC Project area include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 4.4-2 provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas, and ultimate transition to electric vehicles. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

4.4.2.2 California Regulations

CARB

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the California Ambient Air Quality Standards (CAAQS) for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources, such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons. The project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power

requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8)
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

4.4.2.3 Regional Regulations

Air Quality Management Plan (AQMP)

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards. AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and project consistency with the AQMP is provided in the analysis section, below.

South Coast Air Quality Management District Rules and Regulations

To implement the AQMP, the SCAQMD develops and implements rules and regulations for emissions that may be generated by various uses and activities. The rules and regulations detail pollution-reduction measures that must be implemented during construction and operation of projects. Rules and regulations relevant to the project include the following:

- SCAQMD Rule 402: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- SCAQMD Rule 403: This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.
    - The contractor shall adhere to the following applicable measures of Rule 403 including, but not limited to:
    - All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
    - The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
    - All access points to the project site shall have track out devices installed.
    - The contractor shall ensure that traffic speeds on unpaved roads and project site areas are limited to 15 mph or less
- SCAQMD Rule 1113: This rule serves to limit the Volatile Organic Compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

4.4.2.4 Local Regulations

City of Highland General Plan Policies

The City of Highland General Plan offers the following Public Health and Safety Element Goals, Policies and Programs regarding air quality:

Public Health & Safety Element: Goal 6.8
A circulation network that efficiently, safely and economically moves people, vehicles, and goods using transportation facilities that meet the current demands and projected needs of the City, while maintaining and protecting its residential and spa resort character.

Public Health & Safety Element: Policy 1
Ensure consistency of Federal, State, and County legislation with Highland's Air Quality goal and policies.

Public Health & Safety Element: Policy 2
Participate in formulating regional policies and solutions to air quality problems established by the San Bernardino County Regional Air Quality Plan.

Public Health & Safety Element: Policy 3
Create and integrate innovative local emissions reducing pilot programs into city plans for future government facilities and equipment.

Public Health & Safety Element: Policy 4
Support the development and use of alternative fuel sources for transportation-related activities to reduce local government energy demand.

Public Health & Safety Element: Policy 5
Participate in the establishment of public private partnerships for the provision of innovative public and private transportation services and systems where the enhancement of the local and regional air quality is a major goal.

Public Health & Safety Element: Policy 6
Cooperate with regional transit agencies in the continued development of diverse and efficiently operated transportation systems that generate the minimum feasible pollutants.

Public Health & Safety Element: Policy 7
Support current incentive programs that recognize and reward developments using new and innovative emission reduction techniques such as innovative efficient window glazing, wall insulation, and ventilation systems; efficient air conditioning, heating, and appliances; use of passive solar design, and solar heating systems; use of energy cogeneration and/or use of waste energy; and landscape techniques that reduce water consumption and provide passive solar benefits.

Public Health & Safety Element: Policy 10
Reduce vehicle emissions by supporting the design and implementation of the Citywide system of bikeways and pedestrian trails as a non-polluting circulation alternative by requiring as part of the development review process the installation of planned bicycle routes, paths, and lanes where designated; and the construction of necessary bicycle parking and storage areas within convenient commercial, employment and recreation activity areas.

Public Health & Safety Element: Policy 12
Continue to encourage the integration of air quality planning with land use and transportation planning in the design, review, and development processes by:

- Ensuring that site designs facilitate rather than discourage pedestrian movement between commercial development and residential or office uses (e.g., locate buildings adjacent to the street with parking behind such that pedestrians need not walk through parking lots to reach their destination; provide clear pedestrian paths and connections, etc.).
- Supporting the mixed use overlay in the zoning ordinance as a means to enhance pedestrian movement throughout the City.

- Providing for increased intensity of development in designated locations along existing and proposed transit corridors.
- Supporting location and operational standards in the development code for ancillary employee services, including but not limited to child care, restaurants, banking facilities, convenience markets, at major employment centers for the purpose of reducing midday vehicle trips.
- Continuing to develop interconnected traffic signal control system in all new projects, roadway improvements. Move forward with programs to retrofit existing signals on all streets where traffic volume and delay time is significant.
- Enforcing parking lot design guidelines that encourage reciprocal parking designs and/or agreements between adjacent developments, provide for the consolidation of driveways along major commercial corridors such as Base Line, and require parking areas be efficiently designed so as to minimize internal circulation conflicts.
- Integrating, where appropriate and feasible, traffic improvements (e.g., dedicated turn lanes and pockets, bus turnouts and shelters, restripe traffic lands for optimal traffic flow) into capital improvement projects that improve the efficiency of transportation systems.
- Continuing to ensure that all new development applications include an air quality improvement summary per SCAQMD and SCAG Air Quality Handbook Guidelines, which describe the general methods used in development design to reduce air emissions.

Public Health & Safety Element: Policy 13
Regulate the location and design of sensitive receptors (schools, day care facilities, hospitals and the like) from excessive and hazardous emissions to air pollution, and continue to support site plans that separate and/or buffer residential and sensitive receptors from freeways, arterials, point sources, and hazardous material locations.

Public Health & Safety Element: Policy 14
Reduce particulate emissions from construction sites, grading activities, temporary roads and parking lots, and agricultural operations by enforcing requirements that minimize fugitive dust.

Public Health & Safety Element: Policy 15
Enforce compliance of new development with the Tree Preservation Ordinance.

Public Health & Safety Element: Policy 16
Reduce particulate and stationary emissions attributed to the removal, transportation and processing of mineral resources by enforcing required permits and physical barrier requirements that minimize the effects of dust from day-to-day operations of mineral extraction, transportation, and processing facilities.

City of San Bernardino General Plan Policies

The City of San Bernardino General Plan offers the following Goals, Policies and Programs regarding air quality:

Circulation: Goal 6.6
Promote a network of multi-modal transportation facilities that are safe, efficient, and connected to various points of the City and the region.

Circulation: Policy 6.6.9
Work with Omnitrans to create transit corridors, such as the one currently being explored on E Street linking CSUSB to Hospitality Lane, to increase transit ridership, reduce traffic congestion, and improve air quality.

Safety: Goal 10.1
Protect the environment, public health, safety, and welfare from hazardous wastes.

Circulation: Policy 10.1.2
Ensure the protection of surface and groundwater quality, land resources, air quality, and environmentally sensitive areas through safe transportation of waste through the City and comprehensive planning of hazardous materials, wastes, and sites.

Natural Resources and Conservation: Goal 12.5

Promote air quality that is compatible with the health, well-being, and enjoyment of life.

Natural Resources and Conservation: Policy 12.5.1
Reduce the emission of pollutants including carbon monoxide, oxides of nitrogen, photochemical smog, and sulfate in accordance with South Coast Air Quality Management District (SCAQMD) standards.

Natural Resources and Conservation: Policy 12.5.3
Require dust abatement measures during grading and construction operations. (LU-1)

Natural Resources and Conservation: Policy 12.5.5
Purchase City vehicles that use energy efficient fuel and minimize air pollution. (NR-2)

Natural Resources and Conservation: Goal 12.6

Reduce the amount of vehicular emissions in San Bernardino.

Natural Resources and Conservation: Policy 12.6.3
Install streetscape improvements and other amenities to encourage pedestrian activity in key City areas and reduce vehicular travel and associated air emissions.

Natural Resources and Conservation: Policy 12.6.6
Continue to cooperate with Omnitrans and the Rapid Transit District to expand as necessary the comprehensive mass transit system for the City to reduce vehicular travel.

Natural Resources and Conservation: Policy 12.6.7
Promote the use of public transit and alternative travel modes to reduce air emissions.

Natural Resources and Conservation: Goal 12.7

Participate in regional initiatives and programs to improve the South Coast Basin's air quality.

Natural Resources and Conservation: Policy 12.7.1
Cooperate with the South Coast Air Quality Management District and incorporate pertinent local implementation provisions of the Air Quality Management Plan.

Natural Resources and Conservation: Policy 12.7.2
Work with the South Coast Air Quality Management District to establish controls and monitor uses in the City that could add to the air basin's degradation (e.g., auto repair, manufacturers).

Natural Resources and Conservation: Policy 12.7.3
Coordinate with SCAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.

Natural Resources and Conservation: Policy 12.7.4
Work with the other cities in the South Coast Air Basin to implement regional mechanisms to reduce air emissions and improve air quality.

Natural Resources and Conservation: Policy 12.7.5
Support legislation that promotes cleaner industry, clean fuel vehicles, and more efficient burning engines and fuels.

Natural Resources and Conservation: Policy 12.7.6
Encourage, publicly recognize, and reward innovative approaches to improve air quality.

Natural Resources and Conservation: Policy 12.7.7
Involve environmental groups, the business community, special interests, and the general public in the formulation and implementation of programs that actively reduce airborne pollutants.

4.4.3 Existing Conditions: Air Quality

4.4.3.1 South Coast Air Basin

The IVIC Project area is located in the SCAB within the jurisdiction of SCAQMD. The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and State air quality standards. As previously stated, the IVIC Project area is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

4.4.3.2 Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO2) to sulfates (SO4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are

approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NOX and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

4.4.3.3 Wind Patterns and Project Location

The distinctive climate of the project area and the SCAB is determined by its terrain and geographical location. The SCAB is located on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

4.4.3.4 Criteria Pollutants

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible concentrations of pollutants. Criteria pollutants, their typical sources, and health effects are identified below, Table 4.4-1.

Table 4.4-1
CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury

Criteria Pollutant	Description	Sources	Health Effects
			at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with O_2. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are

Criteria Pollutant	Description	Sources	Health Effects
			exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and reside in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X,	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and

Criteria Pollutant	Description	Sources	Health Effects
	and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.		
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the project is not anticipated to generate a quantifiable amount of Pb emissions.	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances	Odors can come from many sources including animals,	Offensive odors can potentially affect human health in several ways. First, odorant

Criteria Pollutant	Description	Sources	Health Effects
	in the air come into contact with the human olfactory nerves.	human activities, industry, natures, and vehicles.	compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

4.4.3.5 Existing Air Quality

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. NAAQS and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 4.4-2.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May 4, 2016 and are presented in Table 4.4-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ do not exceed standards. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the federal Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, CARB has implemented a State Implementation Plan (SIP). The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area.

4.4.3.6 Regional Air Quality

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 35 permanent monitoring stations and 2 single-pollutant source Pb air monitoring sites throughout the air district. On January 25, 2024, CARB adopted the proposed 2023 amendments to the state and national area designations. See Table 4.4-3 for attainment designations for the SCAB. Appendix 2.1 of the AQIA provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

Table 4.4-2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter (PM2.5)[9]	24 Hour	–	–	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15.0 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Flourescense; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead 8[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: California Air Resources Board 5/4/16

Footnotes:

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above 150 $\mu g/m^3$, is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.

8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9 On December 14, 2012, the national PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primarily and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primarily and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11 On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 j.tg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 4.4-3
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

4.4.3.7 Local Air Quality

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the District in order to provide Southern California residents with information about the air quality conditions. The proposed Development Site is located within the SRA 34. Within SRA 34, the SCAQMD Central San Bernardino Valley 1 monitoring station is located 0.7 miles west of the Development Site and is the nearest long-term air quality monitoring site for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$.

The most recent three (3) years of data available is shown on Table 4.4-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Development Site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2020 through 2022 was obtained from the SCAQMD Air Quality Data Tables. Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

Table 4.4-4
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2020-2022

Pollutant	Standard	Year		
		2020	2021	2022
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.151	0.125	0.144
Maximum Federal 8-Hour Concentration (ppm)		0.111	0.103	0.107
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	56	44	44
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	89	81	70
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.7	1.9	1.6
Maximum Federal 8-Hour Concentration	> 20 ppm	1.2	1.4	1.0
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.066	0.067	0.069
Annual Federal Standard Design Value		0.019	0.019	0.018
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 150 µg/m^3	61	73	62
Annual Federal Arithmetic Mean (µg/m^3)		35.8	32.1	31.5
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m^3	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m^3	6	4	8
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 35 µg/m^3	46.10	55.10	38.10
Annual Federal Arithmetic Mean (µg/m^3)	> 12 µg/m^3	11.95	12.07	10.89
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m^3	1	2	1

ppm = Parts Per Million
µg/m^3 = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.

4.4.4 Thresholds of Significance

The criteria used to determine the significance of potential project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

AIR-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

AIR-3 Expose sensitive receptors to substantial pollutant concentrations?

AIR-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 4.4-5. The SCAQMD's *CEQA Air Quality Significance Thresholds* (March 2023) indicate) indicate that any projects in the SCAB with daily emissions that exceed any of the

indicated thresholds should be considered as having an individually and cumulatively significant air quality impact..

Table 4.4-5
MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

4.4.5 Methodology

4.4.5.1 Approach for Analysis of the Project

Land uses such as the project affect air quality through construction-source and operational-source emissions.

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from MMs. Accordingly, the latest version of CalEEMod has been used for this project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.3 of the AQIA.

4.4.6 Air Quality Impact Analysis Data

4.4.6.1 Construction Emissions

Construction activities associated with the development of individual projects will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ which would likely be released through the burning of fossil fuel in construction equipment, grading fugitive dust, asphalt paving, and the application of architectural coatings during painting activity.

Demolition

As few details are known at this time, this analysis takes a conservative approach by assuming the following demolition quantities for each project category:

- **Project Category 1: Roadway Installation.** It is projected that approximately 63,360 square feet (sf) of existing asphalt/concrete (5,280 linear feet of existing asphalt/concrete x 12 feet of disturbance) will require demolition in any given year of construction activity,

resulting in approximately 7,185 tons of debris. This debris will be transported off-site, with a maximum hauling distance of 20 miles.

- **Project Category 2: Channel Improvement Installation.** As a conservative estimate, it is projected that approximately 79,200 sf of existing asphalt/concrete (5,280 liner feet x 15 feet of disturbance) of existing asphalt/concrete will require demolition, resulting in approximately 8,981 tons of debris. This debris will be transported off-site, with a maximum hauling distance of 20 miles.
- **Project Category 3: Storage Reservoir.** No demolition is anticipated.
- **Project Category 4: Extraction Well.** It is projected that approximately 100 sf of existing asphalt/concrete (10 feet by 10 feet of disturbance area) will require demolition, resulting in approximately 11 tons of debris. This debris will be transported off-site, with a maximum hauling distance of 20 miles.
- **Project Category 5: Sewer Installation.** Approximately 1,630 tons of asphalt will be demolished and hauled off-site..

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Earthwork activities for each project category will be minimal. For purposes of analysis, it is assumed that each project category will balance and therefore no import/export will be required.

Construction Worker Vehicle Trips

Construction emissions for construction worker vehicles traveling to and from the IVIC Project area, as well as vendor trips (construction materials delivered to the IVIC Project area) were estimated based on information from CalEEMod model defaults and the project Team.

Construction Duration

Construction would occur over a 20 year period. However, construction has been modeled as a worst-case year analysis, anticipated to begin in September 2024 and will last through September 2025. The construction schedule utilized in the analysis, shown in Table 4.4-8, represents a "worst-case" analysis scenario because, should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[2]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*.

[2] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offoad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Table 4.4-6
CONSTRUCTION DURATION

Category	Construction Activity	Start Date	End Date	Days
Roadway Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30
Channel Improvement Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30
Storage Reservoir	Site Preparation	1/7/2025	1/8/2025	2
	Grading	1/9/2025	1/22/2025	10
	Foundation Construction	1/23/2025	2/26/2025	25
	Reservoir Construction	2/27/2025	8/13/2025	120
Extraction Well	Demolition	1/7/2025	1/7/2025	1
	Grading	1/8/2025	1/8/2025	1
	Site Preparation	1/9/2025	1/10/2025	2
	Building Construction	1/11/2025	3/17/2025	46
	Paving	3/18/2025	3/24/2025	5
	Architectural Coating	3/25/2025	3/31/2025	5
Sewer Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30

Construction Equipment

Associated equipment was based on information provided by the Project Description. Please refer to specific detailed modeling inputs/outputs contained in Appendices 3.1 through 3.4 of the AQIA. A detailed summary of construction equipment is provided at Table 4.4-7.

Table 4.4-7
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
Roadway Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Other Construction Equipment	1	6
Linear,	Backhoe	Tractors/Loaders/Backhoes	1	6

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
Grubbing & Land Clearing	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks[1]	Off-Highway Trucks	10	6
Linear, Grading & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Drainage, Utilities, & Sub-Grade	Compaction Equipment	Plate Compactor	1	2
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Channel Improvement Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Crushing/Proc. Equipment	1	6
Linear, Grubbing & Land Clearing	Backhoe	Tractors/Loaders/Backhoes	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Grading & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Drainage, Utilities, & Sub-Grade	Compaction Equipment	Plate Compactor	1	2
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Storage Reservoir				
Site Preparation	Bulldozers	Rubber Tired Dozers	1	6
	Front End Loaders	Crawler Tractors	1	6
Grading	Bulldozers	Rubber Tired Dozers	1	6
	Front End Loaders	Crawler Tractors	2	6
	Water Truck	Off-Highway Trucks	1	4
	Scrapers	Scrapers	1	6
	Excavators	Excavators	1	6
	Dump Haul Trucks	Off-Highway Trucks	1	6
	Delivery Trucks	Off-Highway Trucks	10	6
Foundation Construction	-	Cement and Mortar Mixers	4	6
	-	Pavers	1	7
	-	Rollers	1	7
	-	Tractors/Loaders/Backhoes	1	7
	-	Off-Highway Trucks	10	6
Reservoir Construction	-	Cranes	1	4
	-	Forklifts	2	6
	-	Tractors/Loaders/Backhoes	2	8
	-	Off-Highway Trucks	10	6
Extraction Well				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	8
	Excavators	Excavators	3	8
	Rubber Tired Dozers	Rubber Tired Dozers	2	8
Site Preparation	Rubber Tired Dozers	Rubber Tired Dozers	3	8
	Crawler Tractors	Crawler Tractors	4	8
Grading	Excavators	Excavators	2	8
	Graders	Graders	1	8
	Rubber Tired Dozers	Rubber Tired Dozers	1	8
	Scrapers	Scrapers	2	8
	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	Cranes	1	8
	Forklifts	Forklifts	3	8
	Generator Sets	Generator Sets	1	8
	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8
	Welders	Welders	1	8
	Dump/Delivery Trucks	Off-Highway Trucks	8	8
Paving	Pavers	Pavers	2	8
	Paving Equipment	Paving Equipment	2	8

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
	Rollers	Rollers	2	8
Architectural Coating	Air Compressor	Air Compressor	1	8
Sewer Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Crushing/Proc. Equipment	1	6
Linear, Grubbing & Land Clearing	Backhoe	Tractors/Loaders/Backhoes	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Grubbing & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
Linear, Grubbing & Excavation	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Drainage, Utilities, & Sub-Grade	Compaction Equipment	Plate Compactor	1	2
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6

[1] Dump/delivery trucks will be modeled as vendor trips.

4.4.6.2 Operational Emissions

Long-term air quality impacts occur from mobile source emission generated from project-related traffic and from stationary source emissions generated from natural gas. The proposed project primarily involves construction activity. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the project sites during on-going maintenance. However, the project would generate a nominal number of traffic trips for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources. Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. As this project involves the construction of roadways, channels, storage reservoirs, extraction wells, and sewers, heating and consumer products would not be used.

4.4.6.3 Localized Significance

Background on Localized Significance Threshold (LST) Development
The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[3]. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology.*

4.4.6.3 Potential Impacts

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The IVIC Project is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as State and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet State and federal ambient air quality standards.

Currently, these State and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the State and federal ambient air quality standards. AQMPs are updated regularly to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 AQMP* continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and

[3] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2016 AQMP, the *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements. The project's consistency with the AQMP will be determined using the *2022 AQMP* as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook*. These indicators are discussed below:

Consistency Criterion No. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1
The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations could occur if localized or regional significance thresholds are exceeded. The project has the potential to exceed the applicable regional significance thresholds for construction activity (after mitigation). Therefore, the project has the potential to conflict with the AQMP according to this criterion.

On the basis of the preceding discussion, the project is determined to be consistent with the first criterion.

Consistency Criterion No. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2022 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Highland, City of San Bernardino, and County of San Bernardino General Plan is considered to be consistent with the AQMP.

Construction Impacts – Consistency Criterion 2
Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

On the basis of the preceding discussion, the project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The project would not result in or cause NAAQS or CAAQS violations. The project's does not propose a land use development but rather involves the installation of roadways, channels, storage reservoirs, extraction wells, and sewers. The project is therefore considered to be consistent with the AQMP.

Mitigation Measures:

AQ-1: ***When using construction equipment greater than 150 horsepower (>150 hp), the Construction Contractor shall ensure that off-road diesel construction equipment complies with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications.***

Level of Significance After Mitigation: Less Than Significant

MM AQ-1 would require that equipment greater than 150 horsepower meets Tier 4 emissions standards or better to minimize construction related NO_x emissions fall below SCAQMD emissions thresholds. Compliance with this Mitigation Measure, in addition to compliance with SCAQMD standards regulations, would ensure that the project would not conflict with the AQMP. Impacts are therefore less than significant.

AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Construction Impacts Without Mitigation

The estimated maximum daily construction emissions without mitigation are summarized on Table 4.4-8. Detailed construction model outputs are presented in Appendix 3.1 of the AQIA prepared by Urban Crossroads (Appendix 1 of Volume 2). Under the assumed scenarios, emissions resulting from the project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

Table 4.4-8
OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
New Roadway	1.09	6.98	8.93	0.03	0.52	0.29
Channel Installation	1.08	6.97	8.77	0.03	0.50	0.29
Storage Reservoir	0.58	5.54	8.06	0.01	0.46	0.27
Extraction Well	n/a	n/a	n/a	n/a	n/a	n/a
Sewer Installation	1.08	6.97	8.77	0.03	0.50	0.29
Total	3.83	26.46	34.53	0.10	1.98	1.14
Winter						
New Roadway	2.30	20.34	20.34	0.06	3.77	1.25
Channel Installation	2.31	21.04	20.62	0.07	4.43	1.38
Storage Reservoir	6.94	59.50	53.10	0.15	6.69	3.78
Extraction Well	5.20	48.00	43.00	0.08	8.50	4.97
Sewer Installation	2.20	17.86	18.92	0.05	1.66	0.83
Total	18.95	166.74	155.98	0.41	25.05	12.21
Maximum Daily Emissions	**18.95**	**166.74**	**155.98**	**0.41**	**25.05**	**12.21**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1 of the AQIA prepared by Urban Crossroads.

Construction Impacts with Mitigation

The estimated maximum daily construction emissions with mitigation are summarized on Table 4.4-9. Mitigation Measure (**MM**) **AQ-1** is recommended to reduce the severity of the impacts. Detailed construction model outputs are presented in Appendix 3.2 of the AQIA prepared by Urban Crossroads. After implementation of **MM AQ-1**, project construction-source emissions of NO_X would not exceed the applicable SCAQMD thresholds for any criteria pollutant. The project would also require compliance with SCAQMD Rule 402, to ensure that all future uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use. Additional compliance with SCAQMD Rule 403 would be required, in order to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Compliance with this rule would require the contractor to adhere to the following applicable measures of Rule 403 including, but not limited to:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- All access points to the project site shall have track out devices installed.

- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are limited to 15 mph or less.

Rule 1113, which limits the VOC content of architectural coatings, would also be required to be implemented by the project. As these are mandatory requirements, the project will be required to comply, and therefore, with the implementation of **MM AQ-1,** and through compliance with SCAQMD regulations, construction-source emissions impacts would be less than significant impact.

Table 4.4-9
OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITH MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
New Roadway	0.63	3.66	13.50	0.03	0.41	0.19
Channel Installation	0.62	3.65	13.40	0.03	0.38	0.18
Storage Reservoir	0.19	1.04	9.22	0.01	0.27	0.09
Extraction Well	n/a	n/a	n/a	n/a	n/a	n/a
Sewer Installation	0.62	3.65	13.40	0.03	0.38	0.18
Total	2.06	12.00	49.52	0.10	1.44	0.64
Winter						
New Roadway	0.89	9.27	24.30	0.06	3.24	0.76
Channel Installation	0.90	10.04	24.60	0.07	3.89	0.89
Storage Reservoir	1.77	10.10	90.80	0.17	4.59	1.87
Extraction Well	0.88	7.05	45.31	0.08	6.27	2.93
Sewer Installation	0.83	6.79	22.85	0.05	1.14	0.36
Total	5.27	43.25	207.86	0.43	19.13	6.81
Maximum Daily Emissions	**5.27**	**43.25**	**207.86**	**0.43**	**19.13**	**6.81**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (mitigated) emissions are presented in Appendix 3.1 of the AQIA prepared by Urban Crossroads.

Operational Impacts

Long-term air quality impacts occur from mobile source emission generated from project-related traffic and from stationary source emissions generated from natural gas. The proposed project primarily involves construction activity. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the project sites during on-going maintenance. However, the project would generate a nominal number of traffic trips for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources. Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. As this project involves the construction of roadways, channels, storage reservoirs, extraction wells, and sewers, heating and consumer products would not be used. Stationary energy emissions would result from energy consumption associated with the proposed project. However, the proposed project may include the use of an emergency diesel generator, allowing the pump station to run on backup

power in case of emergency. If a backup generator is installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the SCAB. The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Backup generators would be used only in emergency situations and for routine testing and maintenance purposes and would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. As project operations would not exceed SCAQMD thresholds, the project would not violate an air quality standard or contribute to an existing violation. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

*Mitigation Measures: Implementation of **MM AQ-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

MM AQ-1 would require that equipment greater than 150 horsepower meets Tier 4 emissions standards or better to minimize construction related NO_x emissions fall below SCAQMD emissions thresholds. Compliance with this Mitigation Measure, in addition to compliance with SCAQMD standards regulations, would ensure that air quality emissions would be less than significant.

AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Background

Applicability for LSTs for the Project

For this project, the appropriate SRA for the LST analysis is the SCAQMD Central San Bernardino Valley (SRA 34). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that would occur during construction activity:
  - The maximum daily on-site emissions could be based on information provided by the project Applicant; or
  - The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds and CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore

concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.

- The LST Methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

Emissions Considered

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

Maximum Daily Disturbed Acreage

It is assumed that up to 2 acres would be disturbed per day for all Project Categories. This is conservative as the construction impacts are assessed against a smaller acreage threshold which would represent a more conservative assessment. '

Receptors

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours*." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8-hours.

Project Related Receptors

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the project's potential to cause an individual and cumulatively significant impact. As a conservative measure it is assumed that the nearest sensitive receptor could potentially be located immediately adjacent to construction activities. It should be noted that the LST Methodology also explicitly states that "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Consistent with the SCAQMD's LST Methodology, a 25-meter receptor distance is utilized in this analysis and provide for a conservative i.e. "health protective" standard of care.

Localized Construction Source Emissions

Localized Thresholds for Construction Activity

Since the total acreage disturbed is less than five acres per day for construction activities, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 4.4-10 were calculated by interpolating the threshold values for the project's disturbed acreage.

Table 4.4-10
MAXIMUM DAILY LOCALIZED SIGNIFICANCE THRESHOLD

Pollutant	Construction Localized Thresholds
All Project Categories	
NO_X	170 lbs/day
CO	972 lbs/day
PM_{10}	7 lbs/day
$PM_{2.5}$	4 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final Localized Significance Threshold Methodology, July 2008

Construction Source Localized Significance Emissions Without Mitigation

Table 4.4-11 identifies the localized impacts at the nearest receptor location in the vicinity of the project. Without mitigation, localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM_{10} during the Extraction Well Development. Outputs from the model runs for construction LSTs are provided in Appendices 3.1 through 3.5 of the AQIA.

Table 4.4-11
LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITHOUT MITIGATION

On-Site Construction Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Roadway Installation				
Maximum Daily Emissions	**9.91**	**9.38**	**2.40**	**0.69**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Channel Improvement Installation				
Maximum Daily Emissions	**9.91**	**9.38**	**2.89**	**0.76**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Storage Reservoir				
Maximum Daily Emissions	**59.00**	**52.30**	**6.44**	**3.72**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Extraction Well				
Maximum Daily Emissions	**37.50**	**32.40**	**7.59**	**4.47**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**YES**	**YES**
Sewer Installation				
Maximum Daily Emissions	**9.91**	**9.38**	**0.88**	**0.46**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Construction Source Localized Significance Emissions With Mitigation

Table 4.4-12 identifies mitigated localized impacts at the receptors nearest the IVIC Project area. After implementation of mitigation measure (**MM AQ-1**), construction-source emissions would not exceed the applicable SCAQMD LSTs thresholds and would be less-than-significant. Outputs from the model runs for mitigated localized construction-source emissions are provided in Appendices 3.6 through 3.10 of the AQIA.

Table 4.4-12
LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITH MITIGATION

On-Site Construction Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Roadway Installation				
Maximum Daily Emissions	**3.25**	**12.20**	**2.00**	**0.33**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Channel Improvement Installation				
Maximum Daily Emissions	**3.25**	**12.20**	**2.49**	**0.40**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Storage Reservoir				
Maximum Daily Emissions	**1.27**	**13.80**	**2.81**	**1.39**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Extraction Well				
Maximum Daily Emissions	**4.43**	**35.30**	**5.76**	**2.79**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Sewer Installation				
Maximum Daily Emissions	**3.25**	**12.20**	**0.48**	**0.11**
SCAQMD Localized Threshold	170	972	7	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Localized Operational Source Emissions

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed, the project would generate a nominal number of traffic trips in the context of on-going maintenance resulting in a negligible amount of new mobile source emissions. Additionally, all pumps associated with the project are assumed to be electrically powered and would not directly generate air emissions. However, the proposed project may include the use of an emergency diesel generators, allowing pump stations to run on backup power in case of emergency. If backup generator would be installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the SCAB. Upon compliance with SCAQMD permitting procedures, localized emissions from any potential diesel generator would not result in substantial pollutant concentrations capable of exceeding operational LST thresholds. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

CO "Hot Spot Analysis"

As discussed below, the project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 4.4-13.

Table 4.4-13
CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	4.2
Sunset Boulevard/Highland Avenue	4	4.5	3.9
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.8
Long Beach Boulevard/Imperial Highway	3	3.1	9.3

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's *2003 Air Quality Management Plan (2003 AQMP)* and the *1992 Federal Attainment Plan for Carbon Monoxide* (*1992 CO Plan*), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hour CO concentration measured at the Long Beach Boulevard and Imperial Highway intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the *2003 AQMP* was prepared. In contrast, the ambient 8-hour CO concentration within the project study area is estimated at 1.1 ppm—1.3 ppm. Therefore, even if the traffic volumes for the project were double or even triple of the traffic volumes generated at the Long Beach Boulevard and Imperial Highway intersection, coupled with the on-going improvements in ambient air quality, the project would not be capable of resulting in a CO "hot spot" at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact. Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 4.4-14. The busiest intersection evaluated was that at Wilshire

Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vph and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively. The *2003 AQMP* estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).

Table 4.4-14
TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard & Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard & Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard & Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard & Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

Potential Impacts to Sensitive Receptors

The potential impact of project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during project construction.

Additionally, the project will not exceed the SCAQMD localized significance thresholds during operational activity. Further project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of project operations.

Friant Ranch Case

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the California Supreme Court held that an EIR air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

As discussed in briefs filed in the Friant Ranch case, correlating a project's criteria air pollutant emissions to specific health impacts is challenging. The SCAQMD, which has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes noted that it may be "difficult to quantify health impacts for criteria pollutants." SCAQMD used O_3 as an example of why it is impracticable to determine specific health outcomes from criteria pollutants for all but very large, regional-scale projects. First, forming O_3 "takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources." Second, "it takes a large amount of additional precursor emissions (NO_X and VOCs) to cause a modeled increase in ambient ozone levels over an entire region," with a 2012 study showing that "reducing NO_X by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion."

SCAQMD concluded that it "does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects." The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) ties the difficulty of correlating the emission of criteria pollutants to health impacts to how ozone and particulate matter are formed, stating that "[b]ecause of the complexity of ozone formation, a specific tonnage amount of NO_X or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area." Similarly, the tonnage of PM "emitted does not always equate to the local PM concentration because it can be transported long distances by wind," and "[s]econdary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_X) and NO_X," meaning that "the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area." The disconnect between the amount of precursor pollutants and the concentration of ozone or PM formed makes it difficult to determine potential health impacts, which are related to the concentration of ozone and PM experienced by the receptor rather than levels of NO_X, SO_X, and VOCs produced by a source.

Most local agencies lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally specific thresholds of significance based on potential health impacts from an individual development project. The use of national or "generic" data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in cause asthma), existing scientific tools cannot accurately estimate health impacts of the project's air emissions without undue speculation. Instead, readers are directed to the project's air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the project's construction and long-term operation.

The LST analysis above determined that the project would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$.

As the project's emissions will comply with federal, state, and local air quality standards, the proposed project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

Health Risk Assessment

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, and has been derived from the Inland Valley Infrastructure Corridor Construction Health Risk Assessment City of Highland, City of San Bernardino, and County of San Bernadino that was prepared by Urban Crossroads, which is provided as Appendix 2 to Volume 2 of this DEIR. The Environmental Protection Agency's (U.S. EPA's) AERMOD model has been utilized. For purposes of this analysis, the Lakes American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) View (Version 12.0.0)

was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 23132.

Because the precise locations where construction activities would occur are not known at this time, modeling was performed using a single volume source covering an area of two acres. Consistent with the localized significance threshold analysis performed in the project air study, it was assumed that construction activities would occur over an approximately two-acre site at any given time. As such, construction emissions were modeled using a two-acre sized volume source with a release height of 5 meters and an initial vertical dimension of 1.4 meters, consistent with SCAQMD's localized significance threshold modeling methodology.

Additionally, because specific construction locations are not known at this time, the analysis considered a worst-case scenario where sensitive receptors were placed surrounding the construction area at a distance of 40 feet in order to account for varying wind speeds and directions in the project area.

Model parameters are presented in Table 4.4-15. The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Redlands monitoring station was used to represent local weather conditions and prevailing winds.

Table 4.4-15
AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (population 2,035,210)
Terrain (Flat/Elevated)	Flat
Averaging Time	**Period (5-year Meteorological Data Set)**
Receptor Height	**0 meters (Regulatory Default)**

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the IVIC Project boundaries, each volume source location, and receptor locations in the project vicinity. The AERMOD dispersion model summary output files for the project are presented in Appendix 2.2 of the HRA. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential property and not necessarily the boundaries of the properties containing these uses because the human receptors spend a majority of their time at the residence's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the project site.

For purposes of this HRA, receptors include residential land uses in the vicinity of the project. These receptors are included in the HRA since residents may be exposed at these locations over the course of project construction. This methodology is consistent with SCAQMD and Office of Environmental Health Hazard Assessment (OEHHA) recommended guidance.

Any impacts to residents or workers located further away from the project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the

HRA at the Maximally Exposed Individual Receptor and Maximally Exposed Individual Worker because concentrations dissipate with distance.

Because the specific locations at which construction activities would occur are not known at this time, the flat terrain option was utilized in AERMOD. However, due to the relatively flat terrain in the vicinity of the IVIC Project area, it is not anticipated that this would significantly alter the results compared to the use of the elevated terrain option.

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Table 4.4-16 summarizes the exposure parameters for Residents based on 2015 OEHHA Guidelines. Appendix 2.3 of the HRA includes detailed risk calculations.

Table 4.4-16
EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK

Scenario	Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
Category 1	0 to 2	1,090	10	0.97	1.00	254	8
Category 2	0 to 2	1,090	10	0.97	1.00	254	8
Category 3	0 to 2	1,090	10	0.60	1.00	157	8
Category 4	0 to 2	1,090	10	0.23	1.00	60	8
Category 5	0 to 2	1,090	10	0.97	1.00	254	8

Carcinogenic Chemical Risk

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, OEHHA recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. This calculation can be found in the HRA.

Non-Carcinogenic Exposures

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 $\mu g/m^3$.

Potential Project DPM-Source Cancer and Non-Cancer Risks

Without implementation of **MM AQ-1**, the maximum incremental cancer risk during roadway installation, channel improvement installation, and sewer installation would exceed the SCAQMD significance threshold of 10 in one million. Refer to Table 4.4-17, below. Without implementation of **MM AQ-1**, the maximum incremental cancer risk during roadway installation, channel improvement installation, and sewer installation would exceed the SCAQMD significance threshold of 10 in one million. Under all construction activities, without implementation of MM AQ-1, non-cancer risks would not exceed the applicable significance threshold of 1.0.

Table 4.4-17
SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS – WITHOUT MITIGATION

Construction Activity	Time Period	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
Category 1 – Roadway Installation	0.97 Year Exposure	11.29	10	YES
Category 2 – Channel Improvement Installation	0.97 Year Exposure	11.29	10	YES
Category 3 – Storage Reservoir	0.60 Year Exposure	6.09	10	NO
Category 4 – Extraction Well	0.23 Year Exposure	1.14	10	NO
Category 5 – Sewer Installation	0.97 Year Exposure	11.29	10	YES
Construction Activity	**Time Period**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Category 1 – Roadway Installation	Annual Average	0.02	1.0	NO
Category 2 – Channel Improvement Installation	Annual Average	0.02	1.0	NO
Category 3 – Storage Reservoir	Annual Average	0.03	1.0	NO
Category 4 – Extraction Well	Annual Average	0.04	1.0	NO
Category 5 – Sewer Installation	Annual Average	0.02	1.0	NO

Table 4.4-18 presents the estimated construction risk with mitigation that would result under each construction activity for sensitive receptors located within 40 feet of project construction activities. However, with implementation of **MM AQ-1**, the maximum incremental cancer risk would fall below the SCAQMD significance threshold of 10 in one million during all construction activities. Additionally, with implementation of **MM AQ-1**, non-cancer risks would not exceed the applicable significance threshold of 1.0 during all construction activities.

Table 4.4-18
SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS – WITH MITIGATION

Construction Activity	Time Period	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
Category 1 – Roadway Installation	0.97 Year Exposure	5.35	10	NO
Category 2 – Channel Improvement Installation	0.97 Year Exposure	4.24	10	NO
Category 3 – Storage Reservoir	0.60 Year Exposure	0.79	10	NO
Category 4 – Extraction Well	0.23 Year Exposure	0.17	10	NO
Category 5 – Sewer Installation	0.97 Year Exposure	4.24	10	NO
Construction Activity	**Time Period**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Category 1 – Roadway Installation	Annual Average	0.01	1.0	NO
Category 2 – Channel Improvement Installation	Annual Average	0.01	1.0	NO
Category 3 – Storage Reservoir	Annual Average	<0.01	1.0	NO
Category 4 – Extraction Well	Annual Average	0.01	1.0	NO
Category 5 – Sewer Installation	Annual Average	0.01	1.0	NO

As a result of the scale of the proposed IVIC, and the lack of specific project level proposals for development under the IVIC, it is not possibly to perform a Health Risk Assessment (HRA) that would accurately reflect risk to sensitive receptors within the project area. While the whole of the IVIC is anticipated to result in some health risk to sensitive receptors in the project area, the extent of such risks is unknown. Therefore, mitigation is required to ensure that future projects both prepare project-specific HRAs and implement project-specific mitigation to minimize health risk to nearby sensitive receptors.

*Mitigation Measures: Implementation of **MM AQ-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

MM AQ-1 would require that equipment greater than 150 horsepower meets Tier 4 emissions standards or better to minimize construction related NO_x emissions fall below SCAQMD emissions thresholds. Compliance with this Mitigation Measure, in addition to compliance with SCAQMD standards regulations, would ensure that air quality impacts on sensitive receptors would be less than significant.

AQ-4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The potential for the project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations. The proposed project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed project construction and operations would be less than significant and no mitigation is required.

Mitigation Measures: None required

Level of Significance After Mitigation: Less Than Significant

4.4.7 Mitigation Measures

The following mitigation measures have been developed for assignment to future specific project. As each City reviews individual project application in the future, those measures identified as applicable to a specific project, both construction and operation, will be assigned to a proposed project. This extensive list of measures was compiled based on previous input from SCAQMD for project in the general area.

AQ-1: The Construction Contractor shall ensure that off-road diesel construction equipment complies with Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications. This measure will apply to all future projects.

4.4.8 Cumulative Impacts

Level of Significance: Significant and Unavoidable

As previously shown in Table 4.4-3, the CAAQS designate the IVIC Project area as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the IVIC Project area as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution.* In this report the SCAQMD clearly states (Page D-3):

"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

4.4.9 Significant and Unavoidable Impacts

Development associated with implementation of the proposed IVIC and cumulative development would result not in unavoidable significant air quality impacts, through the implementation of **MM AQ-1**, intended to minimize NO_x emissions, as well as through compliance with SCAQMD regulations. Impacts would be less than significant.

4.5 BIOLOGICAL RESOURCES

4.5.1 Introduction

This subchapter evaluates the environmental impacts to biological resources from implementation of the proposed Inland Valley Infrastructure Corridor (IVIC) Project. These issues will be discussed below as set in the following framework:

4.5.1 Introduction
4.5.2 Regulatory Setting
4.5.3 Existing Conditions
4.5.4 Thresholds of Significance
4.5.5 Methodology
4.5.6 Environmental Impacts
4.5.7 Mitigation Measures
4.5.8 Cumulative Impacts
4.5.9 Significant and Unavoidable Impacts

The analysis in this subchapter is based on the following reference documents:

- HDR, 2024. *General Biological Assessment & Aquatic Resources Delineation Technical Report, Inland Valley Infrastructure Corridor Program.* Appendix 3, Volume 2 of this DEIR.
- Goulson, D, 2010. *Bumblebees: behavior, ecology, and conservation*. Oxford University Press, New York. 317pp.
- Hatfield, R., Jepsen, S., Foltz Jordan, S., Blackburn, M., Code, Aimee, 2018. A Petition to the State of California Fish and Game Commission to List Four Species of Bumblebees as Endangered Species.
- Thorp, Robbin W., Horning Jr, Donald S., and Dunning, Lorry L, 1983. *Bumble Bees and Cuckoo Bumble Bees of California*. Bulletin of the California Insect Survey 23.
- Williams, P. H., R. W. Thorp, L. L. Richardson, and S.R. Colla, 2014. *Bumble bees of North America: An Identification guide*. Princeton University Press, Princeton, New Jersey. 208pp

The following comments from regarding biological resources were received during the NOP comment period:

NOP Comment Letter #4 San Bernardino Valley Water Conservation District: The Comment Letter indicates that the San Bernardino Valley Water Conservation District owns properties to the east of the IVIC boundary within the Upper Santa Ana River Wash for purposes of groundwater recharge and is the Permittee for the Upper Santa Ana River Wash Habitat Conservation Plan. The Comment Letter requests that inclusion and analysis of the Upper Santa Ana River Wash Habitat Conservation Plan in the Biological Resources, Land Use & Planning, and other applicable sections.

Response: The proximity of the IVIC to the Upper Santa Ana River Wash Habitat Conservation Plan only occurs at the City Creek Channel and is acknowledged in the DEIR. However, the IVIC does not envision any activities that would impact the City Creek Channel (as opposed to the City Creek Bypass Channel). Therefore, any potential for conflict with the Wash Habitat Conservation Plan is negligible to nonexistent.

4.5.2 Regulatory Setting

State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Federal

Federal Endangered Species Act of 1973

Federal Endangered Species Act (FESA) (1973) protects plants and wildlife that are listed by the USFWS and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of FESA prohibits the taking of endangered wildlife, where taking is defined as any effort to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on Federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-Federal land in knowing violation of State law (16 U.S. Code [U.S.C.] 1538). Under Section 7 of FESA, Federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a BO, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. FESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features "essential to the conservation of the species," or which may require "special management consideration or protection..." (16 U.S..C § 1533[a][3].2; 16 U.S.C. § 1532[a]). This designated Critical Habitat is then afforded the same protection under the FESA as individuals of the species itself, requiring issuance of an incidental take permit prior to any activity that results in "the destruction or adverse modification of habitat .... determined .... to be critical" (16 U.S.C § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of FESA provides a means for authorizing the "take" of threatened or endangered species by Federal agencies, and applies to actions that are conducted, permitted, or funded by a Federal agency. The statute requires Federal agencies to consult with the USFWS or NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a proposed project "may affect" a listed species or destroy or modify critical habitat, the Lead Agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans, Section 10 of FESA, requires the acquisition of an incidental take permit from the USFWS by non-Federal landowners for activities that might incidentally harm (or "take") endangered or threatened wildlife on their land. To obtain an Incidental Take Permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

The Migratory Bird Treaty Act of 1918

The MBTA of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of CFR Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MTBA.

Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration,

and purification functions. Technical standards for delineating wetlands have been developed by the USACE which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the CWA, the USACE is responsible for regulating the discharge of dredged or fill material into waters of the U.S. The term "waters" includes certain wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR and by Federal case law.

Currently the applicability of the CWA in accordance with the "2023 Waters Rule" and must be harmonized with the Supreme Court of the U.S. (SCOTUS) rulings in *United States v. Riverside Bayview* (*Bayview*)[1], *Solid Waste Agency of Northern Cook County v. Army Corps* (*SWANCC*)[2], *Rapanos v. United States* (*Rapanos*)[3], and *Sackett v. EPA* (*Sackett II*)[4] rulings.

The following summarizes the changes that may occur as a result of this ruling. The 2023 Rule defines the following Waters of the U.S. There are no changes from the Pre-2015 Waters Rule in the definitions of a(1), a(2), and a(4) Waters. However, there are nuance changes to a(3) Waters, and there are substantial changes to identifying a(5) Waters. In general, the 2023 Rule does not consider "isolated" as described in SWANCC, nor does it consider a need to have ties to interstate commerce (Bayview). This rule relies entirely on the definitions below for Traditionally Navigable Waters, and their impoundment and tributaries, which are established by having a "Significant Nexus" by contributing to the biological, chemical, or physical characteristics of a Traditionally Navigable Water.

During the first two months of the 2023 Rule implementation, several court cases have enjoined the use of the rule and subsequently have reverted to the Pre-2015 Rule. Currently 27 states are using the Pre-2015 Rule. However, California has not been enjoined and continues to fall under the 2023 Rule. On May 26, 2023 the SCOTUS ruled on Sackett II. In this ruling they found the CWA's use of "waters" encompasses "only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic[al] features' that are described in ordinary parlance as 'streams, oceans, rivers, and lakes.'" 547 U. S., at 739 (quoting Webster's New International Dictionary 2882 (2d ed. 1954) (Webster's Second); original alterations omitted).

The SCOTUS appears to have struck down the use of the Significant Nexus Analysis, use of "Similarly Situated Waters" being combined to have a biological, chemical, or biological nexus to a Traditionally Navigable Water. Further, the Court has determined that Waters of the U.S. extend only to tributaries of traditionally navigable waters that have relatively permanent flows, such that they flow or are inundated unless there is unusually prolonged drought, or the ebb of a tide.

The USACE and EPA will continue to implement the Water of the U.S. Rule under these revised definitions, which may affect the applicability of USACE issued permits for elements of the Program and other projects. The EPA and the USACE will determine CWA jurisdiction over a project site and complete the "significant nexus test" as detailed in the guidelines and the USACE-approved Jurisdictional Determination Form.

Rivers and Harbors Act 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable waters of the U.S.

[1] *United States v. Riverside Bayview Homes, Inc*. (1985) 474 U.S. 121.
[2] *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers* (2001) 531 U.S. 159.
[3] *Rapanos v. United States* (2006) 547 U.S. 715.
[4] Sackett v. Environmental Protection Agency (2023) 598 U.S. _____

Fish and Wildlife Coordination Act
The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any Federal project where any body of water is impounded, diverted, deepened, or otherwise modified. Implementing agencies are required to consult with the USFWS and the appropriate State wildlife agency.

Executive Orders

Invasive Species—Executive Order (EO) 13112 (1999)
Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

Protection of Wetlands—Executive Order 11990 (1977)
Issued on May 24, 1977, helps avoid the long-term and short-term adverse impacts associated with destroying or modifying wetlands and avoiding direct or indirect support of new construction in wetlands when there is a practicable alternative.

Migratory Bird—EO 13186 (2001)
Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs Federal agencies to implement the MBTA. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of NEPA and directs Federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act
The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the MBTA (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the U.S. or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the U.S. and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the U.S., the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

State

California Endangered Species Act
California Endangered Species Act (CESA) is similar to the main provisions of FESA and is administered by CDFW. Unlike its Federal counterpart, CESA applies the take prohibitions to not only listed threatened and endangered species, but also to State candidate species for listing. Section 86 of the FGC defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife, which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

Clean Water Act Section 401/Porter-Cologne Act
California regulates water quality related to discharge of dredge or fill material into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and, when

involving waters of the U.S., under its authority pursuant to Section 401 of the CWA. Section 401 compliance is a Federal mandate regulated by the State. The local RWQCB have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. In addition, the RWQCBs regulate water quality for all waters of the State, which may also include isolated wetlands, as defined by the Porter-Cologne Act (Porter Cologne; Ca. Water Code, Div. 7, Section 13000 et seq.). The RWQCB regulates discharges that can affect water quality of both waters of the U.S. and waters of the State. If there is no USACE jurisdiction over waters of the U.S., then the RWQCB regulates water quality of waters of the State through a Waste Discharge Permit, as required to comply with the Porter-Cologne Act when a Section 401 water quality certification would not apply.

Sections 1600 through 1606 of the California Fish and Game Code

This section requires that a Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Fish and Game Codes

All birds, and raptors specifically, and their nests, eggs and parts thereof are protected under Sections 3503.5 of the FGC. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) is considered a violation of this code. Additionally, Section 3513 of the FGC prohibits the take or possession of any migratory non-game bird listed by the MBTA. The CDFW has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (California Fish & Game Code Section 1802). The CDFW, as a trustee agency under State CEQA Guidelines Section 15386, provides expertise in reviewing and commenting on environmental documents and makes and regulates protocols regarding potential negative impacts to biological resources held in California.

Fully Protected Species

Four sections of the FGC list 37 fully protected species (i.e., Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and State that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

Bird Nesting Protections

Bird nesting protections in Sections 3503, 3503.5, 3511, and 3513of the FGC include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), or Strigiformes (owls).
- Section 3511 prohibits the take or possession of fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof,

as designated in the MBTA. To avoid violation of the take provisions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

California Migratory Bird Act-Assembly Bill 454

Existing Federal law, the MBTA, provides for the protection of migratory birds, as specified. The MBTA also authorizes states and territories of the U.S. to make and enforce laws or regulations that give further protection to migratory birds, their nests, and eggs. Existing State law makes unlawful the taking or possession of any migratory nongame bird, or part of any migratory nongame bird, as designated in the MBTA, except as provided by rules and regulations adopted by the U.S. Secretary of the Interior under provisions of the MBTA……. (a) It is unlawful to take or possess any migratory nongame bird as designated in the MBTA (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the U.S. Secretary of the Interior under the MBTA.

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (FGC Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA, discussed above at 4.5.4.2.1, provides further protection for rare and endangered plant species, but the NPPA remains part of the FGC.

Natural Communities Conservation Planning Act

This Act was enacted to encourage broad-based planning to provide for effective protection and conservation of the State's wildlife resources while continuing to allow appropriate development and growth (FGC Sections 2800 to 2835). Natural Community Conservation Plans (NCCP) may be implemented, which identify measures necessary to conserve and manage natural biological diversity within the planning area, while allowing compatible and appropriate economic development, growth, and other human uses.

Local

City of San Bernardino

The City identifies the following as part of its vision for future: "Minimize impacts to biological resources and natural features from new development." (Natural Resources and Conservation Element, P. 12-2) In the Land Use Element, the following Conservation Goals and Policies are outlined.

Lane Use Element: Goal 2.6

Control development and the use of land to minimize adverse impacts on significant natural, historic, cultural, habitat, and hillside resources.

Lane Use Element: Policy 2.6.2

Balance the preservation of plant and wildlife habitats with the need for new development through site plan review and enforcement of the California Environmental Quality Act (CEQA).

Lane Use Element: Policy 2.6.3

Capitalize on the recreational and environmental resources offered by the Santa Ana River and Cajon Wash by requiring the dedication and development of pedestrian and greenbelt linkages.

Biological Resources are discussed beginning on Page 12-3 of the Natural Resources and Conservation Element of the City General Plan. The following Goals and Policies are included under the Biological Resources topic.

Natural Resources and Conservation Element: Goal 12.1
Conserve and enhance San Bernardino's biological resources.

Natural Resources and Conservation Element: Policy 12.1.1
Acquire and maintain current information regarding status and location of sensitive biological elements (species and natural communities) within the planning area, as shown on Figure NRC-1. *[Figure NRC-1 (Potential Habitat for Sensitive Wildlife) is reproduced in this document as Figure 4.5-1.]*

Natural Resources and Conservation Element: Policy 12.1.2
Site and develop land uses in a manner that is sensitive to the unique characteristics of and that minimizes the impacts upon sensitive biological resources.

Natural Resources and Conservation Element: Policy 12.1.3
Require all proposed land uses in the "Biological Resource Management Area" (BRM), Figure NRC-2, be subject to review by the Environmental Review Committee (ERC). *[Figure NRC-2 (Biological Resource Areas) is reproduced in this document as Figure 4.5-2.]*

Natural Resources and Conservation Element: Policy 12.1.4
Require that development in the BRM:
a. Submit a report by a qualified professional(s) that addresses the proposed project's impact on sensitive species and habitat, especially those that are identified in State and Federal conservation programs;
b. Identify mitigation measures necessary to eliminate significant adverse impacts to sensitive biological resources;
c. Define a program of monitoring, evaluating the effectiveness of, and ensuring the adequacy of the specified mitigation measures; and
d. Discuss restoration of significant habitats.

Natural Resources and Conservation Element: Goal 12.2
Protect riparian corridors to provide habitat for fish and wildlife.

Natural Resources and Conservation Element: Policy 12.2.1
Prohibit development and grading within fifty (50) feet of riparian corridors, as identified by a qualified biologist, unless no feasible alternative exists.

Natural Resources and Conservation Element: Policy 12.2.2
Generally, permit the following uses within riparian corridors:
a. Education and research, excluding buildings and other structures;
b. Passive (non-mechanized) recreation;
c. Trails and scenic overlooks on public land(s);
d. Fish and wildlife management activities;
e. Necessary water supply projects;
f. Resource consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code;
g. Flood control projects where no other methods are available to protect the public safety;
h. Bridges and pipelines where supports are not in significant conflict with corridor resources.

Natural Resources and Conservation Element: Policy 12.2.3
Pursue voluntary open space or conservation easements to protect sensitive species or their habitats.

Natural Resources and Conservation Element: Policy 12.2.4
Development adjacent to riparian corridors shall:
a. Minimize removal of vegetation;
b. Minimize erosion, sedimentation, and runoff by appropriate protection or vegetation and landscape;
c. Provide for sufficient passage of native and anadromous fish as specified by the California Department of Fish and Game;
d. Minimize wastewater discharges and entrapment;

e. Prevent groundwater depletion or substantial interference with surface and subsurface flows; and provide for natural vegetation buffers.

Natural Resources and Conservation Element: Policy 12.2.5
Permit modification of the boundaries of the designated riparian corridors based on field research and aerial interpretation data as part of biological surveys.

Natural Resources and Conservation Element: Goal 12.3
Establish open space corridors between and to protected wildlands.

Natural Resources and Conservation Element: Policy 12.3.1
Identify areas and formulate recommendations for the acquisition of property, including funding, to establish a permanent corridor contiguous to the National Forest via Cable Creek and/or Devil Canyon. The City shall consult with various Federal, State and local agencies and City departments prior to the adoption of any open space corridor plan.

Natural Resources and Conservation Element: Policy 12.3.2
Seek to acquire real property rights of open space corridor parcels identified as being suitable for acquisition.

Natural Resources and Conservation Element: Policy 12.3.3
Establish the following habitat types as high-priority for acquisition as funds are available:
a. Habitat of endangered species;
b. Alluvial scrub vegetation;
c. Riparian vegetation dominated by willow, alder, sycamore, or native oaks; and
d. Native walnut woodlands.

Natural Resources and Conservation Element: Policy 12.3.4
Preserve and enhance the natural characteristics of the Santa Ana River, City Creek, and Cajon Creek as habitat areas.

Natural Resources and Conservation Element: Policy 12.3.5
Prevent further loss of existing stands of Santa Ana River Wooly-star (*Eriastrum densifolium sanctorum)* and Slender-horned Centrostegia (*Centrostegia leptoceras).*

City of Highland
In the City's General Plan "Preserving Our Natural Setting" is one of the five general themes of the General Plan. Specifically, "We have always been grateful for the natural frame within which Highland nestles between the expansive San Bernardino National Forest and the upper reaches of the Santa Ana River, just as it drops down out of the San Bernardino Mountains at Seven Oaks Dam. Some of this natural terrain defines important spaces within Highland as well" (Page 1-2, City of Highland General Plan). Two elements of the General Plan contain specific references to natural habitats, Land Use (Compatibility and Preserving Natural Resources) and Conservation and Open Space (Biological Resources). Refer to **Figure 4.5-1**, (General Plan Figure 5.1) which contains a map of sensitive biological resource in the City of Highland. Pertinent Goals and Policies regarding biological resources in the General Plan include the following.

Lane Use Element: Goal 2.6
Maintain an organized pattern of land use that minimizes conflicts between adjacent land uses.

Lane Use Element: Policy 7
Require new or expanded uses to provide mitigation or buffers, including greenbelts or landscaping, between dissimilar uses or existing uses where potential adverse impacts could occur.

Lane Use Element: Policy 9
Require landscape and/or open space buffers to maintain a natural edge for proposed private development directly adjacent to natural, public open space areas.

Lane Use Element: Goal 2.7
Encourage natural resource and open space preservation through appropriate land use policies that recognize their value and through the conservation of areas required for the protection of public health and safety.

Lane Use Element: Policy 4
Preserve areas designated as Open Space to provide for recreation, preservation of scenic and environmental values, managed production of resources (agriculture, water reclamation and conservation, mineral extraction) and protection of public safety.

Lane Use Element: Policy 5
Promote joint development and use of open space resources with adjacent jurisdictions.

Conservation and Open Space Element: Goal 5.3
Continue to work with the East Valley Water District to meet the current and future water needs of its residents (see Public Services and Facilities Element, Section 4.2).

Conservation and Open Space Element: Policy 1
To the extent possible, preserve floodplain and aquifer recharge areas in their natural condition.

Conservation and Open Space Element: Goal 5.4
Continue to preserve and enhance the water quality and natural habitat of its waterways.

Conservation and Open Space Element: Policy 1
In coordination with the East Valley Water District and the County of San Bernardino, continue to maintain and improve the hydrology and natural quality of the watersheds of Bledsoe Creek, Plunge Creek, Elder Gulch, City Creek, Sand Creek, Warm Creek, Old City Creek Overflow Channel, Bald Ridge Creek, Santa Ana Canyon, and the Santa Ana River.

Conservation and Open Space Element: Policy 2
Review and revise, as necessary, zoning and subdivision ordinance provisions related to protection of the City's watersheds, especially in areas that abut creek systems and natural vegetation and open space areas, to enhance the natural appearance of watershed areas without compromising flood control and safety considerations.

Conservation and Open Space Element: Policy 3
Cooperate with other agencies and participate in multijurisdictional efforts to improve watershed management practices.

Conservation and Open Space Element: Policy 4
Reevaluate the effect of engineering practices and specifications relative to storm channel design to avoid their appearance as "concrete ditches."

Conservation and Open Space Element: Goal 5.7
Maintain, protect and preserve biologically significant habitats, including riparian areas, woodlands and other areas of natural significance.

Conservation and Open Space Element: Policy 1
Continue participation, in cooperation with relevant agencies and jurisdictions, in the preparation, planning and implementation of Habitat Conservation Plans and preservation areas.

Conservation and Open Space Element: Policy 2
Ensure that all development, including roads proposed adjacent to riparian and other biologically sensitive habitat, avoid significant impacts to such areas.

Conservation and Open Space Element: Policy 3
Require that new development proposed in such locations be designed to:
- Minimize or eliminate the potential for unauthorized entry into the sensitive area;

- Create buffer areas adjacent to the sensitive area, incorporating the most passive uses of the adjacent property;
- Protect the visual seclusion of forage areas from road intrusion by providing vegetative buffering;
- Provide wildlife movement linkages to water sources and other habitat areas;
- Provide native vegetation that can be used by wildlife for cover along roadsides; and
- Protect wildlife crossings and corridors.

Conservation and Open Space Element: Policy 4
Design lighting systems so as to avoid intrusion of night lighting into the sensitive area.

Conservation and Open Space Element: Policy 5
As part of the environmental review process, require that projects determined to be located within a biologically sensitive area prepare documentation on the impacts of such development along with mitigation and mitigation monitoring programs.

Conservation and Open Space Element: Policy 6
Ensure that required biological assessments are conducted in cooperation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

Conservation and Open Space Element: Policy 7
Within existing natural and naturalized areas, preserve existing mature trees and vegetation.

Conservation and Open Space Element: Policy 8
Within rural and hillside residential areas, permit only such natural vegetation to be removed as is necessary to locate home sites, construct access roads and ensure fire safety.

Conservation and Open Space Element: Policy 9
Enforce requirements that healthy, mature individual specimen trees be preserved in place, as per the City Municipal Code.

Conservation and Open Space Element: Policy 10
Require builders and developers to prune, treat and maintain existing trees and plant new ones within future rights-of-way, public lands, common areas and development projects.

Conservation and Open Space Element: Policy 11
Enforce the tree preservation ordinance as a means of managing the preservation of trees and their removal, where necessary.

Conservation and Open Space Element: Policy 12
Require replacement at a 2:1 ratio of all mature trees (those with 24-inch diameters or greater measured 4½ feet above the ground) that are removed.

Conservation and Open Space Element: Policy 13
Develop an outreach program to schools and the community about the preservation and management of the City's rich biological resources.

4.5.3 Existing Conditions: Biological Resources

4.5.3.1 Project Setting

The Biological Resources Assessment (BRA) was prepared for the IVIC to address potential effects of the Project to designated critical habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS) and/or the California Native Plant Society (CNPS). HDR assessed the open lands within the IVIC Project area for sensitive species with attention focused on those State- and/or Federally-listed as threatened or endangered species and California species of special concern that have

been documented in the project vicinity and/or whose habitat requirements are present within the vicinity of the project site.

In addition to the BRA and focused surveys, HDR's Regulatory Specialists conducted a Jurisdictional Delineation (JD) of the IVIC area. The purpose of the JD was to determine the extent of State and Federal jurisdictional waters within the project area potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the California Fish and Game Code (FCG).

Project area is located approximately 60 miles east of Los Angeles just south of the foothills of the San Bernardino Mountains. It is centrally located between three major freeways (State Route (SR)-210 to the north and east, the I-215 to the west, and the I-10 to the south) and regional attractions including the Loma Linda University and Medical Center (5 miles southwest of Project area), University of Redlands (8 miles southeast of Project area), the San Bernardino International Airport (SBIA), and commercial shopping destinations in Downtown San Bernardino and the Highland Town Center, both within 5 miles of the Project area (see **Figure 3-1**, Regional Location).

The IVIC Project area is located immediately north of the SBIA and the Project area extends to the north side of 6th Street. The western boundary extends to the terminus of the City Creek Bypass Channel, where it joins with Twin Creek, which is about a quarter of a mile to the east of Waterman Avenue. The IVIC Project area is bounded to the east by the SR-210 freeway. Third Street in both cities and Fifth Street in the City of Highland serve as the southern boundary of the Project area.

The IVIC Project area is situated in the geographically based ecological classification known as the Inland Valleys – Level IV ecoregion, of the Southern California/Northern Baja Coast – Level III ecoregion. The goal of regional ecological classifications is to reduce variability based on spatial covariance in climate, geology, topography, climax vegetation, hydrology, and soils. The Inland Valleys ecoregion is a heavily urbanized ecoregion that historically consisted of the alluvial fans and basin floors immediately south of the San Gabriel and San Bernardino Mountains.

Elevations within the IVIC Project area range from approximately from 1,470 feet to 1,500 feet above mean sea level (amsl). The terrain is essentially level, with a gradual increase in elevation to the north and east. The only distinctive topographic feature that exists adjacent to the proposed Project footprint is City Creek, which flows under 5th Street between Church Avenue and SR-210. Surface runoff within the Project area generally flows to the south and west.

The IVIC Project area is within a hot-summer Mediterranean climate (Csa), subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures within the Program area peak at 96.2 degrees Fahrenheit (° F) in July and August and fall to an average annual minimum temperature of 38.5° F in January. Average annual precipitation is greatest from November through April and reaches a peak in February (3.25 inches). Precipitation is lowest in the month of July (0.04 inches). Annual total precipitation averages 16.12 inches.

Hydrologically, the IVIC Project area is situated within the Bunker Hill Hydrologic Sub-Area (HSA 801.52). The Bunker Hill HSA comprises a 124,791-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). The Santa Ana River is the major hydrogeomorphic feature

within the Santa Ana Watershed. The closest tributary to the Santa Ana River is City Creek, which flows north to south through the easternmost end of the Project area.

According to the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA- NRCS) Web Soil Survey, the IVIC Program area is mapped within the following soil types (refer to Appendix 5, which contains the Soil Map of the Project area):

- Tujunga gravelly loamy sand, 0 to 9 percent slopes: Tujunga gravelly loamy sands consist of gravelly loamy sand and gravelly sand horizons comprised of alluvium derived from granite. This soil type is somewhat excessively drained, with very low runoff, and has not been identified as a hydric soil.
- Tujunga loamy sand, 0 to 5 percent slopes: Tujunga loamy sands consist entirely of loamy sand horizons comprised of alluvium derived from granite. This soil type is also somewhat excessively drained, with very low runoff, and has not been identified as a hydric soil.
- Hanford coarse sandy loam, 2 to 9 percent slopes: Hanford family soils consist of sandy loam and fine sandy loam horizons comprised of alluvium derived from granite. This soil type is well drained, with low runoff, and has not been identified as a hydric soil.
- Psamments, Fluvents and Frequently flooded soils: Psamments and Fluvents consist of sand, fine sand, and stratified gravelly sand to gravelly loamy sand horizons comprised of sandy alluvium. These soils are somewhat excessively drained, with very low runoff, and have not been identified as hydric soils.
- Grangeville fine sandy loam, saline-alkali: Grangeville family soils consist of fine sandy loam and sandy loam horizons comprised of alluvium derived from granite. This soil type is somewhat poorly drained, with low runoff, and has a minor component that has been identified as a hydric soil.
- Soboba stony loamy sand, 2 to 9 percent slopes: Soboba stony loamy sands consist of stony loamy sand, very stony loamy sand, and very stony sand horizons comprised of alluvium derived from granite. This soil type is excessively drained, with low runoff, and has not been identified as a hydric soil.
- Soboba gravelly loamy sand, 0 to 9 percent slopes: Soboba gravelly loamy sands consist of gravelly loamy sand, very gravelly loamy sand, and very stony sand horizons comprised of alluvium derived from granite. This soil type is excessively drained, with low runoff, and has not been identified as a hydric soil.

Given that the roadway and sewer improvement components are entirely within existing paved streets and adjacent curb, gutter, and sidewalks, soils within the proposed footprint for these Project components are likely comprised mostly of fill material.

The IVIC Project area is in an urban landscape containing a mix of uses, with most recent growth consisting of warehouses, logistics centers, and other business park uses, consistent with the City of Highland's General Plan. Much of the land in the center of the Project area is designated for residential use by the City of San Bernardino's current General Plan, which is presently being updated. Adjacent properties consist of vacant land to the west and south, single-family homes to the east, and educational facilities (Liberty High School) to the north. Existing land uses surrounding the IVIC Program area include:

- North – Immediately north of 6th Street, single- and multi-family residential properties
- East – Immediately west of Interstate 210, industrial land uses
- South – SBIA and industrial uses
- West – Commercial, residential, and institutional

A small man-made drainage channel (City Creek Bypass Channel) crosses through the central-southern portion of the Project area and continues west to its confluence with East Twin Creek, which is the western limit of the IVIC Project area. Most natural vegetation has been removed by past agricultural activities, and most trees and shrubs occurring in the Project area are found where limited human landscaping occurs. However, 5th Street crosses City Creek between Church Avenue and SR-210 at the easternmost end of the Program area, and City Creek supports a mix of *Lepidospartum squamatum Shrubland Alliance* (scale broom scrub) and *Baccharis salicifolia Shrubland Alliance* (mulefat thicket) habitats along its floodplain. The portion of 5th Street between Church Avenue and SR-210 is also adjacent the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) boundary, which encompasses the entire span of City Creek and its adjacent terrace on both sides of 5th Street between Church Avenue and SR-210. The San Bernardino Valley Water Conservation District is the lead Permittee for the Wash Plan and its Task Force partners include the City of Highland and County of San Bernardino.

4.5.3.2 Existing Biological and Physical Conditions

Habitat

The proposed Project footprint is completely disturbed and no longer supports any native habitat. Areas adjacent the proposed Project footprint consist mostly of commercial/industrial and residential development and disturbed vacant land, with some native scale broom scrub or Riversidean Alluvial Fan Sage Scrub (RAFSS) and mulefat thicket (Southern Riparian Scrub) habitat present adjacent the easternmost portion of 5th Street, between Church Avenue and SR-210. Adjacent vacant land throughout most of the IVIC Program area supports dense ruderal vegetation dominated by nonnative grasses (Avena spp., Bromus spp.), mustard (Hirschfeldia incana), and Russian thistle (Salsola tragus). City Creek Bypass Channel is mostly unvegetated, with scattered patches of nonnative grasses, spiny sowthistle (Sonchus asper), and other ruderal species.

City Creek supports a mix of RAFSS and riparian scrub habitat adjacent 5th Street, between Church Avenue and SR-210. The active City Creek floodplain consists of sparsely vegetated braided channel dominated by mule fat and other shrubby vegetation, with scattered emergent Fremont cottonwood (Populus fremontii). RAFSS habitat on the City Creek channel slopes and adjacent terrace is dominated by deerweed (Acmispon glaber), California sagebrush (Artemisia californica), California buckwheat (Eriogonum fasciculatum), brittlebush (Encelia farinosa), and telegraph weed (Heterotheca grandiflora).

A complete list of plant species identified within the Program area during the BRA-ARD field survey is included in Appendix C of the BRA provided as Appendix 3 to Volume 2 of this DEIR.

Wildlife

The IVIC Project area is in an urban setting and most species expected to occur within the Project area are those adapted to disturbed environments. During the field surveys, special attention was focused on those Project components that are adjacent vacant parcels and other undeveloped areas (i.e. City Creek), where special status species are more likely to occur.

Amphibians and Reptiles

The only herp species observed or otherwise detected within the Project Area during the reconnaissance level survey were Great Basin fence lizard (*Sceloporus occidentalis longipes*) and western side-blotched lizard (*Uta stansburiana elegans*).

Birds were the most observed wildlife group within the Project area and species observed or otherwise detected during the field surveys included:

- Red-tailed Hawk (*Buteo jamaicensis*)
- California Quail (*Callipepla californica*)
- Killdeer (*Charadrius vociferus*)
- Lesser Nighthawk (*Chordeiles acutipennis*)
- Rock Pigeon (*Columba livia*)
- Common Raven (*Corvus corax*)
- American Kestrel (*Falco sparverius*)
- House Finch (*Haemorhous mexicanus*)
- Dark-eyed Junco (*Junco hyemalis*)
- Song Sparrow (*Melospiza melodia*)
- California Towhee (*Melozone crissalis*)
- Northern Mockingbird (*Mimus polyglottos*)
- House Sparrow (*Passer domesticus*)
- Cliff Swallow (*Petrochelidon pyrrhonota*)
- Bushtit (*Psaltriparus minimus*)
- Great-tailed Grackle (*Quiscalus mexicanus*)
- Say's Phoebe (*Sayornis saya*)
- Lesser Goldfinch (*Spinus psaltria*)
- Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
- Eurasian Collared-Dove (*Streptopelia decaocto*)
- European Starling (*Sturnus vulgaris*)
- Western Kingbird (*Tyrannus verticalis*)
- Mourning Dove (*Zenaida macroura*)

Mammals

Mammal species observed or otherwise detected within the Project area during the field surveys included California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), and domestic cats and dogs. It should be noted that many mammal species expected to occur in the Project area are nocturnal and not likely to be observed during the daytime field surveys. Additionally, no focused small mammal trapping surveys were conducted as part of the BRA field survey effort.

4.5.3.3 Special Status Species and Habitats

According to the CNDDB, 96 sensitive species (39 plant species, 57 animal species) and six sensitive habitats have been documented in the *San Bernardino South, Redlands, San Bernardino North,* and *Harrison Mountain* USGS 7.5-Minute Series Quadrangles. This list of sensitive species and habitats includes any state and/or federally listed or proposed for listing as threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. “Special Animals” is a general term that refers to all the taxa the CNDDB is interested in tracking, regardless of their legal or protection

status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

The USFWS IPaC search identified four additional special status species as potentially occurring in the regional vicinity of the IVIC Project. A complete list of all special status species identified by the IPaC, CNDDB, and CNPSEI databases as potentially occurring in the Project vicinity is provided in Appendix F of the BRA. Of the 100 sensitive species identified by the CNDDB and IPaC queries, 28 are state and/or federally listed or proposed for listing as threatened or endangered species. However, only the following 13 have been documented in the Program vicinity (within approximately 3 miles):

- Marsh sandwort (*Arenaria paludicola*)
- Swainson's hawk (*Buteo swainsoni*)
- Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
- Slender-horned spineflower (*Dodecahema leptoceras*)
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)
- Quino checkerspot butterfly (*Euphydryas editha quino*)
- California black rail (*Laterallus jamaicensis coturniculus*)
- Gambel's water cress (*Nasturtium gambelii*)
- Steelhead – southern California DPS (*Oncorhynchus mykiss irideus* pop. 10)
- Coastal California gnatcatcher (*Polioptila californica californica*)
- Least Bell's vireo (*Vireo bellii pusillus*)

However, the documented occurrences for marsh sandwort, salt marsh bird's-beak, western yellow- billed cuckoo, Quino checkerspot butterfly, California black rail, Gambel's water cress, and southern steelhead represent historic occurrences. These species are no longer considered to be extant within the IVIC Project vicinity and no suitable habitat exists within the Program area for any of these species. Therefore, the IVIC Project will not affect these species and no further discussion of these species is warranted.

Although not a state or federally listed as threatened or endangered species, BUOW are considered a state SSC and a federal Bird of Conservation Concern (BCC), and this species is protected by international treaty under the Migratory Bird Treaty Act of 1918 (MBTA) and by State law under the California FGC (FGC #3513 & #3503.5). Additionally, this species has previously been documented in the City Creek Bypass Channel component of the IVIC Project. Therefore, BUOW will be included in the discussion below.

Special Status Species

The proposed Project footprint consists entirely of existing roadways and man-made flood control channel (City Creek Bypass Channel). The environmental conditions within the proposed Project footprint are not suitable to support any of the special status plant species documented in the IVIC Program vicinity, including the state and federally listed as endangered slender-horned spineflower or Santa Ana River woollystar. However, there is some suitable habitat within and/or adjacent the proposed Project footprint to support several special status wildlife species documented in the IVIC Project vicinity.

In addition to the discussion below, an analysis of the likelihood for occurrence of all CNDDB sensitive species documented in the *San Bernardino South, Redlands, San Bernardino North,* and *Harrison Mountain* quads is provided in Appendix A of the BRA provided as Appendix 3 to

Volume 2 of this DEIR. This analysis considers species' range as well as documentation within the vicinity of the IVIC Program area and includes the habitat requirements for each species and the potential for their occurrence on site, based on required habitat elements and range relative to the current site conditions.

Swainson's Hawk – Threatened (State)

The state listed as threatened Swainson's hawk (SWHA) is a medium-sized raptor with relatively long, pointed wings that curve up while in flight. This species is a long-distance, neotropical migrant, nesting in northwestern Canada, the western U.S., and Mexico, and wintering in the open pampas and agricultural areas of South America (Argentina, Uruguay, southern Brazil). SWHA rely on grasslands for foraging and have adapted to using agricultural fields as replacement for native grasslands. SWHA generally nest near water in or near riparian habitats, although they have been known to nest in small clusters of trees within a larger grassland. Although the Central Valley and Great Basin areas of northern California currently support the largest breeding populations in California, small populations of SWHA have been documented in isolated desert areas of the western Mojave Desert, the greater Antelope Valley near Lancaster, and in the Owen's Valley, along the eastern edge of the Sierra Nevada. SWHA populations have declined dramatically in California since the early 1900s, from a historic population estimate of as many as 17,136 breeding pairs, down to an estimated 375 pairs in 1979 and more recently (2005), as many 2,081 pairs. Threats resulting in SWHA population declines include loss and/or degradation of nesting, foraging and wintering habitats, pesticide poisoning and shooting during migration or on their wintering grounds.

> *Findings*: The only SWHA occurrence documented in the 4-quad CNDDB query is a historic occurrence from sometime between 1880 and 1920 recorded from the vicinity of San Bernardino. Migratory SWHA have been observed near the SBIA and there is some suitable roosting and foraging habitat adjacent portions of the proposed Project footprint (pers. obs.). However, the IVIC Project area is outside the current known breeding range for this species and there is no suitable SWHA breeding habitat within the Project area. Therefore, implementation of the IVIC Project will not affect Swainson's hawk.

San Bernardino Kangaroo Rat – Endangered (Federal/State)

The state and federally listed as endangered San Bernardino kangaroo rat (SBKR) is one of three recognized subspecies of Merriam's kangaroo rat (*D. merriami*) in California. The Merriam's kangaroo rat is a small, burrowing rodent species that can be found within inland valleys and deserts of southwest United States of America and northern Mexico. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*) and the Stephens kangaroo rat (*Dipodomys stephensi*) occur in areas occupied by SBKR, but these other species have a wider habitat range. SBKR, however, has a restricted southern California distribution, confined to certain inland valley scrub communities and, more particularly, to scrub communities occurring along rivers, streams, and drainages within the San Bernardino, Menifee, and San Jacinto valleys. Most of these drainages have been historically altered due to a variety of reasons including, mining, off-road vehicle use, road and housing development, and flood control efforts. This increased use of river floodplain resources resulted in a reduction in both the amount and quality of habitat available for SBKR.

The areas which SBKR occupy are subjected to periodic flooding and hence, the dominant vegetation type (alluvial fan sage scrub) is described in general terms as having three successional phases: pioneer, intermediate, and mature as determined by elevation and distance from the main channel and time since previous flooding. Vegetation cover generally increases with distance from the active stream channel. The pioneer phase is subject to frequent flood

disturbance. The intermediate phase, defined as the area between the active channel and mature terraces, is subject to periodic flooding at longer intervals. The vegetation on intermediate terraces is relatively open. As alluvial fan scrub vegetation ages in the absence of flooding, the suitability of this habitat for the SBKR declines.

The USFWS listed SBKR as endangered on September 24, 1998 and set aside 33,295 acres of critical habitat for the SBKR in 2002. The USFWS then revised that decision in 2008 after a lawsuit and cut the designation down to 7,779 acres in Riverside and San Bernardino counties. On January 10, 2011, a federal court struck down the 2008 designation. The ruling concluded that the USFWS improperly relied on "core habitat" to define critical habitat for the SBKR rather than specifying the physical and biological features essential for the kangaroo rat's conservation, as the law requires. The ruling reinstated the 2002 designation. The 2002 critical habitat rule for SBKR defined four Primary Constituent Elements (PCEs) that are essential to the conservation of SBKR. These PCEs are as follows:

1. Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam;
2. Alluvial sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy;
3. River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historical range of the SBKR; and
4. Upland areas proximal to floodplains with suitable habitat.

Findings: According to the CNDDB and USFWS threatened and endangered species occurrence GIS overlay, there are numerous SBKR occurrences documented adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek. The most recent of these occurrences are from 2022. Therefore, SBKR are presumably present adjacent 5th Street, between Church Avenue and SR-210. No habitat suitable to support SBKR occurs elsewhere within or adjacent the proposed Project footprint and the IVIC Program will not result in any direct "take" of this species. However, it may be necessary to implement specific avoidance measures during the construction of any Project components located between Church Avenue and SR-210, to ensure the Project does not affect SBKR. Recommended SBKR avoidance measures are discussed under the impact analysis presented under Subsection 4.5.6.

Coastal California Gnatcatcher – Threatened (Federal)

The federally listed as threatened coastal California gnatcatcher (CAGN) is a resident (non-migratory) small songbird (passerine) which typically nests and forages in coastal sage scrub vegetation in southern California year-round. CAGN occur in dynamic and successional sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. This species often nests in California sagebrush.

CAGN was federally listed as threatened in 1993 and critical habitat for this species was designated by the USFWS in 2000 and revised in 2007. The Project area is not within USFWS designated critical habitat for this species. The PCEs identified by the USFWS for CAGN consist of the following:

1. Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, maritime succulent scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that

provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and
2. Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

Findings: According to the CNDDB, the nearest documented CAGN occurrence (1995) is approximately 1.8 miles southeast of the IVIC Project area. There is suitable RAFSS habitat (PCE 1) and riparian scrub habitat (PCE 2) for this species adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek. Thus, there is a moderate potential for CAGN to occur adjacent 5th Street, between Church Avenue and SR-210, and protocol CAGN presence/absence surveys should be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the IVIC Project is likely to affect this species. No habitat suitable to support CAGN occurs elsewhere within or adjacent the proposed Project footprint.

Least Bell's Vireo – Endangered (Federal/State)

The least Bell's vireo (LBVI) is a state and federally listed endangered migratory bird species. This species is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian habitats. LBVI nesting habitat typically consists of well-developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern Baja California and establish breeding territories by mid-March to late-March.

LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968 18975) and was subsequently listed as federally endangered on May 2, 1986 (51 FR 16474 16482). Critical habitat units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres. The Project area is not within USFWS designated critical habitat for this species.

Findings: According to the CNDDB, the nearest documented LBVI occurrence (2016) is approximately 1.6 miles northeast (upstream) of the IVIC Program area, within City Creek. There is suitable riparian scrub habitat (mulefat thicket) for this species adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within City Creek. Thus, there is a moderate potential for LBVI to occur adjacent 5th Street, between Church Avenue and SR-210, and protocol LBVI presence/absence surveys should be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the IVIC Program is likely to affect this species. No habitat suitable to support LBVI occurs elsewhere within or adjacent the proposed Project footprint.

Burrowing Owl – Federal BCC/California SSC

The BUOW is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place. They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. According to the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*,

"Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey." BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

BUOW have disappeared from significant portions of their range in the last 15 years and, overall, nearly 60 percent of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The BUOW is not listed under the state or federal ESAs but is considered a state SSC and federal BCC. Additionally, the BUOW is a migratory bird protected by the international treaty under the MBTA and by State law under the California FGC (FGC #3513 & #3503.5).

Findings: According to the CNDDB and personal observations, BUOW have been documented in the City Creek Bypass Channel since 2007 and as recent as 2021. The BUOW habitat assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced approximately 10 meters (30 feet) apart to provide 100 percent visual coverage of the ground surface within the survey area, which included all adjacent undeveloped areas within the 500-foot survey buffer (wherever accessible) and the entire City Creek Bypass Channel. The result of the survey was that no evidence of BUOW was found in the survey area; however, City Creek Bypass Channel and some adjacent areas remain suitable to support this species. Thus, there is still a high potential for BUOW to occur along the City Creek Bypass Channel and protocol BUOW presence/absence surveys would be required to determine whether this species persists within the Project area.

Special Status Habitats

The IVIC Project area is partially within USFWS designated Critical Habitat for the federally listed as threatened Santa Ana sucker (*Catostomus santaanae*) and federally listed as endangered SBKR. These Critical Habitat units include the portion of the City Creek floodplain that is adjacent 5th Street, between Church Avenue and SR-210. However, the entire proposed Project footprint is restricted to existing paved roadways and man-made flood control channel (City Creek Bypass Channel). Therefore, the Project will not result in any loss or adverse modification of USFWS designated Critical Habitat, or any other special status habitats.

4.5.3.4 Aquatic Resources Delineation

The IVIC Project area is within the Bunker Hill Hydrologic Sub-Area (HSA 801.52). The Bunker Hill HSA comprises a 124,791-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). This watershed is primarily within San Bernardino County and includes portions of Riverside and Orange Counties with a small portion of Los Angeles County. The Santa Ana Watershed is bound on the north by the Mojave and Southern Mojave Watersheds, on the southeast by the Whitewater River and San Jacinto Watersheds, and on the west by the San Gabriel, Seal Beach, Newport Bay, and Aliso-San Onofre Watersheds. The Santa Ana Watershed encompasses a portion of the San Gabriel and San Bernardino Mountains in the north and is approximately 3,000 square miles in area. The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. One of several tributaries to the Santa Ana River is City Creek, which flows north to south through the easternmost end of the Project area.

Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. The Environmental Protection Agency (EPA) and USACE currently define WOTUS
as:

1. Waters used either currently, previously, or susceptible to future use in interstate or foreign commerce, the territorial seas, and interstate waters.
2. Impoundments of waters otherwise defined as WOTUS, except for impoundments of those WOTUS that are identified in 5 (below).
3. Relatively permanent, standing, or continuously flowing tributaries to the WOTUS described in 1 and 2 (above).
4. Wetlands that are adjacent to waters described in 1 (above), or relatively permanent, standing or continuously flowing bodies of water identified in 2 or 3 (above) that have a continuous surface connection with those waters.
5. Intrastate lakes and ponds not identified in 1 through 4 (above) that are relatively permanent, standing, or continuously flowing bodies of water with a continuous surface connection to the waters identified in 1 or 3 (above).

Findings: The IVIC Program area is intersected by City Creek, between Church Avenue and SR-210, and includes the City Creek Bypass Channel. No Project component will impact City Creek; however, the City Creek Bypass Channel will be improved between Victoria Avenue and its confluence with East Twin Creek (refer to **Figures 4.5-2 and 4.5-3**). The City Creek Bypass Channel is a man-made ephemeral flood control channel that receives surface flows for only brief durations and in direct response to precipitation.

There are no wetland or non-wetland WOTUS present within the proposed Project footprint. There is not a continuous surface water connection between City Creek Bypass Channel and any potential downstream receiving waters, including East Twin Creek, which is another tributary to the Santa Ana River. Given that the City Creek Bypass Channel does not have a continuous surface water connection to any WOTUS it was determined that no aquatic resources subject to regulation by the USACE or RWQCB under Sections 404/401 of the CWA occur within the proposed Project footprint.

Waters of the State

Under Sections 1600 through 1607 of the California FGC, the CDFW has jurisdiction over lakes, rivers, streams, or other aquatic resources, stream-dependent wildlife resources, and riparian habitats. This jurisdiction can include, but is not limited to intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, USGS blue-line streams, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance that support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

Findings: The City Creek Bypass Channel (**Figures 4.5-2 and 4.5-3**) is subject to regulation by the CDFW under Section 1602 of the FGC, as well as by the RWQCB under the Porter Cologne Water Quality Control Act. Although this man-made flood control feature consists mostly of unvegetated gravelly sand and cobble river wash, it has an identifiable bed and bank, which defines the maximal extent of this feature. Therefore, the City Creek Bypass Channel would fall under CDFW and RWQCB jurisdiction.

4.5.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

BIO-1 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

BIO-3 Have a substantial adverse effect on State or Federally protected wetlands (including, but limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

BIO-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

BIO-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

4.5.5 Methodology

This subchapter evaluates the level of adverse impact to biological resources that is forecast to occur if the project is implemented as proposed. The methodologies relied on in the following analyses includes a review of pertinent literature, a review of the California Natural Diversity Data Base (CNDDB), field survey investigations, and analysis of potential impacts to biological resources. A focused/protocol survey for burrowing owl was also performed within the project area.

4.5.6 Environmental Impacts

BIO-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The construction and operation of the infrastructure across the IVIC may result in direct and indirect impacts on special-status wildlife species. The extent and nature of impacts on special-status wildlife species varies depending on the species under consideration, their range, and the type and quality of suitable habitats present.

In general, permanent and temporary direct impacts on special-status wildlife species during construction of the future infrastructure improvements across the IVIC include mortality or injury, and disturbances to suitable habitats for special-status wildlife species, including disruption of wetland and streambeds; water pollution; and reptile, bird, and mammal burrow or nest

disturbance. These habitat disturbances could lead to the permanent or temporary abandonment of these habitats by special-status species, a disruption in the life cycle of these species, or direct mortality or injury of individuals of these species.

Permanent and temporary indirect impacts on special-status wildlife species would occur through construction or maintenance activities associated with future Project infrastructure in a number of ways depending on the species and type of disturbance. Potential indirect impacts include erosion, soil compaction, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution. These indirect impacts could lead to the disturbance of special-status wildlife species such as a temporary shift in foraging patterns or territories, refugia abandonment, increased predation, decreased reproductive success, and reduced population viability.

Construction of any IVIC Project infrastructure should only result in mostly minimal impacts on special-status wildlife species, because only a limited amount of marginal habitat for special-status wildlife species could be impacted by construction activities. The location where most of the proposed IVIC infrastructure will be installed or constructed occurs within built-up land, or otherwise disturbed locations, and thus construction would potentially impact special-status wildlife species that use mostly urban/developed areas. This does not negate the fact that special-status species, critical habitat, and habitat supporting special status species exist within the IVIC Project area, and may be impacted by a minimal number and type of infrastructure proposed as part of the IVIC Project, particularly the facilities that would be installed within the areas adjacent to 5th Street, between Church Avenue and SR-210—at which SBKR are known to occur—and within the City Creek Bypass Channel between Victoria Avenue and Sterling Avenue—at which BUOW have been documented to occur.

Ongoing operations or maintenance activities requiring ground disturbance, clearing, or grubbing could cause erosion and sedimentation, or could indirectly affect the hydrology of nearby jurisdictional waters and the species that depend on these resources. Chemical runoff from trucks or equipment within the future IVIC infrastructure ROW could indirectly degrade suitable habitat used by these species that are present adjacent to or within the management zone boundaries. If operational maintenance requires weed abatement activities, such as the use of herbicides, these activities could also contribute to chemical runoff and pollution of adjacent suitable habitats. However, maintenance activities that would have potential impacts on special-status wildlife species are limited to the IVIC infrastructure ROW areas that are currently in service or that will be added to normal program operations and maintenance at existing facilities.

Special Status Plant Species

The proposed Project footprint is completely disturbed and no longer supports any native habitats (see Site Photos provided in the BRA, Appendix 3). The proposed Project footprint consists of existing paved roadways and a man-made flood control channel (City Creek Bypass Channel), and the environmental conditions within the proposed Project footprint are not suitable to support any of the special status plant species documented in the IVIC Program vicinity, including the state and federally listed as endangered slender-horned spineflower or Santa Ana River woollystar. Therefore, the IVIC Program will not affect any listed plant species, and no mitigation is required to ensure that impacts to special status plant species are avoided, as none are known to occur within the IVIC footprint. However, for the EVWD Well Development and Reservoir, which would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones, it is possible that special status plants

may be impacted, depending on the site specific conditions for these facilities. This is because these facilities could be installed outside of the IVIC boundaries, as EVWD's lower and intermediate zones to not perfectly overlap with this boundary (refer to **Figure 3-15**). These zones are located within highly urbanized areas that are unlikely to support special status plant species; however, as site-specific botanical surveys shall be required through the implementation of **MM BIO-1** in advance of construction to confirm that special status plant species are absent from the project site, or otherwise, impacts to such species are fully avoided through site design or through compliance with USFWS and/or CDFW regulations.

Special Status Habitats

The IVIC Project will not affect any special status habitats, including any USFWS designated Critical Habitat for any federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat. However, there is some RAFSS and riparian scrub (mulefat thicket) habitat adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek that is suitable for the federally listed as threatened CAGN and the state and federally listed as endangered LBVI, respectively. No other Critical Habitat is located within or adjacent to either the IVIC boundaries or EVWD's lower and intermediate zones. Thus, impacts to special status habitats are not anticipated.

Special Status Species

According to the CNDDB, USFWS species occurrence data overlay, and other relevant literature and databases, four State and/or Federally-listed threatened or endangered wildlife species are documented within three miles of the IVIC Project area. Additionally, there are several other sensitive wildlife species that are documented to occur within the vicinity of the IVIC Project area. An analysis of the likelihood for occurrence of all sensitive wildlife species is provided in **Table 4.5-2**. This analysis takes into account species range as well as documentation within the vicinity of the project area. The five State and/or Federally-listed threatened or endangered wildlife species documented within the proposed project area are described below, as well as the burrowing owl (*Athene cunicularia*), considered an SSC by the CDFW.

San Bernardino kangaroo rat
The proposed Project footprint—excepting the EVWD Reservoir and Well Development, which would require installation of these facilities outside of the channel and roadway corridors, within parcels of land in EVWD's lower and intermediate zones—is within existing paved roadways and City Creek Bypass Channel, which does not contain any habitat suitable to support SBKR, and the IVIC Program will not result in any direct "take" of this species. However, construction activities within 5th Street, between Church Avenue and SR-210, could potentially result in indirect effects on SBKR. Therefore, the precautionary mitigation measures are recommended to avoid any potential Project related effects on SBKR.

California gnatcatcher
There is suitable RAFSS and nearby riparian scrub (mulefat thicket) habitat for CAGN adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek, and this species has been documented within 1.8 miles of the proposed Project footprint. However, it is not currently known whether CAGN occur in the IVIC Program area. Therefore, mitigation to ensure that protocol CAGN presence/absence surveys are conducted prior to implementation of any Project infrastructure located between Church Avenue and SR-210, is required to determine whether the individual project is likely to affect this species.

Least Bell's vireo

There is suitable riparian scrub (mulefat thicket) habitat for LBVI adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within City Creek, and this species has been documented within 1.6 miles of the proposed Project footprint. However, it is not currently known whether LBVI occur in the IVIC Program area. Therefore, it is recommended that protocol LBVI presence/absence surveys be conducted prior to implementation of any Project components located between Church Avenue and SR-210, to determine whether the Program is likely to affect this species. Alternatively, all construction activities between Church Avenue and SR-210 can be conducted outside of the LBVI breeding season (typically mid-March to late September), when this species is absent from the region.

Burrowing Owl (BUOW)

BUOW have been documented occurring in the City Creek Bypass Channel portion of the IVIC Program area, between Victoria Avenue and Sterling Avenue. Therefore, a BUOW habitat suitability assessment of the Program area was conducted by HDR in April and May of 2024 that included 100 percent visual coverage of all adjacent undeveloped areas within the 500-foot survey buffer (wherever accessible) and the entire City Creek Bypass Channel. The result of the survey was that no evidence of BUOW was found in the survey area; however, City Creek Bypass Channel and some adjacent areas remain suitable to support this species. Therefore, protocol BUOW presence/absence surveys are required through the implementation of mitigation to determine whether this species persists within the Project area. If BUOW are determined to be present within the Project area following protocol presence/absence surveys, then coordination with the CDFW would be required prior to implementation of any Project infrastructure that may affect this species.

The BUOW is a state SSC and federal BCC and is protected under the MBTA and by state law under the California FGC (FGC #3513 & #3503.5). In general, impacts to BUOW can be avoided by conducting work outside of their nesting season (peak BUOW breeding season is identified as April 15th to August 15th). However, if all work cannot be conducted outside of nesting season, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations. Regardless of survey results and conclusions given herein, BUOW are protected by applicable state and federal laws. As such, if a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this DEIR is intended to authorize any form of disturbance to BUOW. Such authorization must come from the appropriate regulatory agencies, including CDFW and/or USFWS.

Crotch's bumble bee (CBB)

The California Fish and Game Commission recently, in September of 2022, accepted a petition to list the Crotch's bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Crotch's bumble bee primarily nest in late February through late October underground in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, under-brush piles, in old bird nests, and in dead trees or hollow logs. Overwintering sites utilized by Crotch's bumble bee mated queens include soft, disturbed soil , or under leaf litter or other debris (Williams et al. 2014). As previously stated, based on the field survey results, the overall conditions within the IVIC Project area are disturbed and degraded. However, the same small vacant area with remnant coastal sage scrub elements such as buckwheat, located north of 5th Street, east of Central Avenue and west of City Creek that may be marginally suitable habitat for CAGN may also be suitable for this species.

The CBB is known to occur almost exclusively in California and has been described as having historically occupied grasslands and shrublands in southern to central California, but primarily in the Central Valley. It is assumed that suitable habitat may contain any of the following: (1) areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows and forage plants; (2) potential nest habitat (late February through late October) containing underground abandoned small mammal burrows, perennial bunch grasses and/or thatched annual grasses, brush piles, old bird nests, dead trees or hollow logs; (3) overwintering sites (November through early February) utilized by mated queens in self- excavated hibernacula potentially in soft, disturbed soil, sandy, well-drained, or loose soils, under leaf litter or other debris with ground cover requisites such as barren areas, tree litter, bare-patches within short grass in areas lacking dense vegetation. While the proposed IVIC Project area contains some suitable habitat for BUOW, and as such contains parcels with burrows, holes, and crevices that might be suitable for CBB nests. However, given the overall disturbed nature of a majority of the IVIC Project area, suitable habitat for this species is anticipated to only occur within the parcel(s) containing remnant coastal sage scrub elements that would also be suitable for CAGN. Although the potential for this species to occur is low, the small habitat patch will be surveyed for this species prior to any proposed development on it.

Mitigation Measures:

In order to ensure that special status plant species are protected for the EVWD Well Development and Reservoir, for which site specific locations have not yet been selection, the implementation of **MM BIO-1** in advance of construction shall be required to confirm that special status plant species are absent from the project site, or otherwise, impacts to such species are fully avoided through site design or through compliance with USFWS and/or CDFW regulations.

BIO-1 ***Preconstruction clearance surveys shall be conducted by a qualified biologist who is familiar with the local flora, to determine if any special status plant species are present within the proposed disturbance area prior to construction of the EVWD Well Development and Reservoir. Botanical surveys shall be conducted during the appropriate time of year, when target species are both evident and identifiable.***

Should any special status plants be located within the area of potential effect (APE) during the preconstruction survey, the Implementing Agency shall fully avoid the plant(s) or due if the species is federally listed, Section 7 Consultation with the USFWS shall be conducted, if the species is listed by the State, an Incidental Take Permit (ITP) from CDFW shall be obtained. Subject to CDFW and/or USFWS concurrence, EVWD shall mitigate the loss of the plant(s) through the purchase of mitigation credits from a CDFW-approved bank, or the acquisition and conservation of land approved by CDFW at a minimum 1:1 (replacement-to-impact) ratio.

The following mitigation can reduce the impact to burrowing owl to a less than significant level.

BIO-2 ***All future IVIC projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for***

review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Implementing Agency shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval.

Preconstruction burrowing owl surveys shall be conducted no less than 14 days prior to the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys shall be performed by a qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If the preconstruction surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and prepare a Burrowing Owl Plan that shall be submitted to CDFW and USFWS for review and approval prior to commencing Project activities.

In order to ensure that impacts to SBKR are reduced to a level of less than significant, the following mitigation measures are required:

BIO-3 ***All construction activities between Church Avenue and SR-210 shall be restricted to existing roadways and adjacent sidewalk areas, and shall take place during daytime hours to avoid any light or noise disturbance that could potentially alter the nocturnal behavior of San Bernardino kangaroo rat (SBKR) present in adjacent habitat within and along City Creek. In the event that construction outside of roadway and adjacent sidewalk footprints cannot be avoided, the provisions of MM BIO-4 shall be adhered to and required.***

BIO-4 ***Preconstruction presence/absence surveys for San Bernardino kangaroo rat (SBKR) shall be conducted within 45 days prior to any onsite ground disturbing activity by a qualified biologist. SBKR surveys shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service (USFWS). If no presence of SBKR is found during the survey, MM BIO-5 need not be enforced.***

BIO-5 ***In the event that the preconstruction survey determines the presence of SBKR, and complete avoidance is not possible, the Implementing Agency shall acquire an ESA and/or CESA Incidental Take Permit (ITP) prior to any vegetation- or ground disturbing activities. Any take of SBKR without take authorization would be a violation of Fish and Game Code section 2050 et seq. The Implementing Agency shall provide compensation***

for loss of habitat to SBKR in the following manner: the Implementing Agency shall obtain a 2081 ITP from the CDFW; the Implementing Agency shall offset the loss of habitat to SBKR by purchasing suitable SBKR habitat at a minimum 3:1 ratio depending on the habitat quality of the impact site and the location and habitat quality of the identified mitigation site; and any conserved habitat shall be provided with an appropriate endowment to ensure permanent protection and the conserved habitat shall be managed in perpetuity by an agency or party considered acceptable to the CDFW. No ground disturbance within potential SBKR habitat shall occur until an ITP is obtained by the Implementing Agency from CDFW and USFWS. Note that the final compensation package contained in the permit may differ from the above compensation package.

BIO-6 ***IVIC Projects shall avoid installing permanent lighting between Church Avenue and SR-210 beyond that which exists at present. If new permanent lighting must be installed between Church Avenue and SR-210 as part of the IVIC Project circulation system infrastructure improvements, low intensity lighting that is directed away from adjacent areas shall be utilized to protect SBKR and other nocturnal species from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting in adjacent areas is not increased.***

In order to ensure that impacts to CAGN are reduced to a level of less than significant, the following mitigation measures are required:

BIO-7 ***IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for coastal California gnatcatcher (CAGN) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (February 1 to September 15 is CAGN nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the CAGN is found to occupy the site, MM BIO-8 shall be required.***

BIO-8 ***If CAGN are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of coastal California gnatcatcher. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact gnatcatcher. If a take permit from the USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.***

In order to ensure that impacts to LBVI are reduced to a level of less than significant, the following mitigation measures are required:

BIO-9 ***IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for least Bell's vireo (LBVI) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (March 15 to September 30 is LBVI nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the LBVI is found to occupy the site, MM BIO-8 shall be required.***

BIO-10 ***If LBVI are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of LBVI. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact LBVI. If a take permit from the***

USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.

In order to ensure that impacts to Crotch's bumble bee (CBB) are reduced to a level of less than significant, the following mitigation measure is required:

BIO-11 ***The following mitigation conditions shall be required for Projects that occur between Church Avenue and the SR-210, specifically where the construction APE falls outside of existing sidewalk and right-of-way.***

Vegetation Clearing: Between November 1 and January 31, the shall proceed with hand clearing the vegetation within the whole of the Project Site. If vegetation clearing is not able to proceed during this timeline, SGVWC shall proceed with the Protocol Survey outlined below. This activity shall only occur under the supervision of a qualified monitor/biologist/entomologist familiar with the species behavior and life history of Crotch's bumble bee. The qualified monitor/biologist/entomologist shall stop the vegetation removal crew from further vegetation removal within a 10-foot buffer where any holes, burrows, or crevices are encountered and shall assess the hole utilizing passive measures to determine whether the burrow supports the Crotch's bumble bee. If the hole, burrow, or crevice is not determined to support the species, vegetation removal in this area can resume. If the hole, burrow, or crevice is determined to potentially support this species, the burrow, and the hole, burrow, or crevice shall remain undisturbed for the remainder of vegetation clearing efforts, but the vegetation around the burrow can continue to be hand cleared only where the prevention of disturbance of the hole, burrow, or crevice is possible.

Protocol Survey: If vegetation clearing cannot be accomplished during November 1 and January 31 Protocol surveys for CBB shall be carried out pursuant to CDFW Survey Methods published in June of 2023 for Candidate Bumble Bee Species.[5] If the survey indicates that the species is absent from the project area, construction can proceed without further action. If the species has been determined to be present by the protocol survey, a written survey report will be submitted to the California Department of Fish and Wildlife (CDFW) within 30 days of the last site visit. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report.

If "take" or adverse impacts to Crotch's bumble bee cannot be avoided either during Project activities or over the life of the Project, the Implementing Agency shall consult CDFW to determine if a CESA Incidental Take Permit is required (pursuant to Fish & Game Code, § 2080 et seq.) and if required, the mitigation identified in the permit shall be carried forth by the Implementing Agency to avoid impacts to this species.

In order to ensure that impacts to special status wildlife species are minimized at the EVWD Well Development and Reservoir sites, once the sites are selected, are reduced to a level of less than significant, the following mitigation measure is required:

BIO-12 ***Prior to implementation of the EVWD Well Development and Reservoir, a site-specific biological resources assessment shall be conducted by a qualified biologist familiar***

[5] CDFW, 2023. California Department of Fish and Wildlife Survey Considerations for California Endangered Species Act (CESA). Candidate Bumble Bee Species https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline (accessed 05/23/24)

with area flora and fauna. This survey shall be conducted in accordance with appropriate standards by a qualified biologist/ ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken:

a. The Implementing Agency shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost, with the ultimate compensatory mitigation ratio being determined through negotiation with USFWS and/or CDFW, and never less than 1:1. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.

b. The final mitigation may differ from the above values based on negotiations between the implementing agency and USFWS and CDFW for any incidental take permits for listed species. The Implementing Agency shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.

c. Preconstruction botanical surveys for special-status plant comm***unities and special-status plant species will be conducted in areas that were not previously surveyed because of access or timing issues or project design changes; pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. If special-status plants or plant communities are identified, the following hierarchy of actions shall be taken: a) find an alternative site; b) avoid the plants and maintain them onsite after completing the project; or c) provide compensatory mitigation offsite.***

Level of Significance After Mitigation: Less than Significant

MM BIO-1 would require preconstruction clearance surveys for special status plant species for the EVWD Well Development and Reservoir once site specific locations have been selected for these projects. This **MM** would ensure that either special status plant species are absent from the project area, or that the species is either avoided through site design or that EVWD complies with USFWS and/or CDFW regulations as part if Project implementation.

MM BIO-2 would require site-specific protocol burrowing owl surveys for all IVIC Projects to determine whether BUOW are considered present or absent from the project site due to the species' potential to occur within the IVIC Project area. This **MM** also specifies the actions that would be carried forth to protect the species in the event that BUOW are discovered to occur during the protocol level surveys.

MM BIO-3 would restrict construction activities between Church Avenue and SR-210 to within roadways and adjacent sidewalks, and would restrict construction timing to avoid impacts to the nocturnal SBKR. In the event that the construction footprint falls outside of the roadways and adjacent sidewalk**, MMs BIO-4 and BIO-5** are needed to fully avoid significantly impacting SBKR. **MM BIO-4** requires protocol level surveys for SBKR to occur in accordance with USFWS guidelines. If this species if found to be present, **MM BIO-5** would require an ITP to be obtained from CDFW and/or USFWS that would specify the mitigation necessary to minimize impacts to this species to a level of less than significant.

MM BIO-6 would require avoidance of new permanent sources of light between Church Avenue and SR-210 to protect SBKR and other nocturnal species from direct night lighting that could otherwise significantly impact this species.

MM BIO-7 would require USFWS protocol level surveys for CAGN to determine whether the species is considered present or absent from the project site constructed between Church Avenue and SR-210. If the species is not present, impacts would be less than significant. If the species is present, **MM BIO-8** is required to ensure that consultation with the USFWS is conducted and that a take permit from the USFWS, if needed, is obtained requiring the Implementing Agency to adhere to mitigations that would fully minimize impacts to CAGN to a level of less than significant.

MM BIO-9 would require USFWS protocol level surveys for LBVI to determine whether the species is considered present or absent from the project site constructed between Church Avenue and SR-210. If the species is not present, impacts would be less than significant. If the species is present, **MM BIO-10** is required to ensure that consultation with the USFWS is conducted and that a take permit from the USFWS, if needed, is obtained requiring the Implementing Agency to adhere to mitigations that would fully minimize impacts to LBVI to a level of less than significant.

MM BIO-11 would first require vegetation removal carried out under the observations of a qualified monitor/biologist/entomologist that would remove the vegetation that could support this species prior to construction outside of the CBB flying season. If this cannot be carried out outside of the CBB flying season, the Implementing Agency would be required to carry out the CDFW protocol level surveys for CBB to determine whether the species is considered present or absent from the project site constructed between Church Avenue and SR-210, where construction falls outside of the roadway and sidewalk right-of-way. If the species is not present, impacts would be less than significant. If the species is present, **MM BIO-11** would ensure that consultation with the CDFW is conducted and that a take permit from the CDFW, if needed, is obtained requiring the Implementing Agency to adhere to mitigations that would fully minimize impacts to CBB to a level of less than significant.

MM BIO-12 would ensure that the EVWD Well Development and Reservoir are subject to a site-specific biological resources assessment, wherein, if sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken to avoid significant impacts to these species.

Thus, through the implementation of mitigation, the Project would have a less than significant impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

BIO-2 Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The area surrounding the City Creek Bypass is primarily urbanized and is in a heavily disturbed condition. A small man-made drainage channel (City Creek Bypass Channel) crosses through the central-southern portion of the Project area and continues west to its confluence with East Twin Creek, which is the western limit of the IVIC Project area. Most natural vegetation has been removed by past agricultural activities, and most trees and shrubs occurring in the Project area

are found where limited human landscaping occurs. However, 5th Street crosses City Creek between Church Avenue and SR-210 at the easternmost end of the Program area, and City Creek supports a mix of *Lepidospartum squamatum Shrubland Alliance* (scale broom scrub) and *Baccharis salicifolia Shrubland Alliance* (mulefat thicket) habitats along its floodplain.

The Project will not affect any special status habitats, including any USFWS designated Critical Habitat for any federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat. However, there is some RAFSS and riparian scrub (mulefat thicket) habitat adjacent the easternmost portion of 5th Street (between Church Avenue and SR-210), within and along City Creek that is suitable for the federally listed as threatened CAGN and the state and federally listed as endangered LBVI, respectively. As the proposed IVIC does not include any infrastructure that would encroach into any Critical Habitat, impacts under this issue are considered less than significant.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

BIO-3 Would the Project have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

In addition to the BRA field survey, HDR also assessed the IVIC Project area for the presence of any state and/or federally jurisdictional aquatic resources. There are no wetland or non-wetland WOTUS present within the proposed Project footprint. Therefore, no CWA Sections 404/401 permitting through the USACE or RWQCB would be required. However, the City Creek Bypass Channel is subject to regulation by the CDFW under Section 1602 of the FGC, as well as by the RWQCB under the Porter Cologne Water Quality Control Act (**Figures 4.5-2 and 4.5-3**). Therefore, potential impacts (permanent and/or temporary) to this man-made ephemeral flood control channel would require RWQCB issued Waste Discharge Requirements (WDRs) and a CDFW issued Lake or Streambed Alteration (LSA) Agreement, as required by **MMs BIO-13 and BIO-14**, below.

An FGC Section 1602 Lake LSA Agreement is required for all activities that alter streams and lakes and their associated riparian/riverine habitat. The stormwater drainage system improvements component of the IVIC Project would install a new channel design within the existing ty Creek Bypass Channel between Victoria Avenue (just north of the SBIA and south of 3rd Street) and the East Twin Creek Channel to provide sufficient capacity to convey future 100-year flood flows. This Project would potentially result in approximately 14,500 linear feet and 15.11 acres of impacts to man-made ephemeral flood control channel (City Creek Bypass Channel) installed over a 20-year period. Prior to implementation of any stormwater drainage system improvements within ty Creek Bypass Channel, a formal jurisdictional delineation shall be conducted by a qualified delineation specialist to determine the extent of any potential Project related impacts to this feature and the appropriate regulatory permitting required. In addition to the formal application materials and fee (based on cost of the Project), a copy of the appropriate CEQA documentation must be included with the application. Through implementation of **MMs BIO-13 and BIO-14**, impacts on State or Federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means would be less than significant.

Mitigation Measures:

BIO-13 ***The City Creek Bypass Channel shall minimize discharge of fill to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Impacts to jurisdictional waters shall be mitigated at a minimum 1:1 ratio, with the ultimate compensatory mitigation ratio being determined through negotiation with regulatory agency, and never at a rate of less than 1:1. The ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency, and must be deemed sufficient by the regulatory agency issuing the permit to compensate for/offset the impacts to the jurisdictional waters and supported species and habitats therein. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (USACE, RWQCB, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the implementing agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.***

BIO-14 ***A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities for the City Creek Bypass Channel to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with MM BIO-12.***

Level of Significance After Mitigation: Less Than Significant

MM BIO-14 would ensure that jurisdictional features are documented in accordance with state and federal guidelines. This would aid in identification of the extent of the jurisdictional features of the City Creek Bypass Channel that may be impacted by discharge of fill or streambed alteration. The implementation of **MM BIO-13** would ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features. Thus, through the implementation of mitigation, the Project would have a less than significant impact on federally and state protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

BIO-4 Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The IVIC Project area is not considered an established wildlife movement corridor or nursery site for native or migratory wildlife, because the area does not connect two or more significant habitat

areas and the area is not a major feature influencing the local plant and small mammal communities. The IVIC Project will not create any shift in native habitat use by wildlife, alter population dynamics, or change the local species compositions. Therefore, this Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species through the IVIC Project area.

There is potentially suitable nesting habitat within the IVIC Program area for several avian species including ground nesting species like killdeer (Charadrius vociferus) and several special status species including BUOW, CAGN, and LBVI. Most native bird species are protected from unlawful take by the MBTA. Additionally, the State of California provides protection for native bird species and their nests in the FGC. In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally February 1 through August 31, though the specific dates for nesting depend on the species native to the Project area. Therefore, to reduce potential impacts to nesting birds and foraging raptors at the time of development, **MM BIO-15** will be required to be implemented. With implementation of **MM BIO-15** potential impacts to nesting birds can be reduced to a less than significant impact.

Mitigation Measures:

BIO-15 ***To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 15 of a given calendar year, depending on the species). Additionally, at the discretion of a qualified avian biologist, nesting bird surveys shall be required, where appropriate, regardless of the time of year no more than three (3) days prior to vegetation clearing or ground disturbance activities.***

- ***Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If no active nests are found, no further action would be required. If an active nest is found, the biologist shall set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. There are no standard nest buffers specified in the MBTA or within the FGC. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project- and site-specific basis. The nest(s) and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity should co*mme*nce until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.***
- ***Preconstruction nesting bird surveys shall include a nighttime component to address the potential for presence of nocturnal species. The nesting bird surveys shall consist of a minimum of five (5) consecutive survey days and shall include an additional three (3) consecutive nights of survey for nocturnal species. Nocturnal surveys shall be conducted between the hours of 9:00 pm. and midnight, during appropriate weather conditions (e.g., no rain or winds).***
- ***Vegetation removal, including any tree removal or pruning, and structure demolition shall be conducted outside the typical nesting season (i.e., between September 1st and January 31st), to the maximum extent feasible. Otherwise, the provisions of the preconstruction nesting bird surveys, above, shall suffice to ensure impacts to nesting birds are minimized.***

Level of Significance After Mitigation: Less Than Significant

Mitigation to protect nesting birds will be implemented by Implementing Agencies of IVIC Projects in future through **MM BIO-15**. **MM BIO-15** will require a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction, or construction will occur entirely outside of nesting season. This will ensure that nesting birds are not impacted by construction activities thereby ensuring compliance with the MBTA and Bird nesting protections (Sections 3503, 3503.5, 3511, and 3513) in the FGC. As such, the mitigation provided above minimizes the impacts under this issue to a level of less than significant.

BIO-5 Would the Project conflict with any local policies or ordinances protecting of biological resources, such as a tree preservation policy or ordinance?

According to the City of Highland Municipal Code (16.64.040) heritage tree preservation requires replacement at a 2:1 ratio of all mature trees (those with 24-inch diameters or greater measured 4.5 feet above the ground) that are removed by permit. The requirements for a permit State:

1. *No person, firm, or corporation shall remove, relocate or destroy any heritage tree within the city limits, including an applicant for a building permit, without first obtaining a tree removal permit from the community development director.*
2. *No tree removal permit shall be issued for the removal of any heritage tree on any lot associated with a proposal for development, unless all discretionary approvals have been obtained from the city.*
3. *No tree designated as an historic landmark shall be altered, removed, relocated or destroyed by any person, firm or corporation without first obtaining a landmark alteration permit and tree removal permit.*

There are trees scattered throughout the City of Highland portion of the IVIC Project area that meet the size requirements to be considered a heritage tree. Since this ordinance must be followed, no additional mitigation is required.

The City of San Bernardino also has a tree ordinance that protects trees. This ordinance—19.28.100—states that “In the event that more than 5 trees are to be cut down, uprooted, destroyed, or removed within a 36 month period, a permit shall first be issued by the Department” (Community Development). Individual infrastructure projects may remove more than 5 trees, and should this occur the Implementing Agency will obtain a permit to remove these trees. Since this ordinance must be followed, no additional mitigation is required.
With no further potential for conflicts with local policies or ordinances, impacts under this issue are less than significant.

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

BIO-6 Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Implementation of the project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There are no applicable Habitat Conservation Plans or Natural

Community Conservation Plans in effect within the City of San Bernardino or City of Highland that would be impacted by the proposed IVIC. As discussed in the BRA, The portion of 5th Street between Church Avenue and SR-210 is also adjacent the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) boundary, which encompasses the entire span of City Creek and its adjacent terrace on both sides of 5th Street between Church Avenue and SR-210. The San Bernardino Valley Water Conservation District is the lead Permittee for the Wash Plan and its Task Force partners include the City of Highland and County of San Bernardino. The proposed Project is not anticipated to encroach into the Wash Plan area, nor impede its implementation. Thus, it is not anticipated that the proposed project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Impacts under this issue are considered less than significant.

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

4.5.7 Mitigation Measures

The following biological resources mitigation measures have been identified for implementation in conjunction with the IVIC to minimize impacts to a level of less than significant.

BIO-1 ***Preconstruction clearance surveys shall be conducted by a qualified biologist who is familiar with the local flora, to determine if any special status plant species are present within the proposed disturbance area prior to construction of the EVWD Well Development and Reservoir. Botanical surveys shall be conducted during the appropriate time of year, when target species are both evident and identifiable.***

Should any special status plants be located within the area of potential effect (APE) during the preconstruction survey, the Implementing Agency shall fully avoid the plant(s) or due if the species is federally listed, Section 7 Consultation with the USFWS shall be conducted, if the species is listed by the State, an Incidental Take Permit (ITP) from CDFW shall be obtained. Subject to CDFW and/or USFWS concurrence, EVWD shall mitigate the loss of the plant(s) through the purchase of mitigation credits from a CDFW-approved bank, or the acquisition and conservation of land approved by CDFW at a minimum 1:1 (replacement-to-impact) ratio.

BIO-2 ***All future IVIC projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot***

be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Implementing Agency shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval.

Preconstruction burrowing owl surveys shall be conducted no less than 14 days prior to the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys shall be performed by a qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If the preconstruction surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and prepare a Burrowing Owl Plan that shall be submitted to CDFW and USFWS for review and approval prior to commencing Project activities.

BIO-3 ***All construction activities between Church Avenue and SR-210 shall be restricted to existing roadways and adjacent sidewalk areas, and shall take place during daytime hours to avoid any light or noise disturbance that could potentially alter the nocturnal behavior of San Bernardino kangaroo rat (SBKR) present in adjacent habitat within and along City Creek. In the event that construction outside of roadway and adjacent sidewalk footprints cannot be avoided, the provisions of MM BIO-4 shall be adhered to and required.***

BIO-4 ***Preconstruction presence/absence surveys for San Bernardino kangaroo rat (SBKR) shall be conducted within 45 days prior to any onsite ground disturbing activity by a qualified biologist. SBKR surveys shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service (USFWS). If no presence of SBKR is found during the survey, MM BIO-5 need not be enforced.***

BIO-5 ***In the event that the preconstruction survey determines the presence of SBKR, and complete avoidance is not possible, the Implementing Agency shall acquire an ESA and/or CESA Incidental Take Permit (ITP) prior to any vegetation- or ground disturbing activities. Any take of SBKR without take authorization would be a violation of Fish and Game Code section 2050 et seq. The Implementing Agency shall provide compensation for loss of habitat to SBKR in the following manner: the Implementing Agency shall obtain a 2081 ITP from the CDFW; the Implementing Agency shall offset the loss of habitat to SBKR by purchasing suitable SBKR habitat at a minimum 3:1 ratio depending on the habitat quality of the impact site and the location and habitat quality of the identified mitigation site; and any conserved habitat shall be provided with an appropriate endowment to ensure permanent protection and the conserved habitat shall be managed in perpetuity by an agency or party considered acceptable to the CDFW. No ground disturbance within potential SBKR habitat shall occur until an ITP is obtained by the Implementing Agency from CDFW and USFWS. Note that the final compensation package contained in the permit may differ from the above compensation package.***

BIO-6 ***IVIC Projects shall avoid installing permanent lighting between Church Avenue and SR-210 beyond that which exists at present. If new permanent lighting must be installed between Church Avenue and SR-210 as part of the IVIC Project circulation system infrastructure improvements, low intensity lighting that is directed away from adjacent areas shall be utilized to protect SBKR and other nocturnal species from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting in adjacent areas is not increased.***

BIO-7 ***IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for coastal California gnatcatcher (CAGN) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (February 1 to September 15 is CAGN nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the CAGN is found to occupy the site, MM BIO-8 shall be required.***

BIO-8 ***If CAGN are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of coastal California gnatcatcher. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact gnatcatcher. If a take permit from the USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.***

BIO-9 ***IVIC Projects that require construction between Church Avenue and the SR-210 shall be required to conduct USFWS protocol surveys for least Bell's vireo (LBVI) in advance of construction to determine whether the species is considered present or absent from the site. Alternatively, construction can be carried out outside of the nesting season for CAGN (March 15 to September 30 is LBVI nesting season). In the event this species is not identified within the Project limits by the protocol survey, no further mitigation is required. If, during the protocol survey, the LBVI is found to occupy the site, MM BIO-8 shall be required.***

BIO-10 ***If LBVI are found to be present, the Implementing Agency shall consult with the USFWS to determine if the Project would result in take of LBVI. Consultation with the USFWS, in order to comply with the ESA, is advised well in advance of any ground-disturbing activities and/or vegetation removal that may impact LBVI. If a take permit from the USFWS is needed, the Implementing Agency shall comply with the mitigation measures detailed in a take permit issued from USFWS.***

BIO-11 ***The following mitigation conditions shall be required for Projects that occur between Church Avenue and the SR-210, specifically where the construction APE falls outside of existing sidewalk and right-of-way.***

Vegetation Clearing: Between November 1 and January 31, the shall proceed with hand clearing the vegetation within the whole of the Project Site. If vegetation clearing is not able to proceed during this timeline, SGVWC shall proceed with the Protocol Survey outlined below. This activity shall only occur under the supervision of a qualified monitor/biologist/entomologist familiar with the species behavior and life history of Crotch's bumble bee. The qualified monitor/biologist/entomologist shall stop the vegetation removal crew from further vegetation removal within a 10-foot buffer where any holes, burrows, or crevices are encountered and shall assess the hole utilizing passive measures to determine whether the burrow supports the Crotch's bumble bee. If the hole, burrow, or crevice is not determined to support the species, vegetation removal in this area can resume. If the hole, burrow, or crevice is determined to potentially support this species, the burrow, and the hole, burrow, or crevice shall

remain undisturbed for the remainder of vegetation clearing efforts, but the vegetation around the burrow can continue to be hand cleared only where the prevention of disturbance of the hole, burrow, or crevice is possible.

Protocol Survey: If vegetation clearing cannot be accomplished during November 1 and January 31 Protocol surveys for CBB shall be carried out pursuant to CDFW Survey Methods published in June of 2023 for Candidate Bumble Bee Species.[6] If the survey indicates that the species is absent from the project area, construction can proceed without further action. If the species has been determined to be present by the protocol survey, a written survey report will be submitted to the California Department of Fish and Wildlife (CDFW) within 30 days of the last site visit. The report will include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report will also include recommendations for avoidance, and the location information will be submitted to the California Natural Diversity Database (CNDDB) at the time of, or prior to, submittal of the survey report.

If "take" or adverse impacts to Crotch's bumble bee cannot be avoided either during Project activities or over the life of the Project, the Implementing Agency shall consult CDFW to determine if a CESA Incidental Take Permit is required (pursuant to Fish & Game Code, § 2080 et seq.) and if required, the mitigation identified in the permit shall be carried forth by the Implementing Agency to avoid impacts to this species.

BIO-12 ***Prior to implementation of the EVWD Well Development and Reservoir, a site-specific biological resources assessment shall be conducted by a qualified biologist familiar with area flora and fauna. This survey shall be conducted in accordance with appropriate standards by a qualified biologist/ ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken:***

- ***a. The Implementing Agency shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost, with the ultimate compensatory mitigation ratio being determined through negotiation with USFWS and/or CDFW, and never less than 1:1. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.***
- ***b. The final mitigation may differ from the above values based on negotiations between the implementing agency and USFWS and CDFW for any incidental take permits for listed species. The Implementing Agency shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.***
- ***c. Preconstruction botanical surveys for special-status plant co**mm**unities and special-status plant species will be conducted in areas that were not previously surveyed because of access or timing issues or project design changes; pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. If special-status plants or plant communities are identified, the following hierarchy of actions shall be taken: a) find an alternative site; b) avoid the plants and maintain them onsite after completing the project; or c) provide compensatory mitigation offsite.***

[6] CDFW, 2023. California Department of Fish and Wildlife Survey Considerations for California Endangered Species Act (CESA). Candidate Bumble Bee Species https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline (accessed 05/23/24)

BIO-13 ***The City Creek Bypass Channel shall minimize discharge of fill to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Impacts to jurisdictional waters shall be mitigated at a minimum 1:1 ratio, with the ultimate compensatory mitigation ratio being determined through negotiation with regulatory agency, and never at a rate of less than 1:1. The ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency, and must be deemed sufficient by the regulatory agency issuing the permit to compensate for/offset the impacts to the jurisdictional waters and supported species and habitats therein. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (USACE, RWQCB, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the implementing agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.***

BIO-14 ***A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities for the City Creek Bypass Channel to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with MM BIO-12.***

BIO-15 ***To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 15 of a given calendar year, depending on the species). Additionally, at the discretion of a qualified avian biologist, nesting bird surveys shall be required, where appropriate, regardless of the time of year no more than three (3) days prior to vegetation clearing or ground disturbance activities.***

- ***Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If no active nests are found, no further action would be required. If an active nest is found, the biologist shall set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. There are no standard nest buffers specified in the MBTA or within the FGC. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project- and site-specific basis. The nest(s) and buffer zones shall be field checked***

weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity should co*mm*ence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

- ***Preconstruction nesting bird surveys shall include a nighttime component to address the potential for presence of nocturnal species. The nesting bird surveys shall consist of a minimum of five (5) consecutive survey days and shall include an additional three (3) consecutive nights of survey for nocturnal species. Nocturnal surveys shall be conducted between the hours of 9:00 pm. and midnight, during appropriate weather conditions (e.g., no rain or winds).***
- ***Vegetation removal, including any tree removal or pruning, and structure demolition shall be conducted outside the typical nesting season (i.e., between September 1st and January 31st), to the maximum extent feasible. Otherwise, the provisions of the preconstruction nesting bird surveys, above, shall suffice to ensure impacts to nesting birds are minimized.***

4.5.8 Cumulative Impacts

Cumulative biological resource impacts can only occur when such resources are not avoided, protected or mitigated as outlined above. The mitigation requirements outlined in **Subsection 4.5.7** are identified to ensure that biological resources are avoided or otherwise protected or mitigated, such that no cumulatively considerable impacts are anticipated to occur. The proposed project will not cause significant adverse cumulative effects related to the reduction of sensitive vegetation communities or wetland/riparian habitat present in the general area because there are no such communities located within the project area for which impacts cannot be minimized through either avoidance or mitigation, as described above in **Subsection 4.5.7**. The IVIC Project can be implemented consistent existing regulations and with mitigation as outlined in the preceding sections. Based on compliance with the required mitigation and the overall lack of any habitat to support sensitive species or a substantial wildlife population, the proposed Project will not result in significant adverse biology resource impacts that rise to a cumulatively considerable level.

4.5.9 Significant and Unavoidable Impacts

As determined above, the data substantiate that no significant and/or unavoidable significant adverse impacts relating to biological resources will occur as a result of the implementing the IVIC.

Table 4.5-1
LISTED SPECIES OCCURRENCE POTENTIAL WITHIN THE ACTION AREA

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Accipiter cooperii	Cooper's hawk	None/ None	G5; S4; CDFW: WL	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	There is no suitable nesting habitat for this species in the Program area. Occurrence potential is **low**.
Agelaius tricolor	tricolored blackbird	None/ Threatened	G1G2; S2; CDFW: SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None/ None	G5T3; S4; CDFW: WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Allium howellii var. *clokeyi*	Mt. Pinos onion	None/ None	G4T2; S2; CNPS: 1B.3	Great Basin scrub, pinyon and juniper woodland, meadows, and seeps (edges). 1385-1800 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Anniella stebbinsi	Southern California legless lizard	None/ None	G3; S3; CDFW: SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Antrozous pallidus	pallid bat	None/ None	G4; S3; CDFW: SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	There are no suitable roosting sites for this species in the Program area. Occurrence potential is **low**.
Arenaria paludicola	marsh sandwort	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Marshes and swamps. Growing up through dense mats of *Typha, Juncus, Scirpus,* etc. in freshwater marsh. Sandy soil. 3-170 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Arizona elegans occidentalis	California glossy snake	None/ None	G5T2; S2; CDFW: SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Artemisiospiza belli belli	Bell's sparrow	None/ None	G5T2T3; S3; CDFW: WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Aspidoscelis hyperythra	orange-throated whiptail	None/ None	G5; S2S3; CDFW: WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, but the nearest documented occurrence for this species (2016) is approx. 5.7 miles SW of the 5th Street bridge. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Aspidoscelis tigris stejnegeri	coastal whiptail	None/ None	G5T5; S3; CDFW: SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Astragalus hornii var. *hornii*	Horn's milk-vetch	None/ None	GUT1; S1; CNPS: 1B.1	Meadows and seeps, playas. Lake margins, alkaline sites. 75-350 m.	The habitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Athene cunicularia	burrowing owl	None/ None	G4; S2; CDFW: SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	There is suitable habitat for this species in the Program Area and this species has been documented along the City Creek Bypass Channel as recent as November of 2021. Occurrence potential is **high**.
Batrachoseps gabrieli	San Gabriel slender salamander	None/ None	G2G3; S2S3	Known only from the San Gabriel Mtns. Found under rocks, wood, and fern fronds, and on soil at the base of talus slopes. Most active on the surface in winter and early spring.	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Berberis nevinii	Nevin's barberry	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m.	Some of the habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (1990s) is approx. 5.6 miles SW of the 5th Street bridge. Occurrence potential is low adjacent 5th Street between Church Street and SR-210. However, this species is **absent** from the proposed Program footprint.
Bombus crotchii	Crotch's bumble bee	None/ Candidate Endangered	G2; S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	The host plants for this species are present in the Program Area. Occurrence potential is **moderate**.
Bombus morrisoni	Morrison bumble bee	None/ None	G3; S1S2	From the Sierra-Cascade ranges eastward across the intermountain west. Food plant genera include *Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus,* and *Melilotus*.	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is **low**.
Bombus pensylvanicus	American bumble bee	None/ None	G3G4; S2	Long tongued; forages on a wide variety of flowers including vetches (*Vicia*), clovers (*Trifolium*), thistles (*Cirsium*), sunflowers (*Helianthus*), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	The host plants for this species are present in the Program Area. Occurrence potential is **moderate**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Brodiaea filifolia	thread-leaved brodiaea	Threatened/ Endangered	G2; S2; CNPS: 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	The microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Buteo swainsoni	Swainson's hawk	None/ Threatened	G5; S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	The Program Area is outside the current breeding range of this species. However, there is some suitable non-breeding season foraging habitat for this species in the program area, and this species has been observed adjacent 3rd Street at the San Bernardino International Airport. Occurrence potential is **moderate**.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/ None	G3T2; S2; CNPS: 1B.2	Meadows and seeps, chaparral, lower montane coniferous forest. Vernally moist places in yellow-pine forest, chaparral. 195-2530 m.	The habitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Calochortus plummerae	Plummer's mariposa-lily	None/ None	G4; S4; CNPS: 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Some of the habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek, but the nearest documented occurrence for this species (1997) is approx. 2.6 miles E of the 5th Street bridge. Occurrence potential is **low-moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Carex comosa	bristly sedge	None/ None	G5; S2; CNPS: 2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m.	Only one historic occurrence (1884) documented in the 4-quad CNDDB query and the habitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/ None	G2?; S2?; CNPS: 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. Mesic to drying soils in open areas of stream and meadow margins or in vernally wet areas. 1140-2320 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Catostomus santaanae	Santa Ana sucker	Threatened/ None	G1; S1; CDFW: SSC	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/ None	G3G4T2; S2; CNPS: 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also, in disturbed places. 5-1170 m.	Some of the habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented (1992) approx. 2 miles N (upstream) of the 5th Street bridge in City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/ None	G5T3T4; S3S4	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented (2002) in this area. Occurrence potential is **high** adjacent 5th Street between Church Street and SR-210.
Charina umbratica	southern rubber boa	None/ Threatened	G2G3; S2	Found in a variety of montane forest habitats. Previously considered morphologically intermediate, recent (2022) genomic analysis clarifies individuals from Mt Pinos, Tehachapi Mts, and southern Sierra Nevada are southern rubber boa. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter.	The montane habitats this species occurs in are absent from the Program Area. Occurrence potential is **low**.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	Endangered/ Endangered	G4?T1; S1; CNPS: 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/ None	G3T2; S2; CNPS: 1B.1	Coastal scrub, chaparral, cismontane woodland, valley, and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Some of the habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (1991) is approx. 2 miles SE of the 5th Street bridge. Occurrence potential is **low-moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened/ Endangered	G5T2T3; S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Coleonyx variegatus abbotti	San Diego banded gecko	None/ None	G5T5; S1S2; CDFW: SSC	Coastal and cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, but the only occurrence for this species documented in the 4-quad CNDDB query is approx. 10 miles SW of the 5th Street bridge. Occurrence potential is **low**.
Crotalus ruber	red-diamond rattlesnake	None/ None	G4; S3; CDFW: SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None/ None	G5T4?; SH; CNPS: 2B.2	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m.	Only one historic occurrence (1890) documented in the 4-quad CNDDB query and the habitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Diadophis punctatus modestus	San Bernardino ringneck snake	None/ None	G5T2T3; S2?	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered/ Endangered	G5T1; S1; CDFW: SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented numerous times in this area including as recent as 2022. Therefore, this species is presumably **present** adjacent 5th Street between Church Street and SR-210.
Dipodomys stephensi	Stephens' kangaroo rat	Threatened/ Threatened	G2; S3	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	The Program area is outside the known range of this species. Occurrence potential is **low**.
Dodecahema leptoceras	slender-horned spineflower	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include *Encelia, Dalea, Lepidospartum*, etc. Sandy soils. 200-765 m.	Some of the habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek. However, the nearest documented occurrence for this species (2021) is approx. 1.1 miles SE of the 5th Street bridge. Occurrence potential is low-moderate adjacent 5th Street between Church Street and SR-210. However, this species is **absent** from the proposed Program footprint.
Empidonax traillii extimus	southwestern willow flycatcher	Endangered/ Endangered	G5T2; S3	Riparian woodlands in Southern California.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Eremophila alpestris actia	California horned lark	None/ None	G5T4Q; S4; CDFW: WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	There is some suitable habitat for this species in the Program area. Occurrence potential is **moderate**.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered/ Endangered	G4T1; S1; CNPS: 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	The habitats this species is associated with are present adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented within City Creek up- and downstream of the Program Area. Occurrence potential is high adjacent 5th Street between Church Street and SR-210. However, this species is **absent** from the proposed Program footprint.
Euchloe hyantis andrewsi	Andrew's marble butterfly	None/ None	G3G4T2; S2	Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake, San Bernardino Mtns, San Bernardino Co, 5000-6000 ft. Hostplants are *Streptanthus bernardinus* and *Arabis holboellii* var *pinetorum*; larval foodplant is *Descurainia richardsonii*.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Eugnosta busckana	Busck's gallmoth	None/ None	G1G3; S2S3	Coastal southern California. Tiny micro-moth (1 cm) with larva forming galls on host plant *Encelia californica* (California brittlebush). Adult flight period is during winter, generally from November to February, and have been reported at UV lights and porch lights.	The host plant for this species is present adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Eumops perotis californicus	western mastiff bat	None/ None	G4G5T4; S3S4; CDFW: SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	There is some suitable habitat for this species in the Program area. Occurrence potential is **moderate**.
Euphydryas editha quino	quino checkerspot butterfly	Endangered/ None	G4G5T1T2; S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants *Plantago erecta, P. insularis,* and *Orthocarpus purpurescens*.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Falco columbarius	merlin	None/ None	G5; S3S4; CDFW: WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms, and ranches. Clumps of trees or windbreaks are required for roosting in open country.	The Program Area is outside the breeding range of this species. However, there is suitable non-breeding season habitat for this species in the program area, and this species has been observed along 3rd Street, between Victoria Avenue and Central Avenue. Occurrence potential is **moderate**.
Fimbristylis thermalis	hot springs fimbristylis	None/ None	G4; S1S2; CNPS: 2B.2	Meadows and seeps (alkaline). Near hot springs. 115-1585 m.	The habitats this species is associated with are absent from the Program area. Occurrence potential is **low**.
Galium californicum ssp. *primum*	Alvin Meadow bedstraw	None/ None	G5T2; S2; CNPS: 1B.2	Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1460-1830 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Gila orcuttii	arroyo chub	None/ None	G2; S2; CDFW: SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/ None	G5T1T2; S1S2; CDFW: SSC	Known from black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges. May be extirpated from San Jacinto range. Needs cavities in trees/snags for nests and cover. Needs nearby water.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Haliaeetus leucocephalus	bald eagle	Delisted/ Endangered	G5; S3; CNPS: CDFW: FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/ None	G5TX; SX; CNPS: 1A	Marshes and swamps (coastal salt and freshwater). 35-1525 m.	Only one historic occurrence (1937) documented in the 4-quad CNDDB query and the microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
Heuchera parishii	Parish's alumroot	None/ None	G3; S3; CNPS: 1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder, and rock field. Rocky places. Sometimes on carbonate. 1340-3505 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Horkelia cuneata var. *puberula*	mesa horkelia	None/ None	G4T1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	One historic occurrence (1888) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Icteria virens	yellow-breasted chat	None/ None	G5; S4; CDFW: SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Imperata brevifolia	California satintail	None/ None	G3; S3; CNPS: 2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean desert scrub, meadows, and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m.	One historic occurrence (1891) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Ivesia argyrocoma var. *argyrocoma*	silver-haired ivesia	None/ None	G2T2; S2; CNPS: 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. In pebble plains and meadows with other rare plants. 1490-2960 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Lanius ludovicianus	loggerhead shrike	None/ None	G4; S4; CDFW: SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Lasiurus xanthinus	western yellow bat	None/ None	G4G5; S3; CDFW: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Laterallus jamaicensis coturniculus	California black rail	None/ Threatened	G3T1; S2; CDFW: FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/ None	G5T3; S3; CNPS: 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Three historic occurrences (1889, 1952, 1952) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/ None	G5T3T4; S3S4	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	There is some suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Lycium parishii	Parish's desert-thorn	None/ None	G4; S1; CNPS: 2B.3	Coastal scrub, Sonoran desert scrub. -3-570 m.	One historic occurrence (1885) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Malacothamnus parishii	Parish's bush-mallow	None/ None	GXQ; SX; CNPS: 1A	Chaparral, coastal sage scrub. In a wash. 305-455 m.	One historic occurrence (1895) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Monardella macrantha ssp. *hallii*	Hall's monardella	None/ None	G5T3; S3; CNPS: 1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley, and foothill grassland. Dry slopes and ridges in openings. 700-1800 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Monardella pringlei	Pringle's monardella	None/ None	GX; SX; CNPS: 1A	Coastal scrub. Sandy hills. 300-400 m.	One historic occurrence (1941) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Nasturtium gambelii	Gambel's water cress	Endangered/ Threatened	G1; S1; CNPS: 1B.1	Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m.	One historic occurrence (1935) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Neolarra alba	white cuckoo bee	None/ None	GH; SH	Known only from localities in Southern California. Cleptoparasitic in the nests of perdita bees.	Two historic occurrences (1913, 1946) documented in the 4-quad CNDDB query. Occurrence potential is **unknown**.
Neotoma lepida intermedia	San Diego desert woodrat	None/ None	G5T3T4; S3S4; CDFW: SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented (2002) in this area. Occurrence potential is **high** adjacent 5th Street between Church Street and SR-210.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/ None	G5; S3; CDFW: SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered/ Candidate Endangered	G5T1Q; S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Onychomys torridus ramona	southern grasshopper mouse	None/ None	G5T3; S3; CDFW: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	None/ None	G5T3; S2; CNPS: 2B.2	Meadows and seeps. Along streams, seepage areas. 60-930 m.	The Program Area does not support the type of stream/seep habitats this species is typically associated with and the only documented occurrence in the 4-quad CNDDB query (2009) is approx. 4.5 miles NW of the 5th Street bridge. Occurrence potential is **low**.
Perideridia parishii ssp. *parishii*	Parish's yampah	None/ None	G4T3T4; S2; CNPS: 2B.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Damp meadows or along streambeds-prefers an open pine canopy. 1470-2530 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Perognathus alticola alticola	white-eared pocket mouse	None/ None	G2TH; SH; CDFW: SSC	Ponderosa and Jeffrey pine habitats; also, in mixed chaparral and sagebrush habitats in the San Bernardino Mountains. Burrows are constructed in loose soil.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/ None	G5T2; S1S2; CDFW: SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek, and this species has been documented (2017) immediately adjacent the S side of the 5th Street/Church Street intersection. Occurrence potential is **high** adjacent 5th Street between Church Street and SR-210.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Phrynosoma blainvillii	coast horned lizard	None/ None	G4; S4; CDFW: SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, along City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Polioptila californica californica	coastal California gnatcatcher	Threatened/ None	G4G5T3Q; S2; CDFW: SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Some potentially suitable habitat for this species exists adjacent 5th Street between Church Street and SR-210, along City Creek, and CAGN have been documented (1995) approx. 1.7 miles SE of the 5th Street bridge. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Rana draytonii	California red-legged frog	Threatened/ None	G2G3; S2S3; CDFW: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.
Rana muscosa	southern mountain yellow-legged frog	Endangered/ Endangered	G1; S2; CDFW: WL	Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1000 to 12000 ft in lakes and creeks that stem from springs and snowmelt. May overwinter under frozen lakes. Often encountered within a few feet of water. Tadpoles may require 2 - 4 yrs. to complete their aquatic development.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered/ None	G1T1; S1	Found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition req. shade.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None/ None	G5T1; S1; CDFW: SSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	The aquatic habitats required by this species do not exist in the Program area. Therefore, this species is considered **absent** from the Program area.
Ribes divaricatum var. *parishii*	Parish's gooseberry	None/ None	G5TX; SX; CNPS: 1A	Riparian woodland. Salix swales in riparian habitats. 65-300 m.	One historic occurrence (1917) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
	Riversidian Alluvial Fan Sage Scrub	None/ None	G1; S1.1		This habitat is **present** adjacent 5th Street, between Church Street and SR-210, along City Creek.
Schoenus nigricans	black bog-rush	None/ None	G4; S2; CNPS: 2B.2	Marshes and swamps. Often in alkaline marshes. 120-1525 m.	The microhabitats this species is associated with are absent from the Program area. Occurrence potential is **low**.
Senecio aphanactis	chaparral ragwort	None/ None	G3; S2; CNPS: 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	The microhabitats this species is associated with are absent from the Program area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Setophaga petechia	yellow warbler	None/ None	G5; S3; CDFW: SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Sidalcea malviflora ssp. *dolosa*	Bear Valley checkerbloom	None/ None	G5T2; S2; CNPS: 1B.2	Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Sidalcea neomexicana	salt spring checkerbloom	None/ None	G4; S2; CNPS: 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m.	Only two historic occurrences (1906) documented in the 4-quad CNDDB query and the microhabitats this species is typically associated with are absent from the Program area. Occurrence potential is **low**.
	Southern Coast Live Oak Riparian Forest	None/ None	G4; S4		This habitat is **absent** from the Program area.
	Southern Cottonwood Willow Riparian Forest	None/ None	G3; S3.2		This habitat is **absent** from the Program area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
	Southern Mixed Riparian Forest	None/ None	G2; S2.1		This habitat is **absent** from the Program area.
	Southern Riparian Scrub	None/ None	G3; S3.2		This habitat (mulefat thicket) is **present** adjacent 5th Street between Church Street and SR-210, within City Creek.
	Southern Sycamore Alder Riparian Woodland	None/ None	G4; S4		This habitat is **absent** from the Program area.
Spea hammondii	western spadefoot	Proposed Threatened/ None	G2G3; S3S4; CDFW: SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Sphenopholis obtusata	prairie wedge grass	None/ None	G5; S2; CNPS: 2B.2	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.	Two historic occurrences (1907, 1917) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/ None	G3G4; S3S4; CNPS: 4.3	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as stream sides or roadcuts. 1440-2500 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.
Streptanthus campestris	southern jewelflower	None/ None	G3; S3; CNPS: 1B.3	Chaparral, lower montane coniferous forest, pinyon, and juniper woodland. Open, rocky areas. 605-2590 m.	The Program area is outside the know elevation range for this species. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Symphyotrichum defoliatum	San Bernardino aster	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley, and foothill grassland. Vernally mesic grassland or near ditches, streams, and springs; disturbed areas. 3-2045 m.	Two historic occurrences (1917, 1939) documented in the 4-quad CNDDB query. Occurrence potential is **low**.
Taxidea taxus	American badger	None/ None	G5; S3; CDFW: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	There is no suitable habitat for this species in the Program area. Occurrence potential is **low**.
Thamnophis hammondii	two-striped gartersnake	None/ None	G4; S3S4; CDFW: SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	There is suitable habitat for this species adjacent 5th Street between Church Street and SR-210, within City Creek. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.
Vireo bellii pusillus	least Bell's vireo	Endangered/ Endangered	G5T2; S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	Some potentially suitable habitat for this species exists adjacent 5th Street between Church Street and SR-210, within City Creek, and LBVI have been documented in City Creek (2016) approx. 1.6 miles N (upstream) of the 5th Street bridge. Occurrence potential is **moderate** adjacent 5th Street between Church Street and SR-210.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):
G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa.* The T-rank refers only to the global condition of ssp. *phaea.*

State Ranking:
S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):
1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened, or endangered in California and elsewhere.
2A = Plants presumed extirpated in California, but common elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed; a review list.
4 = Plants of limited distribution; a watch list.

Threat Ranks:
.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

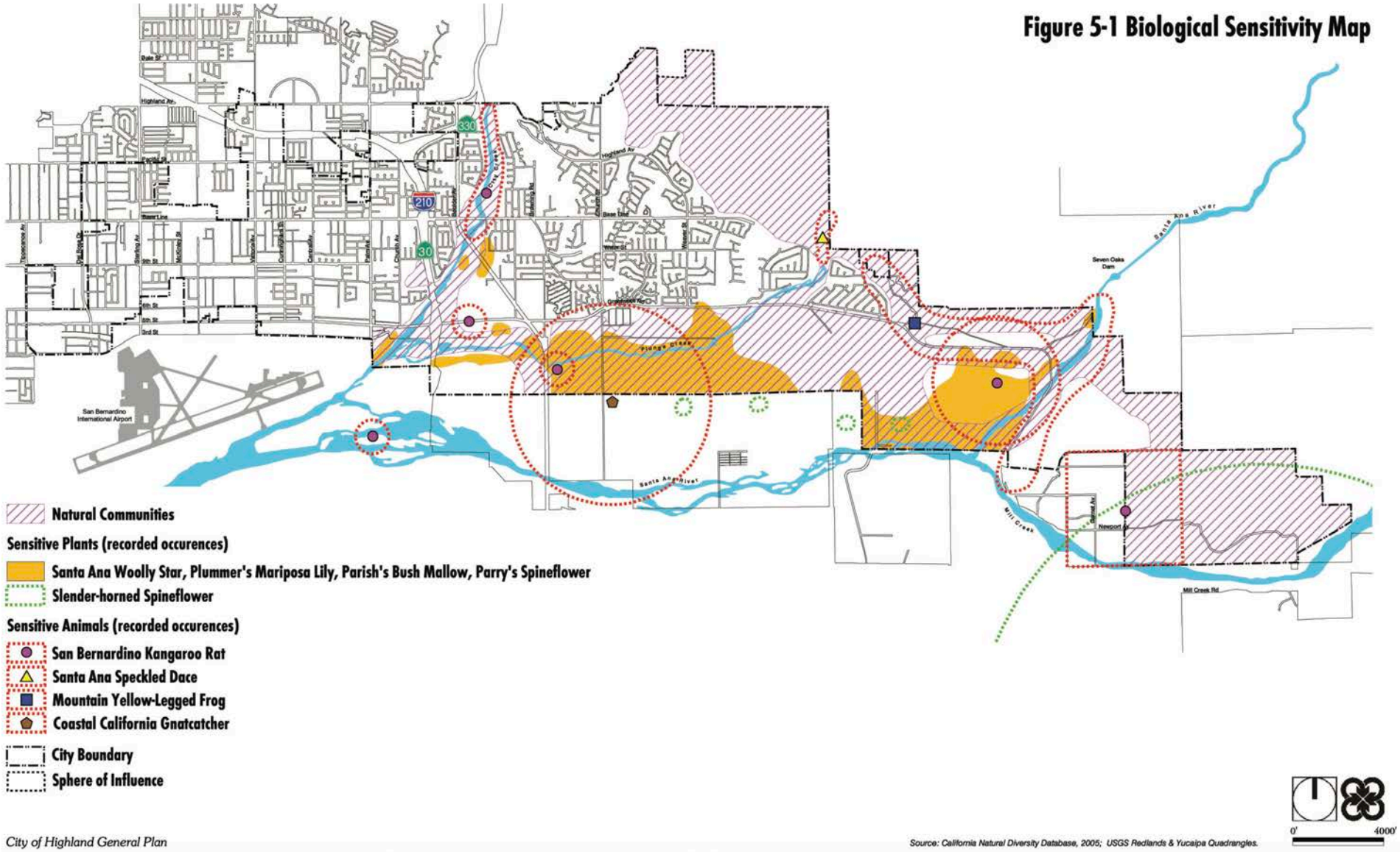

FIGURE 4.5-1

Tom Dodson & Associates
Environmental Consultants

Biological Sensitivity Map

FIGURE 4.5-2

Tom Dodson & Associates
Environmental Consultants

Jurisdictional Aquatic Resource Delineation – Victoria to Sterling

FIGURE 4.5-3

Tom Dodson & Associates
Environmental Consultants

Jurisdictional Aquatic Resource Delineation – Sterling to Twin Creek

4.6 CULTURAL RESOURCES

4.6.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of cultural resources from implementation of the Inland Valley Infrastructure Corridor (IVIC) Project. The following topics address whether the proposed Project would alter or destroy an historic site; cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.4; alter or destroy an archaeological site; cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.4; or, disturb any human remains, including those interred outside of formal cemeteries; restrict existing religious or sacred uses within the potential impact area. The purpose of the cultural resources component of this Draft Environmental Impact Report (DEIR) is to provide a spatial analysis of previously identified cultural resources and to the extent feasible assess the potential for as-yet undocumented historical, archaeological, or paleontological resources to be encountered within the IVIC Project area. In this way, the sensitivity for such resources to be encountered at a future specific project site can be incorporated into the planning process for future infrastructure and entitlement compliance considerations.

"Cultural resource" is primarily a term representing the physical evidence or a place associated with past human activity. Because paleontological resources (fossil remains) can be exposed through grading, excavation, and other ground-disturbing activities, they are also considered under the cultural resource component for the purpose of this DEIR. Cultural resources can be a building, structure, site, landscape, object, or natural feature that can be characterized temporally as prehistoric or historical in origin:

- Prehistoric cultural resources are the result of cultural activities of the ancestors and predecessors of contemporary Native Americans, and often retain traditional and spiritual significance to them. Examples of prehistoric cultural resources include the archaeological remains of Native American villages and campsites; food processing, lithic resource procurement, or tool-making localities; and human burials and cremations. They may also consist of trails, rock art and geoglyphs, and isolated artifacts.
- Historical cultural resources are any human-made environmental features that provide a setting for human activity during the historic period, from the beginning of European colonization to 50 years before present (B.P.). Examples include buildings, structures, and their remains; roads, irrigation works, and other infrastructure/engineering features; and refuse deposits. They may relate to early mission activities, travel and exploration, settlement and homesteading, cattle and sheep herding, mining, agriculture, industrial and commercial development, and urban/suburban expansion, among other themes. In the San Bernardino area, historical cultural resources may date to as early as the Spanish exploration period in the late 18th century.

Cultural Resource issues will be discussed below as set in the following framework:

4.6.9 Significant and Unavoidable Impacts

References including Historic Map, Aerial Photograph, and Record Collections:

- California Historic Resources Information System: reports and site records pertaining to the IVIC project area; available at the South-Central Coastal Information Center, California State University, Fullerton.
- CRM TECH, June 30, 2024. *Update to Cultural Resources Survey Inland Valley Infrastructure Corridor Project Cities of San Bernardino and Highland, San Bernardino County, California*, (Appendix 4 to Volume 2 of this DEIR)
- General Land Office, U.S. Department of the Interior: land survey plat maps, 1850s-1910s; available at U.S. Bureau of Land Management, California Desert District, Moreno Valley.
- Google Earth: historic aerial photograph collection, 1984-2016; available through the Google Earth software.
- Nationwide Environmental Title Research Online: historic aerial photograph collection, 1938-2016; available at http://www.historicaerials.com.
- Natural History Museum of Los Angeles County, Vertebrate Paleontology Section: paleontology collection records; available at the museum, Los Angeles.
- San Bernardino County, 2020. *San Bernardino Countywide Plan Environmental Impact Report.* http://countywideplan.com/eir/ (accessed 07/03/24)
- San Bernardino County Museum, Division of Earth Sciences: Regional Paleontological Localities Inventory; available at the museum, Redlands.
- United States Geological Survey, U.S. Department of the Interior: topographic maps, various quadrangles (30', 15', and 7.5'), 1901-1996; available at Science Library, University of California, Riverside.

The following comments regarding cultural resources issues were raised at the public scoping meeting or as part of the Notice of Preparation:

NOP Comment Letter #1 (NAHC): The comment letter supplied by the NAHC outlines the circumstances in which an EIR must be prepared, and specifically relays that the Lead Agency must determine whether there are historical resources within the project APE, and whether such resources are significant.

Response: This comment is noted, and IVDA has followed through with the preparation of an EIR, within which, under Subchapter 4.6, historical and archeological are considered and analyzed under the thresholds provided by the NAHC.

The Cultural Resources Assessment specific to the development in the IVIC has been prepared in accordance with the NAHC's recommended standards. This report is provided as Appendix 4 to Volume 2 of this DEIR.

NOP Comment Letter #1 (NAHC): The comment letter supplied by the NAHC indicates that the lead agency must consult with all Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project; the Comment Letter details the AB 52 consultation process.

Response: This comment is noted, and IVDA has contacted the Yuhaaviatam of San Manuel Nation—a Tribe that is a partner in the development of the IVIC—the Morongo Band of Mission Indians, and the Gabrieleño Band of Mission Indians – Kizh Nation, under the AB 52 consultation process, as the three Native American tribes that have requested consultation on future projects under the IVDA/SBIAA jurisdiction.

NOP Comment Letter #1 (NAHC): The Comment Letter details the provisions of SB 18 and how a lead agency would comply with SB 18.

Response: This comment is noted, and SB 18 is not applicable to the IVDA as IVDA does not have land use authority to adopt or modify a General Plan or Specific Plan. Furthermore, this Project is an infrastructure program that would not modify the respective General Plans within the IVIC Project Area. SB 18 is not applicable to this Project.

NOP Comment Letter #1 (NAHC): The Comment Letter details NAHC recommendations for cultural resource assessments including contacting the appropriate regional archaeological information center for record search, conducting an archaeological inventory survey if required, and submit report per requirements, contacting the Native American Heritage Commission for a sacred lands file check, as well as suggestions for mitigation to prevent impacts to subsurface resources.

Response: The "Update to Cultural Resources Survey Inland Valley Infrastructure Corridor Project Cities of San Bernardino and Highland, San Bernardino County, California" that were prepared for the IVIC has been prepared to the specifications provided in this comment. Please refer to Appendix 4 in Volume 2 of this DEIR. Detailed mitigation has been provided to address the potential for subsurface resources to exist within the IVIC Project area; these measures address the treatment and disposition of subsurface resources, should they be discovered. These mitigation measures can be found under Subsection 4.6.5.

The following information has been abstracted from three reports prepared by CRM TECH with minor edits to fit the focus of this DEIR. CRM TECH prepared three cultural resources documents for the proposed IVIC. The first study evaluated the potential prehistoric and historic resources within the Specific Plan boundary. This study is titled "*Historical/Archaeological Resources Reconnaissance Fifth and Third Street Corridor Specific Plan Cities of San Bernardino and Highland, San Bernardino County, California*," December 9, 2017. The second study was prepared to address the potential improvements to the City Creek Bypass Channel. This study is titled "*Historical/Archaeological Resources Survey Report City Creek Channel Project Cities of San Bernardino and Highland San Bernardino County, California*," January 30, 2020. The third study is titled "*Update to Cultural Resources Survey Inland Valley Infrastructure Corridor Project Cities of San Bernardino and Highland, San Bernardino County, California"* June 30, 2024. These three reports are provided in Volume 2 of this document as Appendix 4.

4.6.2 Regulatory Setting

The cultural resources component of this DEIR is prepared to address implementation of the IVIC Project, if and when it is approved in the future. The location of potential projects range between well-defined to relatively uncertain at this time. The roadway improvements would occur within the roadways identified in the Project Description (Chapter 3 of this DEIR) within the IVIC Project boundaries, the City Creek Bypass Channel Improvements would occur within the general footprint of the existing City Creek Bypass Channel, and the storm drain improvements would occur within roadways within the IVIC Boundaries. The EVWD Well Development and Reservoir would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones, for which the specific parcels have not yet been selected.

Activities requiring excavation, movement of soil material or demolition at any location within the IVIC Project area have potential to adversely affect cultural resources. In most cases, however,

the IVIC Project would install infrastructure within or adjacent to existing roadways and public rights-of-way where development has already occurred, thus the chances of uncovering previously unidentified cultural resources are diminished somewhat by this circumstance. During construction of new infrastructure outside of these corridors, such as the proposed EVWD Well Development and Reservoir, the chances of encountering cultural resources are greater than along existing roadways, but the actual potential of discovery at each individual location is substantially different and highly site-specific.

The impact assessment presented below focuses on physical changes to the landscape at a project site and any potential adverse impacts these changes may have on any historical, archeological, or paleontological resources that exist at the site. For purposes of the impacts, it is assumed that over the next 20 years the whole IVIC Project area will be developed as proposed and described in the Project Description of this document.

4.6.2.1 Federal

National Historic Preservation Act

Cultural resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 300101 et seq.), and the implementing regulations, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), the NHPA (54 U.S.C. 306108) requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). Under the NHPA, properties of traditional religious and cultural importance to a Tribe are eligible for inclusion in the NRHP (54 U.S.C. 302706). Also, under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register of Historic Places (National Register) was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (Code of Federal Regulations [CFR] 36 Section 60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. In the context of the project, which may involve historical-period structures, the following National Register criteria are given as the basis for evaluating archaeological resources.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty-years old to be eligible for National Register listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

4.6.2.2 State

The State implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." (California Public Resources Code § 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (California Public Resources Code § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

- To be eligible for the California Register, a prehistoric or historical-period property must be significant at the local, State, and/or federal level under one or more of the following criteria:
- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (Those properties identified as eligible for listing in the National Register of Historic Places, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

Under CEQA (Public Resources Code [PRC] Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. State CEQA Guidelines Section 15064.4 defines a historical resource as: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

As described by PRC Section 21084.1 and Section 15064.4 of the State CEQA Guidelines, should a project cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (State CEQA Guidelines Sections 15064.4(b)(1) and 15064.4(b)(4)).

Archaeological resources are defined in CEQA Section 21083.2, which states that a "unique" archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Unique archaeological resources as defined in Section 21083.2 may require reasonable efforts to preserve resources in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required. Additionally, the State CEQA Guidelines state that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA Guidelines Section 15064.4(c)(4)).

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires, in the event human remains are discovered, that all ground disturbances must cease and the County Coroner must be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin by the Coroner, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

4.6.3 Environmental Setting: Cultural Resources

4.6.3.1 Previous Cultural Resources Studies and Historical / Archaeological Resources

IVIC Project Area

According to SCCIC records, more than 30 previous cultural resource studies completed between 1973 and 2015 covered portions of the IVIC Project area, including significant stretches of Third, Fifth, and Sixth Streets, but the IVIC Project area as a whole had not been surveyed systematically prior to this study (**Figure 4.6-1**). As a result of the past studies, 103 cultural resources were previously identified as lying within, partially within, or adjacent to the boundaries of the IVIC Project area, including eight archaeological sites (Table 4.6-1) and 95 buildings or groups of buildings (Table 4.6-2).

Table 4.6-1
PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES IN THE IVIC PROJECT AREA

Site Number	Name
36-006848	Cram and Van Leuven Ditch
36-029563	Remains of mid-20th century irrigation system
36-010820	San Bernardino, Arrowhead and Waterman Railroad
P1074-97H	McKenzie Ditch
P1074-98H	Stewarts Ditch
P1074-99H	Whitlock Ditch
P1074-100H	Feudge Ditch
PSBR-27H	North Fork Ditch

As Table 4.6-1 shows, all eight of the known archaeological sites in the IVIC Project area dated to the historic period, and no prehistoric—i.e., Native American—sites have been identified within the IVIC Project area. One of the sites, 36-010820, represents the former alignment of the San Bernardino, Arrowhead and Waterman Railroad, also known as the Harlem Motor Road or the Highlands Motor Line. Although originally recorded well outside the IVIC Project area, this rail line once traversed within the Sixth Street right-of-way along the northern project boundary (USGS 1901; 1943a; 1943b; NETR Online 1938). Constructed in 1888 as a narrow-gauge motor line from San Bernardino to Harlem Hot Springs, the San Bernardino, Arrowhead and Waterman Railroad operated for 20 years before being acquired by the Pacific Electric Railway Company and eventually dismantled sometime around the 1940s (Swett 1967:23; ERHA n.d.).

The other seven sites all consisted of irrigation features, and six of them represented the former courses of various ditches dating to the mid- or late-19th century. A closer examination of the existing records indicates that the delineation of these long-abandoned early ditches across the IVIC Project area was based solely on historical accounts, and no physical remains have been recorded of any of them within the IVIC Project area boundaries. A review of previous studies on irrigation works in the San Bernardino Valley indicates that one of them, the Cram and Van Leuven Ditch (36-006848), in fact terminated before reaching the IVIC Project area, where it merged into the North Fork Ditch (PSBR-27H; Scott 1977:14-15).

The only archaeological site that was actually observed in the IVIC Project area was 36-029563, which was recorded in 2015 as the remnants of a localized irrigation system, such as concrete junction boxes and a pump, that was installed sometime between 1943 and 1959 (Vader et al. 2015:2-3). The existing site record forms offer no evidence that the site was evaluated for historic significance at the time of recordation, and the cultural resources survey report cited in the site record (Ehringer et al. 2015) could not be located at the SCCIC despite diligent search efforts.

Of the 95 buildings or groups of building identified within, partially within, or adjacent to the IVIC Project area, all but two were recorded, or had their documentation updated, during two past studies completed by CRM TECH in 2011 and 2013, and all of them were determined not to meet the criteria for listing in the National Register of Historic Places or the California Register of Historical Resources (Tang and Jacquemain 2011:7-8; 2013:14-15). Of the other two properties, 36-029562 represented a circa 1916 residence recorded in 2015, which was also found not to be eligible for the National Register or the California Register (McDonald and Anderson 2015:2). The other, 36-013750, was recorded in 2007 as a shed and a garage that survived from a former residential property of unknown age, but was not evaluated at the time (Alexandrowicz 2007a; 2007b:76).

Table 4.6-2
PREVIOUSLY RECORDED HISTORIC-PERIOD BUILDINGS IN THE IVIC PROJECT AREA

Site Number	APN	Street Address	City
36-013750	1192-621-22	27262 Meines Street	Highland
36-020001	0279-211-13	25502 5th Street	San Bernardino
36-025789	0279-181-05	8044 Del Rosa Drive	San Bernardino
36-025790	0279-182-11	8043 Del Rosa Drive	San Bernardino
36-025791	0279-182-12	8033 Del Rosa Drive	San Bernardino
36-025792	0279-184-02	25473 5th Street	San Bernardino
36-025793	0279-185-06	25364 4th Street	San Bernardino
36-025794	0279-191-05	25361 4th Street	San Bernardino
36-025795	0279-191-14	25360 Court Street	San Bernardino

Site Number	APN	Street Address	City
36-025796	0279-191-17	25340 Court Street	San Bernardino
36-025797	1192-221-10	7982 Lankershim Avenue	Highland
36-025798	1192-241-07	26072 3rd Street	San Bernardino
36-025799	1192-241-09	316 Lankershim Avenue	San Bernardino
36-025800	1192-291-17	7987 Lankershim Avenue	Highland
36-025801	1192-291-18	2426 5th Street	Highland
36-025802	1192-291-31	26186 5th Street	Highland
36-025803	1192-531-02	26552 5th Street	Highland
36-025804	1192-531-04	26578 5th Street	Highland
36-025805	1192-531-06	26596 5th Street	Highland
36-025806	1192-531-32	7957 Victoria Avenue	Highland
36-025807	1192-531-33	7977 Victoria Avenue	Highland
36-025808	1192-611-11	27072 5th Street	Highland
36-025809	1192-611-12	27060 5th Street	Highland
36-025810	1192-621-16	27140 5th Street	Highland
36-025811	1192-621-17	27136 5th Street	Highland
36-025812	1192-621-18	27124 5th Street	Highland
36-025813	1192-621-19	27112 5th Street	Highland
36-025814	1192-631-13	27075 5th Street	Highland
36-025815	1192-641-02	8048 Palm Avenue	Highland
36-025816	1192-641-11	27111 5th Street	Highland
36-025817	1201-301-16	27356 5th Street	Highland
36-025818	1201-311-22	27409 5th Street	Highland
36-025819	1201-311-24	27381 5th Street	Highland
36-026641	0279-192-11	1690 3rd Street	Highland
36-026642	1192-241-03	2310 3rd Street	San Bernardino
36-026643	1192-241-05	2358 3rd Street	San Bernardino
36-026644	1192-241-03	2418 3rd Street	San Bernardino
36-026645	1192-311-03	2420-2422 3rd Street	San Bernardino
36-026646	1192-311-03	2424 3rd Street	San Bernardino
36-026647	0279-123-19	24936 3rd Street	San Bernardino
36-026648	0279-151-40	25046 3rd Street	San Bernardino
36-026649	0279-151-19	25064 3rd Street	San Bernardino
36-026650	0279-151-45	25088 3rd Street	San Bernardino
36-026651	0279-151-15	25096 3rd Street	San Bernardino
36-026652	0279-171-13	25190 3rd Street	San Bernardino
36-026653	0279-173-31	25214 3rd Street	San Bernardino
36-026654	0279-173-27	25222 3rd Street	San Bernardino
36-026655	0279-173-24	25248 3rd Street	San Bernardino
36-026656	0279-173-21	25280 3rd Street	San Bernardino
36-026657	0279-192-13	25376 3rd Street	San Bernardino
36-026658	0279-193-08	25444 3rd Street	San Bernardino
36-026659	1192-241-09	26086 3rd Street	San Bernardino
36-026660	0279-141-72	24901 5th Street	San Bernardino
36-026661	0279-131-22	24914 5th Street	San Bernardino
36-026662	0279-141-73	24927 5th Street	San Bernardino
36-026663	0279-131-21	24932 5th Street	San Bernardino
36-026664	0279-141-01	24939 5th Street	San Bernardino

Site Number	APN	Street Address	City
36-026665	0279-131-20	24948 5th Street	Highland
36-026666	0279-141-03	24953 5th Street	Highland
36-026667	0279-131-36	24964 5th Street	San Bernardino
36-026668	0279-131-17	24974 5th Street	San Bernardino
36-026669	0279-141-05	24977 5th Street	San Bernardino
36-026670	0279-131-16	24982 5th Street	San Bernardino
36-026671	0279-131-15	24992 5th Street	San Bernardino
36-026672	0279-141-06	25003 5th Street	San Bernardino
36-026673	0279-151-27	25037 5th Street	San Bernardino
36-026674	0279-131-12	25038 5th Street	San Bernardino
36-026675	0279-141-07	25051 5th Street	San Bernardino
36-026676	0279-201-15	25084 5th Street	San Bernardino
36-026677	0279-151-44	25089 5th Street	San Bernardino
36-026678	0279-201-13	25112 5th Street	San Bernardino
36-026679	0279-151-38	25127 5th Street	Highland
36-026680	0279-201-12	25128 5th Street	San Bernardino
36-026681	0279-151-39	25141 5th Street	San Bernardino
36-026682	0279-201-11	25142 5th Street	Highland
36-026683	0279-161-02	25157 5th Street	San Bernardino
36-026684	0279-162-06	25233 5th Street	San Bernardino
36-026685	0279-163-03	25257 5th Street	San Bernardino
36-026686	1192-291-23	Unknown 5th Street (at Roberts Street)	San Bernardino
36-026688	0279-141-72	8033 Tippecanoe Avenue	Highland
36-026689	0279-141-56	8035 Tippecanoe Avenue	Highland
36-026690	0279-141-46	8037 Tippecanoe Avenue	Highland
36-026693	0279-141-45	8055 Tippecanoe Avenue	Highland
36-026694	0279-141-44	8057 Tippecanoe Avenue	Highland
36-026695	0279-141-43	8069 Tippecanoe Avenue	Highland
36-026696	0279-141-70	8071 Tippecanoe Avenue	Highland
36-026697	0279-141-69	8079 Tippecanoe Avenue	Highland
36-026699	0279-141-32	8099 Tippecanoe Avenue	Highland
36-026700	0279-141-54	8107 Tippecanoe Avenue	Highland
36-026701	0279-141-19	8115 Tippecanoe Avenue	Highland
36-026704	0279-141-18	8125 Tippecanoe Avenue	Highland
36-026706	0279-141-17	8137 Tippecanoe Avenue	Highland
36-026708	0279-192-02	25347 Court Street	San Bernardino
36-026709	0279-151-42	25091 5th Street	San Bernardino
36-029562	0279-211-01	25457 6th Street	Highland

Outside of the IVIC Project area but within a one-mile radius, SCCIC records show some 80 additional studies covering various tracts of land and linear features, many of the them on the former Norton Air Force Base, now the San Bernardino International Airport (**Figure 4.6-2**). As a result, 98 additional historical/archaeological sites, including 88 recorded sites and 10 pending sites, and four isolates— i.e., localities with fewer than three artifacts—were identified within the one-mile scope of the records search.

Among these 102 known cultural resources, only two sites and two isolates were of Native American origin. Both of the sites were recorded in the early 1960s as Native American habitation areas occupied in historic times. One of them, 36-002794, yielded buried mortars and metates during construction work, while the other, 36-002313, was simply described as being "completely gone" (Smith 1961; 1962). The two isolates were recorded as a painted sandstone concretion and a white chert flake.

The vast majority of the 102 cultural resources outside the IVIC Project area have been dated to the historic period, and included 74 buildings and structures, most of them located on the former Norton Air Force Base, along with additional irrigation features, roads, and scattered refuse items. None of these 102 cultural resources was found in the immediate vicinity of the IVIC Project area. Therefore, none of them requires further consideration under CEQA.

On February 9, 2017, CRM TECH submitted a written request to the State of California's Native American Heritage Commission for a records search in the Commission's sacred lands file. In response, the commission reported that the records search identified no Native American cultural resources within the IVIC Project area, but recommended that local Native American groups be contacted for further information. For that purpose, the Commission provided a list of potential contacts in the region (refer to Appendix 1 of the first CRM TECH study, which is presented as Appendix 4 to this DEIR).

Following the Commission's recommendation, on February 23 CRM TECH sent written requests for comments to all five individuals on the referral list and the organizations they represent (Appendix 1 of the first CRM TECH study). In addition, as previously directed by the Morongo Band of Mission Indians, Raymond Huaute, the tribe's Cultural Resources Specialist, was also contacted.

As of this time, only two of the tribal representatives have responded to the inquiry. Goldie Walker, Chairperson of the Serrano Nation of Indians, stated in a telephone conversation on March 8, 2017, that the general area is sensitive for Native American cultural resources. She requested that a monitor from the Serrano Nation be present during all ground-disturbances in the IVIC Project area, notification of any archaeological findings, and copies of all cultural resources documentation for tribal review.

On April 8, 2017, Joan Schneider, Consulting Archaeologist for the San Manuel Band of Mission Indians, replied by e-mail and identified the IVIC Project area as a part of the Serrano ancestral territory and an area that the tribe considers to be culturally sensitive. She requested additional information regarding the specific plan in order to facilitate further, government-to-government consultations, and that a standard Phase I cultural resources survey be completed on the entire IVIC Project area (Appendix 1 of the first CRM TECH study, which is presented as Appendix 4 to this DEIR).

City Creek Bypass Channel

Introduction

Between October 2019 and January 2020, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources study for the proposed City Creek Bypass Channel in the Cities of San Bernardino and Highland, San Bernardino County, California (**Figure 4.6-3**). The primary subject of the study is a three-mile-long segment of the existing City Creek Bypass Channel between Warm Creek on the west and Victoria Avenue on the east (**Figures 4.6-4 and 4.6-5**). The maximum width of the project area is approximately 80 feet, including 15 feet for an

access road along each side of the channel where sufficient space is available. The project alignment extends across a portion of the Rancho San Bernardino land grant lying with Township 1 South, Ranges 3 and 4 West, San Bernardino Baseline and Meridian.

Current Natural Setting

The project location is in the eastern end of the San Bernardino Valley, a broad inland valley defined by the San Gabriel and San Bernardino Mountain Ranges on the north and a series of low rocky hills on the south. The natural environment of the region is characterized by its temperate Mediterranean climate, with the average maximum temperature in July reaching above 90ºF and the average minimum temperature in January hovering around 35ºF. Rainfall is typically less than 20 inches annually, most of which occurs between November and March.

Situated in a largely urbanized setting, the project route is flanked mainly by residential neighborhoods and vacant land, with some commercial and light industrial properties also adjacent and the San Bernardino International Airport (formerly Norton Air Force Base) occupying most of the land on the south side toward the eastern end. The existing City Creek Bypass Channel is lined with concrete side-walls for the easternmost one mile, where it runs between the Airport and Third Street, and at the western end just before it merges into the Warm/Twin Creek Channel. The rest of the channel features unlined earthen banks, sometimes with fencing and netting along the course.

The terrain along the project route is relatively level except for the four- to six-foot depth of the channel, with a gradual incline to the east. The elevations range approximately from 1,025 feet to 1,140 feet above mean sea level. Surface soils in the vicinity consist of light greyish medium- to coarse-grained sands mixed with small to large rocks and small boulders. Vegetation observed within project boundaries includes foxtail, tumbleweed, wild mustard, tree tobacco, jimsonweed, and other small grasses and shrubs.

2024 IVIC Update

Historical/Archaeological Resources within the Project Boundaries

On March 27, 2024, CRM TECH updated the 2017 records search results at the South Central Coastal Information Center (SCCIC), California State University, Fullerton. The results of the records search establish that at the present time the California Historical Resources Inventory identifies four recorded historical/archaeological sites as lying partially across the project alignments, all of them linear features of historical origin.

Three of these were among the seven linear features noted in the 2017 study, namely the San Bernardino, Arrowhead and Waterman Railroad (Site 36-010820), the Cram and Van Leuven Ditch (36-006848), and the North Fork Ditch (formerly designated Pending Site PSBR-27H; now a part of Site 36-006544 (Appendix 4). None of these features remains extant in the project vicinity today. The other four linear features noted in the 2017 study, namely McKenzie Ditch, Stewarts Ditch, Whitlock Ditch, and Feudge Ditch, were all designated as pending sites at that time and are no longer listed in the California Historical Resources Inventory.

Historical sources indicate that the Cram and Van Leuven Ditch and the North Fork Ditch were both constructed in the project vicinity in the 1850s, the former originally terminating well to the east of this location (Scott 1977:12-17). After catastrophic flood damages along the Santa Ana River in 1862, the two ditches were merged into one to restore service to irrigators in both enterprises, and the combined new ditch, which inherited the North Fork name, crossed the southwestern portion of the project area (*ibid.*). In 1882, a new North Fork Canal was built at

higher elevation along the base of the San Bernardino Mountains to maximize the potential acreage of land irrigated by North Fork water (*ibid.*). After that, the 1860s North Fork Ditch was largely abandoned.

The San Bernardino, Arrowhead and Waterman Railroad, also known as the Harlem Motor Road or the Highlands Motor Line, was constructed in 1888 as a narrow-gauge motor line from San Bernardino to the Harlem Springs settlement in Highland (Swett 1967:23; ERHA n.d.). Extending east-west across the project area along the south side of Sixth Street before turning north towards Harlem Springs along Victoria Avenue, the rail line operated for 20 years before being acquired by the Pacific Electric Railway Company and eventually dismantled sometime around the 1940s (*ibid*.; NETR Online 1938; **Figures 4.6-6 through 4.6-7**).

The fourth linear feature identified in the project area by the California Historical Resources Inventory is the City Creek Channel (Site 36-033079), which was built across the project area in the 1940s-1950s, when the creek was rerouted following the construction of Norton Air Force Base across its former course (Tang 2018:12-13). The channel was originally recorded along the south side of Third Street in 2018, and the site record was updated in 2019 and 2020 to include the three-mile segment of the channel from Victoria Avenue to the confluence with Warm Springs (see Attachment B of Appendix 4). In a series of studies that CRM TECH conducted along its course in 2018-2020, the City Creek Channel was repeatedly evaluated against the criteria for listing in the National Register of Historic Places and/or the California Register of Historical Resources and was found not to be eligible each time (Tang et al. 2018:16; 2019:16; 2020:15; Gallardo 2018:2).

Historical Overview

As a part of this study, CRM TECH archaeologist Deirdre Encarnación, M.A., pursued additional historical background research on the project area using historical maps from the 1901-1954 era and aerial/satellite photographs taken between 1938 and 2023. According to these sources, the project vicinity remained rural in character and sparsely settled until the mid-20th century, after Norton Air Force Base came into being on adjacent land to the south (**Figures 4.6-6 through 4.6-8**; NETR Online 1938; 1959). Historical maps from the 1890s show the presence of the Highlands Motor Line and a few roads across the project area, along with some scattered buildings nearby (**Figure 4.6-6**). Prior to the 1940s, much of the project area, especially on the eastern end, was occupied by the wide, unregulated City Creek wash (**Figures 4.6-6 through 4.6-7**; NETR Online 1938). In the 1930s, most of the land along the project routes was used as agricultural fields (NETR Online 1938).

The establishment of Norton Air Force Base in 1941-1942 and, associated with it, the channelization of City Creek completely transformed the landscape in and around the project area in terms of both the natural landscape and the cultural environment. By the 1950s, the surrounding area had been largely suburbanized, featuring an increasing number of densely populated residential neighborhoods, and most of the streets containing the project alignments were in place (**Figure 4.6-8**; NETR Online 1959). Over the ensuing decades, suburban development in the area grew steadily, and all agricultural activities had ceased at least by 1980 (NETR Online 1959-1980). Since then, the overall character of land use in the project vicinity has remained unchanged to the present time (NETR Online 1980-2020; Google Earth 2019-2023).

Native American Input (Update)

On March 27, 2024, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for an update to the Sacred Lands File search completed during the 2017 study. In response, the NAHC stated in a letter dated April 15 that the Sacred

Lands File identified unspecified Native American cultural resources in the general vicinity of the project area (see Attachment C of Appendix 4). The NAHC recommended that the San Manuel Band of Mission Indians and other local Native American groups be consulted for further information and provided a referral list of potential contacts for that purpose.

Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to the San Manuel Band as well as the Morongo Band of Mission Indians, another local tribe of Serrano heritage, on April 15, 2024. While the Morongo Band has not responded to the inquiry, Raylene Borrego, Cultural Resources Technician for the San Manuel Band, replied by e-mail on the same day and stated that "there are multiple sections [of the project alignments] that are near known culturally significant areas." Therefore, the San Manuel Band requested further consultation regarding this project. The responses from the NAHC and the San Manuel Band are attached to this report in Attachment C of Appendix 4 for reference by the IVDA in future government-to-government consultations with the pertinent tribal groups.

Cultural Setting

The earliest evidence of human occupation in inland southern California was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008).

Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the nearby Cajon Pass area, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural history of southern California has been summarized into numerous chronologies, including the works of Chartkoff and Chartkoff (1984), Warren (1984), and others. The prehistory of Riverside County specifically has been addressed by O'Connell et al. (1974), McDonald, et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of the prehistory of inland southern California can be divided into three primary periods:

- Paleoindian Period (ca. 18,000-9,000 B.P.): Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- Archaic Period (ca. 9,000-1,500 B.P.): Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- Late Prehistoric Period (ca. 1,500 B.P.-contact): Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or

mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

The San Bernardino-Highland area is generally considered a part of the homeland of the Serrano Indians, which is centered in the San Bernardino Mountains. Together with that of the Vanyume people, linguistically a subgroup, the traditional territory of the Serrano also includes part of the San Gabriel Mountains, much of the San Bernardino Valley, and the Mojave River Valley in the southern portion of the Mojave Desert, reaching as far east as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander." The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978). The following ethnographic discussion of the Serrano people is based mainly on these sources.

Prior to European contact, Serrano subsistence was defined by the surrounding landscape and primarily based on the gathering of wild and cultivated foods and hunting, exploiting nearly all of the resources available. The population settled mostly on elevated terraces, hills, and finger ridges near where flowing water emerged from the mountains. They were loosely organized into exogamous clans led by hereditary heads, and the clans were in turn affiliated with one of two exogamous moieties named for the wildcat, *Tukutam,* and the coyote*, Wahiiam*. The exact nature of the clans, their structure, function, and number are not known, except that each clan was the largest autonomous political and landholding unit. The core of the unit was the patrilineage, although women retained their own lineage names after marriage. There was no pan-tribal political union among the clans, but they shared strong trade, ceremonial, and marital connections that sometimes also extended to other surrounding nations, such as the Kitanemuk, the Tataviam, and the Cahuilla.

The Serrano had a variety of technological skills that they used to acquire food, shelter, and clothing but also to create ornaments and decorations. Common tools included manos and metates, mortars and pestles, hammerstones, fire drills, awls, arrow straighteners, and stone knives and scrapers. These lithic tools were made from locally sourced material as well as materials procured through trade or travel. They also used wood, horn, and bone spoons and stirrers; baskets for winnowing, leaching, grinding, transporting, parching, storing, and cooking; and pottery vessels for carrying water, storage, cooking, and serving food and drink. Much of this material cultural, elaborately decorated, does not survive in the archaeological record. As usual, the main items found archaeologically relate to subsistence activities.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until the 1810s, when a mission *asistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the San Manuel Band of Mission Indians, the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

The San Bernardino Valley, along with the rest of Alta California, was claimed by Spain in the late 18th century, and the first European explorers traveled through the area as early as 1772, three years after the beginning of Spanish colonization (Beck and Haase 1974:15). For nearly four decades afterwards, however, the arid inland valley received little attention from the European colonizers, who concentrated their efforts along the Pacific coast. Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became a part of the mission's vast land

holdings. The name "San Bernardino" was bestowed on the region in the 1810s, when the *asistencia* and an associated mission rancho, both bearing that name, were established in present-day Loma Linda (Lerch and Haenszel 1981).

After gaining independence from Spain in 1821, the Mexican authorities began in 1834 the process of secularization to dismantle the mission system in Alta California. During the next 12 years, former mission ranchos throughout Alta California were surrendered to the Mexican government, and subsequently divided and granted to various prominent citizens of the province. In 1842, the former mission rancho of San Bernardino was granted to members of a prominent Los Angeles family, the Lugos (Schuiling 1984:34).

After the American annexation of Alta California in 1848, the Lugos sold the entire San Bernardino land grant in 1851 to a group of Mormon settlers, who promptly founded the town of San Bernardino, one of the first non-Indian settlements in what is known today as the Inland Empire (Schuiling 1984:45). The early growth of the Mormon colony was promising. It became the county seat of the newly created San Bernardino County in 1853 and was incorporated as a city the next year (*ibid.*:48-49). In 1857, however, the budding town suffered a devastating setback when half its population, responding to a recall from Mormon leaders, left California for Utah, causing the city to disincorporate (*ibid.*:50).

In the 1880s, spurred by the completion of the Santa Fe Railway in 1885, the rise of the profitable citrus industry, and a general land boom that swept through much of southern California, San Bernardino gradually recovered and reincorporated in 1886. With the selection of the city by the Santa Fe Railway as its regional headquarters, San Bernardino embarked on a period of steady growth that lasted well into the 20th century. During World War II, the growth of San Bernardino was further boosted when a U.S. Army Air Corps pilot training base was established in the southeastern portion of the city in 1941 (Richards 1966). Renamed Norton Air Force Base in 1950, the large military installation continued to provide an important driving force in the local economy over the next 45 years until it was closed in 1994.

A few miles to the northeast of San Bernardino, the present-day Highland area received the earliest Euroamerican settlers at least by the mid-1850s (Richards 1966). The name "Highland" was adopted by the settlers in 1883, when the area had a large enough population to warrant the establishment of a school district, and the town of Highland was laid out in 1891 (*ibid.*). During much of the 20th century, Highland remained a small rural settlement best known for citrus cultivation. In recent decades, however, like many other former rural towns in southern California, Highland has experienced rapid growth as a bedroom community, culminating in its incorporation in 1987.

According to SCCIC records, portions of the project area, mostly near the eastern end, were included in at least 12 previous cultural resources studies completed between 1979 and 2019, but the project area as a whole had not been surveyed systematically prior to this study. As a result of these and other similar studies in the vicinity, two recorded historical/archaeological sites and three "pending" sites have been identified as lying within or partially within the project area, including two small segments of the City Creek Channel itself. These five sites are listed below (see Appendix 4 of the first CRM TECH study for further information):

36-006848 (CA-SBR-6848H)	Cram and van Leuven Ditch, circa 1858/1865
36-033079	Segments of City Creek Channel, circa 1940-1941
P1074-97H	"Pending" site: McKenzie Ditch, circa 1856
P1074-99H	"Pending" site: Whitlock Ditch, circa 1890s

PSBR-27H "Pending" site: North Fork Ditch, circa 1856

The five known sites were subsequently included in the scope of the historical background research and the field survey, as discussed below. Outside the project area but within a half-mile radius, SCCIC records show roughly 30 other previous studies on various tracts of land and linear features. These studies resulted in the identification of nearly 130 recorded sites and six "pending" sites within the scope of the records search, in addition to those listed above. Only two of the sites were of prehistoric (i.e., Native American) origin. Site 36-002794 consisted of a collection of mortars and metates discovered during construction, and Site 36-001074 was described as a small lithic scatter with ten flakes, but the locations of these sites are not clearly defined in the existing records.

The rest of the sites dated to the historic period and consisted predominantly of buildings, including many associated with Norton Air Force Base. Other historic-period sites in the vicinity included various linear features of infrastructure, such as roads and irrigation ditches. None of these additional sites was found within the area to be impacted by the proposed project, and thus none of them requires further consideration during this study.

Historical sources offered ample evidence of settlement and development activities in the project vicinity during the mid- and late 19th century. As early as the mid-1850s, several Mormon settlements were known to have been established on the former Rancho San Bernardino, in addition to the main townsite bearing that name (Scott 1977:12). One of these, the City Creek Settlement, was located in the area along present-day Sixth Street between Waterman Avenue and Sterling Avenue, one-fourth to one-half mile north of the project location (*ibid.*). The North Fork Ditch (PSBR-27H), a short irrigation ditch built in 1856 from the Santa Ana River, served as the settlement's main water supply line and evidently crossed the project area near the eastern end (*ibid*.:12, 13).

After a catastrophic flood on the Santa Ana River in 1862 rendered the original North Fork Ditch useless, the nearby Cram and van Leuven Ditch (36-006848), which had been built in 1858 further upstream but had terminated before reaching the project area, was enlarged and lengthened to convey water allotted to the City Creek Settlement as well (Scott 1977:14-16). The new ditch, completed in 1865, inherited the name of the North Fork Ditch but no longer crossed the project area, traversing east-west near Sixth Street instead (*ibid.*:15-16). In 1881-1882, a "highline ditch" was built along the base of the San Bernardino Mountains to maximize the area irrigated and became known as the North Fork Canal (*ibid.*:17). After that, the 1865 alignment of the combined North Fork Ditch and Cram and van Leuven Ditch near the project area was presumably abandoned.

The other two ditches known to have been once located across the project area, the McKenzie Ditch (P1074-97H) and the Whitlock Ditch (P1074-99H), were both relatively minor irrigation works. The McKenzie Ditch was built around 1856 to divert water from Warm Creek and ran south near present-day Tippecanoe Avenue to irrigate land on both sides of City Creek, crossing the latter by way of a wooden flume (Scott 1977:52, 55). The diminishing flow in Warm Creek and the subdivision of its service area for residential development eventually resulted in the abandonment of that ditch prior to the sale of the water rights to irrigators in Riverside in 1943 (*ibid.*:56). The Whitlock Ditch, a very short ditch that diverted from the north side of City Creek and discharged the surplus water into the McKenzie Ditch, is known to have been in use in 1898, but little further information is available on its history (*ibid.*:52, 58).

By the 1890s, a large number of buildings, most of them likely farmsteads, had appeared around the project location, and a grid of roads had been established, including the forerunners of Third Street, Victoria Avenue, Lankershim Avenue, Sterling Avenue, and Tippecanoe Avenue (Figure 4.6-6). In the 1930s, the road along the eastern portion of the project area was named City Creek Road, while the original alignment of Third Street ran parallel to the south (Figure 4.6-7; NETR Online 1938). Notably, the course of City Creek, then a wide, unregulated wash, did not coincide with the present-day channel along the entire route but traversed further to the south in the eastern reach (Figure 4.6-7; NETR Online 1938). That segment of the channel evidently resulted from the construction of what would become Norton Air Force Base in 1940-1941 (Richards 1966; Norton Air Force Base Museum n.d.).

In the 1950s, both Third Street and City Creek were clearly shown to have been realigned to their current courses outside the northern boundary of Norton Air Force Base, with Third Street absorbing the former City Creek Road (Figure 4.6-8; NETR Online 1959). By then, the eastern segment of the channel had apparently been lined with concrete, while the western reach of City Creek had also been channelized but left unlined as it is today (NETR Online 1959). The channel at the western end of the project area was realigned between 1959 and 1966, when the Warm Creek Channel was completely reconfigured (NETR Online 1959; 1966), and the segment extending east from the project area was converted into an underground culvert in 2012-2013, in preparation for the extension of Victoria Avenue onto the former military base in 2014-2016 (Google Earth 2012-2016). The rest of the City Creek Bypass Channel in and near the project area has undergone no major changes since 1959 except for the extension of Del Rosa Drive across it sometime between 1968 and 1980 (NETR Online 1959-2016; Google Earth 1996-2019).

The results of the field survey indicate that the existing City Creek Bypass Channel (Site 36-033079) is the only cultural resource of historical or prehistoric origin that is present within the project area today. No remnants were found of the four irrigation ditches that once crossed the project area, namely the Cram and van Leuven Ditch, the McKenzie Ditch, the Whitlock Ditch, and the North Fork Ditch (Sites 36-006848, P1074-97H, P1074-99H, and PSBR-27H). In light of the drastic changes in the landscape since their abandonment, especially during and after World War II, it is clear that all physical traces of these early irrigation works have been obliterated by later development, at least in the immediate vicinity of this project.

Site 36-033079 was originally recorded in 2018 as an approximately 2,480-foot segment of the City Creek Bypass Channel near the intersection of Victoria Avenue, and a 700-foot segment at Victoria Avenue crossing was added to the site in 2019 (see Appendix 4). As a result of the current survey, the site was extended further to the west to encompass the entire project alignment to its confluence with the Warm Creek Channel (see the second CRM TECH study). As mentioned above, the easternmost one mile of the channel is lined with concrete sidewalls, as is the westernmost 600 feet, while the rest of the length remains an unlined earthen channel.

A total of seven minor concrete bridges or culverts of historical age (or possibly of historical age) were recorded as associated features of the site. All of the bridges and culverts are of standard design and construction, and none of them demonstrate any notable characters in architecture or engineering (Figure 4.6-9). These seven bridges or culverts and their construction dates are listed below:

Third Street crossing near Sterling Avenue, pre-1959*
Del Rosa Avenue crossing, pre-1959*
Del Rosa Drive crossing, 1968-1980*
Tippecanoe Avenue crossing, pre-1959*

Pedley Road crossing, pre-1959*
Palm Lane crossing, pre-1959*
Third Street crossing near Warm Creek Channel, 1959-1966*
** Source: NETR Online 1959-1980*

4.6.4 Thresholds of Significance

4.6.4.1 Historic and Archaeological Resources

The California Environmental Quality Act (CEQA) establishes that a project that may cause a substantial adverse change in the significance of a "historical resource" or a "tribal cultural resource" is a project that may have a significant effect on the environment (PRC §21084.1-2). According to PRC §5020.1(j), "historical resource" includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.4(a)(1)-(3)).

Regarding the proper criteria of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.4(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

4.6.4.2 Significance Thresholds

The thresholds analyzed in this section are derived from Appendix G of the CEQA Guidelines, and are used to determine the level of potential effect. The significance determination is based on the recommended criteria set forth in Section 15064.4 of the CEQA Guidelines. For analysis purposes, implementation of the IVIC would have a significant effect on cultural resources if it is determined that the project would:

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource as defined in 15064.4.?

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.4.?

CUL-3 Disturb any human remains, including those interred outside of formal cemeteries.

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4.6.5 Methodology

The purpose of the study is to identify and inventory all potential "historical resources" or "tribal cultural resources," as defined by CEQA, that are located within the IVIC Project area for future statutory/regulatory compliance considerations. In order to accomplish this objective, CRM TECH conducted a historical/archaeological resources records search, pursued general historical background research, contacted Native American representatives, and carried out a systematic field survey. This letter presents a summary of the methods and results of these research procedures. The IVIC Project area extends between Third Street and Sixth Street from Tippecanoe Avenue on the west to State Route 210 on the east, within Sections 4, 5, 8, and 9, T1S R3W, San Bernardino Baseline and Meridian, and a portion of the Rancho San Bernardino land grant (Figure 4.6-1).

On February 14, 2017 and March 27, 2024, CRM TECH archaeologist Nina Gallardo, B.A., conducted the historical/ archaeological resources records search at the South-Central Coastal Information Center (SCCIC), California State University, Fullerton. During the records search, Gallardo examined maps and records on file at the SCCIC for previously identified cultural resources in or near the IVIC Project area and existing cultural resources reports pertaining to the vicinity. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

4.6.6 Potential Impacts

Based on the sensitivity assessment presented in the sections above, implementation of specific projects in the IVIC Project area could encounter historical and archaeological resources and cause a significant impact on them. All future IVIC projects that may impact historical or archaeological resources in the IVIC Project area shall be subject to focused studies that cover the entire area of potential effects for each project, including any significant indirect effects. As dictated by the findings above, multiple phases of studies may be necessary to properly identify and evaluate potential cultural resources, mitigate project effects on any significant resources, and protect buried archaeological remains against inadvertent disturbances.

IVIC Project Area

Previously unknown and unrecorded cultural resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Therefore, mitigation will be implemented that would require site-specific studies to identify potentially significant historical, archaeological, and paleontological resources. Additional studies would minimize potential impacts to historical, archaeological, and paleontological resources.

Where a future IVIC project is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a roadway or engineered building), the agency implementing the IVIC project will not be required to complete a follow-on cultural resources report (Phase I Cultural Resources Investigation). Future IVIC projects that are located within undisturbed areas will require a follow-on Phase I Cultural Resources Investigation. Further, mitigation measures are provided below that address the potential for multiple phases of studies that may be necessary to properly identify and evaluate potential cultural resources for a

given IVIC project. It can be anticipated that projects proposed under the IVIC may involve modifications to or may otherwise encounter common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and individual electric distribution poles, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Prior to the field survey, historic maps dated 1858-1967 and aerial photographs taken in 1938-1968 were reviewed systematically to establish past land use and development patterns in the project vicinity, and to identify potential historic-period features within the IVIC Project area (GLO 1858; 1876; USGS 1901-1967; NETR Online 1938-1968). Buildings or structures that postdate 1972 are less than 50 years old at this time and generally do not meet the requirement for potential "historical resources" unless they demonstrate extraordinary merits in architecture, construction, or aesthetics. Therefore, they were excluded from further consideration in this study in the absence of such merits.

Based on these criteria, a total of 315 buildings or group of buildings adjacent to the IVIC Project area that have not been previously recorded or evaluated for CEQA-compliance purposes, most of them residential properties, are considered to be potential "historical resources." These properties, listed in Appendix 2 of the first CRM TECH study, will require proper evaluation under CEQA provisions when involved in future projects, along with the property that was previously recorded as 36-013750, but not evaluated.

Using the list in Appendix 2 of the first CRM TECH study as a guide, on May 8 and 9, 2017, CRM TECH field director Daniel Ballester, M.S., and project archaeologist Nina Gallardo, B.A, carried out the field reconnaissance by driving along each street in the IVIC Project area and visually inspecting all built-environment features encountered. In addition, areas where archaeological resources were previously identified in the IVIC Project area were intuitively inspected on foot as warranted. The results of the survey efforts indicate that the IVIC Project area lies in a mixed-use area where the streets are lined with residential and commercial properties interspersed with stretches of vacant land. Most of the developed lots are 50-100 feet in width, but several exceed 300 feet in width. The larger parcels are sometimes occupied by several buildings of various vintage.

Two older single-family residential neighborhoods dating to the 1959-1968 era (NETR Online 1959; 1968) were found to be relatively intact, one occupying three blocks on either side of Del Rosa Drive between Third and Fifth Streets, and one located between Victoria and Central Avenues and between Fifth and Sixth Street. Of these, the former consists of some 120 residential properties while the latter comprises some 50-60.

The vast majority of the 315 properties listed in Appendix 4 evidently date to the post-WWII boom period of circa 1945 to the late 1960s, and their overall appearance is consistent to the prevailing architectural trend and building practices of the time, while three of the properties may predate WWII (NETR Online 1938-1968). Although these buildings appear to retain at least a minimally recognizable level of historical character, nearly all of them have been altered to varying degrees, with replacement windows, new sidings and roofs, and horizontal or vertical additions the most common modifications.

The ground surface in most of the IVIC Project area has been extensively disturbed by past development activities, most notably the construction of the buildings, roads, and other infrastructure features, which significantly reduces the sensitivity of the IVIC Project area for archaeological resources from the prehistoric or early historic period. No physical remnants were observed of any of the six early ditches listed in Table 4.6-1, nor were any features or artifacts

associated with Site 36-010820, the San Bernardino, Arrowhead and Waterman Railroad, found along its former alignment. At Site 36-029563, however, the fragmented irrigation features recorded in 2015 remain extant in a vacant field between Fifth Street and Sixth Street, to the east of Del Rosa Drive (Appendix 3 of the first CRM TECH study).

In summary, seven of the eight archaeological sites previously identified as lying within, partially within, or adjacent to the IVIC Project area (Table 4.6-1), representing six 19th century irrigation ditches and the San Bernardino, Arrowhead and Waterman Railroad, have evidently been obliterated by past development. However, in light of their potential local historic interest, it is recommended that, prior to the commencement of any proposed project in the immediate vicinity of any of these sites (Appendix 4), further historical research be completed to establish their precise locations in relation to the project area, and an intensive-level archaeological field survey and, if necessary, an extended Phase I survey be conducted in the vicinity to ascertain the presence or absence of any surface or subsurface remains that may be impacted by future development.

The last remaining known archaeological site in the IVIC Project area, 36-029563, consists of a group of abandoned irrigation features from the late historic period. Generally speaking, such minor, fragmented irrigation features of similar age, virtually ubiquitous on agricultural land or former agricultural land in southern California, are unlikely to qualify as "historical resources" under CEQA guidelines. Nevertheless, since SCCIC records contain no indication that it has been formally evaluated for statutory compliance purposes, Site 36-029563 will need to be considered a potential "historical resource" that requires proper evaluation unless the 2015 survey report cited in the existing site record (Ehringer et al. 2015) becomes available for review and proves to contain an adequate evaluation.

The results of the records search indicate that 95 buildings or groups of building were previously recorded adjacent to the IVIC Project area (Table 4.6-2), and 94 of them have been evaluated as not being eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. As such, these 94 properties do not meet CEQA's definition of "historical resources," leaving only one, 36-013750, consisting of a shed and a garage from a former residential property at 27262 Meines Street, to be evaluated under CEQA provisions in the future. However, the present study identified a total of 315 additional buildings or groups of buildings within the IVIC Project area that appear to be of historical origin but remain to be recorded and evaluated (Appendix 2 of the first CRM TECH study).

Pursuant to CEQA guidelines, the 316 properties in the IVIC Project area with historic-period buildings that have not been evaluated should be treated as potential "historical resources" in the planning process, along with the irrigation features at Site 36-029563. If a proposed project will impact any of these properties, further study will be needed to determine whether the affected buildings or features meet the statutory definition as a "historical resource." If federal funding, permit, or license is required for the project, they will also need to be addressed as potential "historic properties" under Section 106 of the National Historic Preservation Act.

In general, CEQA guidelines require that the specific area designated for a proposed project be surveyed at an intensive level for both archaeological and built-environment features in a standard Phase I study in order to ensure the proper identification of "historical resources" and "tribal cultural resources." A program-level study for a general plan or large-scale specific plan, such as this one, cannot be used as a substitute. For projects to be proposed under the Fifth and Third Street Corridor Specific Plan, CEQA's requirement for Phase I cultural resources surveys remains valid, since this study did not entail an intensive-level archaeological survey of the entire IVIC

Project area, unless an adequate Phase I study was completed on the property within the past five years. Meanwhile, the approval of all future projects in the IVIC Project area should incorporate the standard condition that all buried cultural materials discovered during earth-moving operations be examined and evaluated by a qualified archaeologist before any further ground disturbances.

City Creek Bypass Channel

The purpose of this study is to identify any cultural resources within the project area and assist IVDA in determining whether such resources meet the official definition of "historical resources" as provided in the California Public Resources Code, in particular CEQA. According to PRC §5020.1(j), "'historical resource' includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

In summary of the research results presented above, the only potential "historical resource" identified within the project area during this study is Site 36-033079, representing the City Creek Bypass Channel itself, which was constructed in the 1940s-1950s, at least partially during the construction of Norton Air Force Base in 1940-1941. The site was previously recorded in the eastern portion of the project area in 2018 and 2019, and it was found not to be eligible for listing in the National Register of Historic Places or the California Register of Historical Resources at the time (Tang et al. 2018:16; 2019:16; Gallardo 2018:2; see Appendix 3 of the second CRM TECH study). The present study expanded the site boundary to include the entire three-mile length of the channel within the project area but did not encounter any new data that would warrant a revision of the previous evaluation.

The City Creek Bypass Channel is a peripheral feature associated, at least partially, with the establishment of a WWII-era military base but does not demonstrate a unique or particularly close association with that event or with any other events or persons of recognized historic significance. Simple in design and utilitarian in character, the channel and its associated features, such as the bridges and culverts, do not stand out as important examples of any style, type, period, region, or method of construction, nor are they known to represent the work of a prominent architect, designer, engineer, or builder. Finally, as a late-historic-period infrastructure feature of standard

construction, the channel demonstrates little potential for any important historical or archaeological information.

Based on these considerations, and in light of the criteria listed above, Site 36-033079 does not appear to meet any of the criteria for listing in the California Register of Historical Resources and thus does not qualify as a "historical resource." No other potential "historical resources" of either prehistoric or historical origin were identified throughout the various avenues of research. Therefore, the present study concludes that no "historical resources" are present within the project area.

CEQA establishes that a project that may cause a substantial adverse change in the significance of a "historical resource" or a "tribal cultural resource" is a project that may have a significant effect on the environment (PRC §21084.1-2). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

In conclusion, the previous study finds that the only historical/archaeological site present within the project area, 36-033079, does not constitute a "historical resource" under CEQA provisions. However, the NAHC has reported the presence of unspecified Native American cultural resource(s) in the project vicinity and referred further inquiry to the San Manuel Band of Mission Indians. According to CEQA guidelines, the identification of "tribal cultural resources" is beyond the scope of this study and needs to be addressed through government-to-government consultations between IVDA and the pertinent Native American groups pursuant to Assembly Bill (AB) 52. Therefore, CRM TECH presents the following recommendations to IVDA:

- The proposed project will not cause a substantial adverse change to any known "historical resources."
- A tentative conclusion of *No Impact* on cultural resources appears to be appropriate for this project, pending completion of the AB 52 consultation process to ensure the proper identification of potential "tribal cultural resources."
- No additional cultural resources investigation will be necessary for the project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are encountered during any earth-moving operations associated with the project, all work in the immediate area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

2024 Cultural Resources Findings

In summary of the research results presented for the 2024 study findings, among the four linear features previously recorded as lying across the project area, only the City Creek Channel (Site 36-033079) remains extant today. The channel was previously determined not to be eligible for listing in the National Register of Historic Places or the California Register of Historical Resources due to the lack of any important historical association, of any distinguished qualities in design, construction, engineering, or aesthetics, and of the necessary historic integrity (Tang et al. 2018:16; 2019:16; 2020:15; Gallardo 2018:2), and the current study has not encountered any new data to warrant a revisit of that evaluation. Therefore, Site 36-033079 does not appear to meet CEQA definition of a "historical resource," as outlined in PRC §5020.1(j) and Title 14 CCR §15064.5(a)(1)-(3).

Based on these findings, CRM TECH concludes that no "historical resources" are known to be present within the project area. However, the NAHC reported the presence of unspecified Native

American cultural resource(s) in the project vicinity and referred further inquiry to the San Manuel Band of Mission Indians, and the San Manuel Band requested further consultation regarding such resources when contacted during this study. According to CEQA guidelines, the identification of potential "tribal cultural resources," as defined by PRC §21074, is beyond the scope of this study and needs to be addressed through government-to-government consultations between the IVDA and the pertinent Native American groups pursuant to Assembly Bill (AB) 52.

In the final analysis of CEQA compliance for the proposed project, CRM TECH recommends to the IVDA a tentative determination of *No Impact* on cultural resources, pending completion of the AB 52 consultation process. No additional cultural resources investigation is recommended for this project unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant 15064.4.?

Based on the preceding analyses of historic resources within the project area (IVIC Project area and the City Creek Channel) there is a low potential to encounter significant historical resources. A small potential exists to encounter subsurface historical resources during construction activities; therefore, mitigation is provided to address this potential to significantly impact such resources. Similarly, it is possible that some of the buildings within the project area may qualify as significant historical resources, so mitigation has been identified to address this circumstance. With implementation of **MMs CUL-1 through CUL-3** for future site-specific projects, potential historical resource impacts can be reduced to a less than significant impact.

Within the City Creek Channel, the only required mitigation is **MM CUL-1**.

Mitigation Measures:

CUL-1 ***Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a roadway or engineered building site), the agency implementing the individual IVIC Project will not be required to complete a follow-on cultural resources report.***

Where a Phase I Cultural Resources Investigation is not required or at any location where a subsurface cultural resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:

- ***Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

CUL-2 ***Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given individual IVIC Project:***

1. ***Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate:***
   - ***Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet.***
   - ***Historical background research, geoarchaeological profile analysis, and paleontological literature review;***
   - ***Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups;***
   - ***Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions;***
   - ***Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases.***
2. ***Phase II (Evaluation): If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:***
   - ***Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals;***
   - ***In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation;***
   - ***Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples;***
   - ***Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted.***
3. ***Phase III (Mitigation): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:***
   - ***Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation;***
   - ***Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public;***

- ***Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question.***

4. ***<u>Phase III (Monitoring)</u>: At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate.***

CUL-3 After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM, as appropriate and in addition to the lead agency for the project, for permanent documentation and easy references by future researchers.

CUL-4 In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

CUL-5 If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

Level of Significance After Mitigation: Less Than Significant

MM CUL-1 would exclude highly disturbed sites from requiring further cultural resource evaluation, in addition to those sites for which a cultural resource evaluation has already been prepared (the City Creek Bypass Channel) and would require the implementing agency to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities.

MM CUL-2 would ensure that the future IVIC Project Sites that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, will require a follow-on Phase I Cultural Resources Investigation. This **MM** includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within the future IVIC Project Sites.

MM CUL-3 would ensure that, after each phase of the studies required by **MM CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Program Infrastructure project site.

MM CUL-4 would require an archaeologist to be present if any historical resources are discovered during construction of any individual IVIC Project, and that YSMN is informed of the find to provide tribal input in regard to the potential significance of the historical resource and to provide input on the treatment of the resource to ensure it is handled in a manner that would ensure impacts to the resource would be less than significant. **MM CUL-5** was also requested to be implemented by YSMN as part of the AB 52 consultation process, as was **MM CUL-4**, which requires that, if avoidance of historical resources is not possible, that an archaeological monitor be present for the remainder of the implementation of the given IVIC Project pursuant to a Monitoring and Treatment Plan, which would further ensure that historical resources are treated appropriately if unearthed as part of the implementation of the IVIC Project.

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.4.?

The cultural resources evaluation identified relatively few prehistoric resource sites within the project area. Much of the project area has been disturbed by previous development and farming activities. Regardless, a potential exists to encounter subsurface archaeological resources in the existing open areas that have experienced only surficial impact in the past. The accidental exposure of subsurface archaeological resources of significance can be mitigated through implementing **MMs CUL-1** through **CUL-5.** Thus, with implementation of the referenced mitigation measures, potential archaeological resource impacts can be controlled to a less than significant impact level.

*Mitigation Measures: **MMs CUL-1 through CUL-5** are necessary to minimize impacts to a level of less than significant.*

Level of Significance After Mitigation: Less Than Significant

MM CUL-1 would exclude highly disturbed sites from requiring further cultural resource evaluation, in addition to those sites for which a cultural resource evaluation has already been prepared (the City Creek Bypass Channel) and would require the implementing agency to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities.

MM CUL-2 would ensure that the future IVIC Project Sites that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, will require a follow-on Phase I Cultural Resources Investigation. This **MM** includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within the future IVIC Project Sites.

MM CUL-3 would ensure that, after each phase of the studies required by **MM CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the Program Infrastructure project site.

MM CUL-4 would require an archaeologist to be present if any archaeological resources are discovered during construction of any individual IVIC Project, and that YSMN is informed of the find to provide tribal input in regard to the potential significance of the historical resource and to

provide input on the treatment of the resource to ensure it is handled in a manner that would ensure impacts to the resource would be less than significant. **MM CUL-5** was also requested to be implemented by YSMN as part of the AB 52 consultation process, as was **MM CUL-4**, which requires that, if avoidance of archaeological resources is not possible, that an archaeological monitor be present for the remainder of the implementation of the given IVIC Project pursuant to a Monitoring and Treatment Plan, which would further ensure that archeological and prehistoric resources are treated appropriately if unearthed as part of the implementation of the IVIC Project.

CUL-3 Disturb any human remains, including those interred outside of formal cemeteries?

Level of Significance Before Mitigation: Less Than Significant

Since the proposed IVIC project is at the programmatic level, specific project locations and design elements (for example site specific areas of potential effect (APEs) have yet to be finalized for a majority of the IVIC Projects. There are currently no known cemeteries located within the IVIC project area. For potential human remains outside of a designated cemetery in the event that human remains are inadvertently discovered during project construction activities, the human remains could be inadvertently damaged, which could result in a significant impact. Implementation of the proposed project would comply with provisions of state law regarding discovery of human remains, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. If human remains are accidentally exposed during site grading, Section 7050.5 of the California Health and Safety Code requires a contractor to immediately stop work in the vicinity of the discovery and notify the County Coroner. The Coroner must then determine whether the remains are human and if such remains are human, the Coroner must determine whether the remains are or appear to be of Native American origin. If deemed potential Native American remains, the Coroner contacts the Native American Heritage Commission (NAHC) to identify the most likely affected tribe and/or most likely descendant (MLD). Until the landowner has conferred with the MLD, the Implementing Agency shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities consider the possibility of multiple burials. Additionally, the YSMN have requested the implementation of **MM CUL-6** to minimize potential impacts related to human remains and funerary objects. This, mitigation is required to minimize impacts to a level of less than significant.

Mitigation Measures:

CUL-6 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

Level of Significance After Mitigation: Less Than Significant

MM CUL-6 addresses inadvertent discoveries of human remains and/or funerary objects, which has been provided at the request of the YSMN as part of the AB 52 consultation conducted on behalf of the IVIC Project thereby ensuring the protection and proper treatment of such resources, minimizing potential impacts related to human remains and funerary objects to a level of less than significant.

4.6.7 Mitigation Measures

To minimize future impacts on cultural resources, the following mitigation measures will be implemented:

CUL-1 ***Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a roadway or engineered building site), the agency implementing the individual IVIC Project will not be required to complete a follow-on cultural resources report.***

Where a Phase I Cultural Resources Investigation is not required or at any location where a subsurface cultural resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:

- ***Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

CUL-2 ***Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given individual IVIC Project:***

1. ***Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate:***
   - ***Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet.***
   - ***Historical background research, geoarchaeological profile analysis, and paleontological literature review;***
   - ***Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups;***
   - ***Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions;***
   - ***Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases.***
2. ***Phase II (Evaluation): If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:***
   - ***Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals;***

- ***In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation;***
- ***Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples;***
- ***Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted.***

3. ***<u>Phase III (Mitigation</u>): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:***
   - ***Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation;***
   - ***Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public;***
   - ***Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question.***
4. ***<u>Phase III (Monitoring</u>): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate.***

CUL-3 ***After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM, as appropriate and in addition to the lead agency for the project, for permanent documentation and easy references by future researchers.***

CUL-4 ***In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.***

CUL-5 If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within MM TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

CUL-6 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

4.6.8 Cumulative Impact Analysis

As the IVIC Project area continues to develop with projected growth, new industrial mixed-use development is forecast to occur. The IVIC Project area may contain many historical and archaeological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for future cumulative development projects in the project area to destroy known or unknown historical and archaeological resources or resource sites.

The potential construction impacts of a project, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact specific historical and archaeological resources. Therefore, the project's cumulative effects to specific historical and/or archaeological resources could be cumulatively considerable and cumulative impacts would be potentially significant. However, implementation of **MMs CUL-1 through CUL-6** would minimize the proposed IVIC Project's contribution to cumulative impacts to a level of less than significant.

4.6.9 Unavoidable Adverse Impacts

Based on the information presented above, all potential cultural resource impacts would be limited and can be mitigated to a less than significant impact level. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to cultural resources from implementing the IVIC Project as proposed. The IVIC Project cultural resource impacts are less than significant.

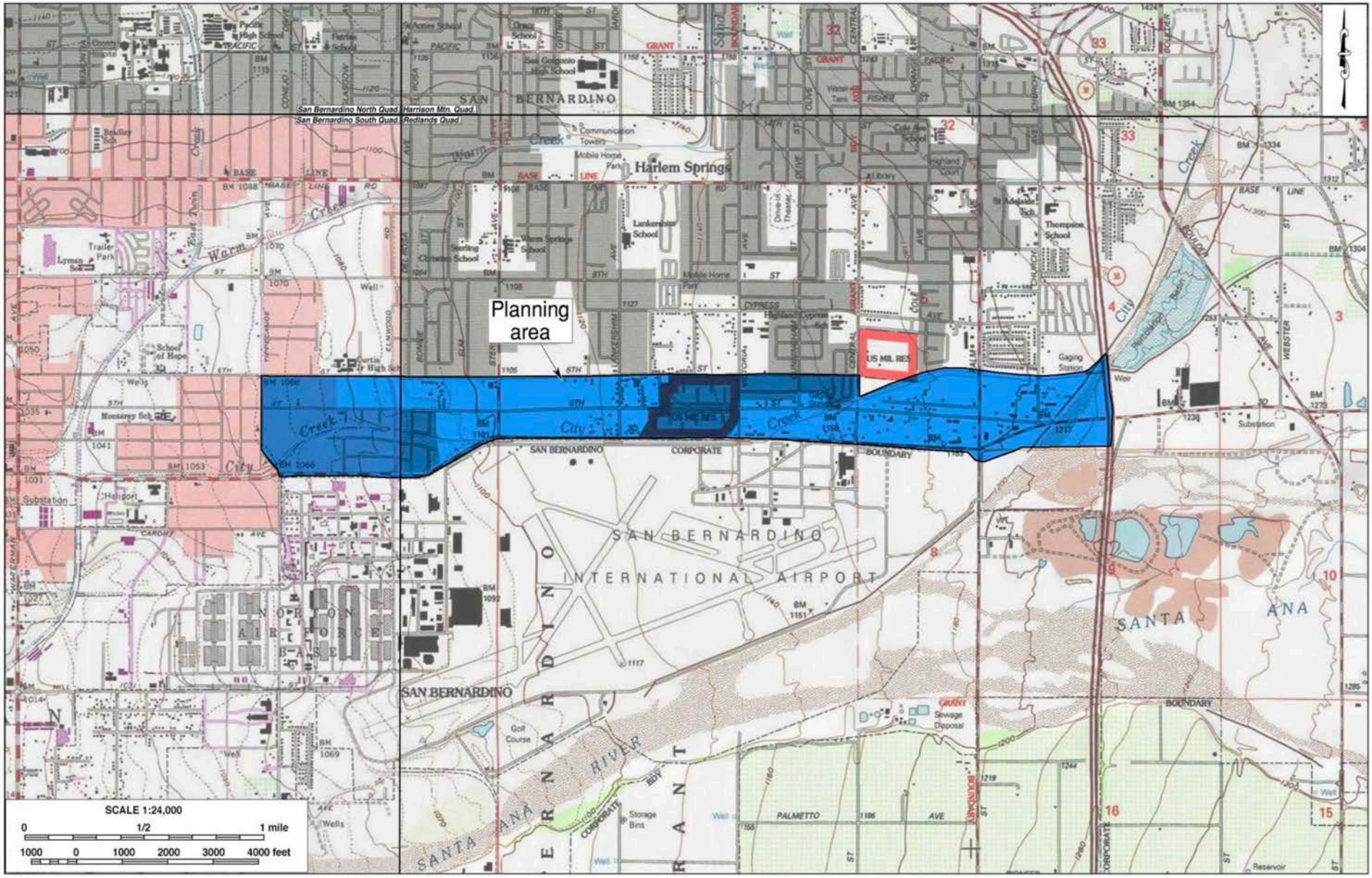

Figure 1. Project location. (Based on USGS Harrison Mountain, Redlands, San Bernardino North, and San Bernardino South, Calif., 1:24,000 quadrangles [USGS 1980; 1988; 1996a; 1996b])

FIGURE 4.6-1

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Project Location

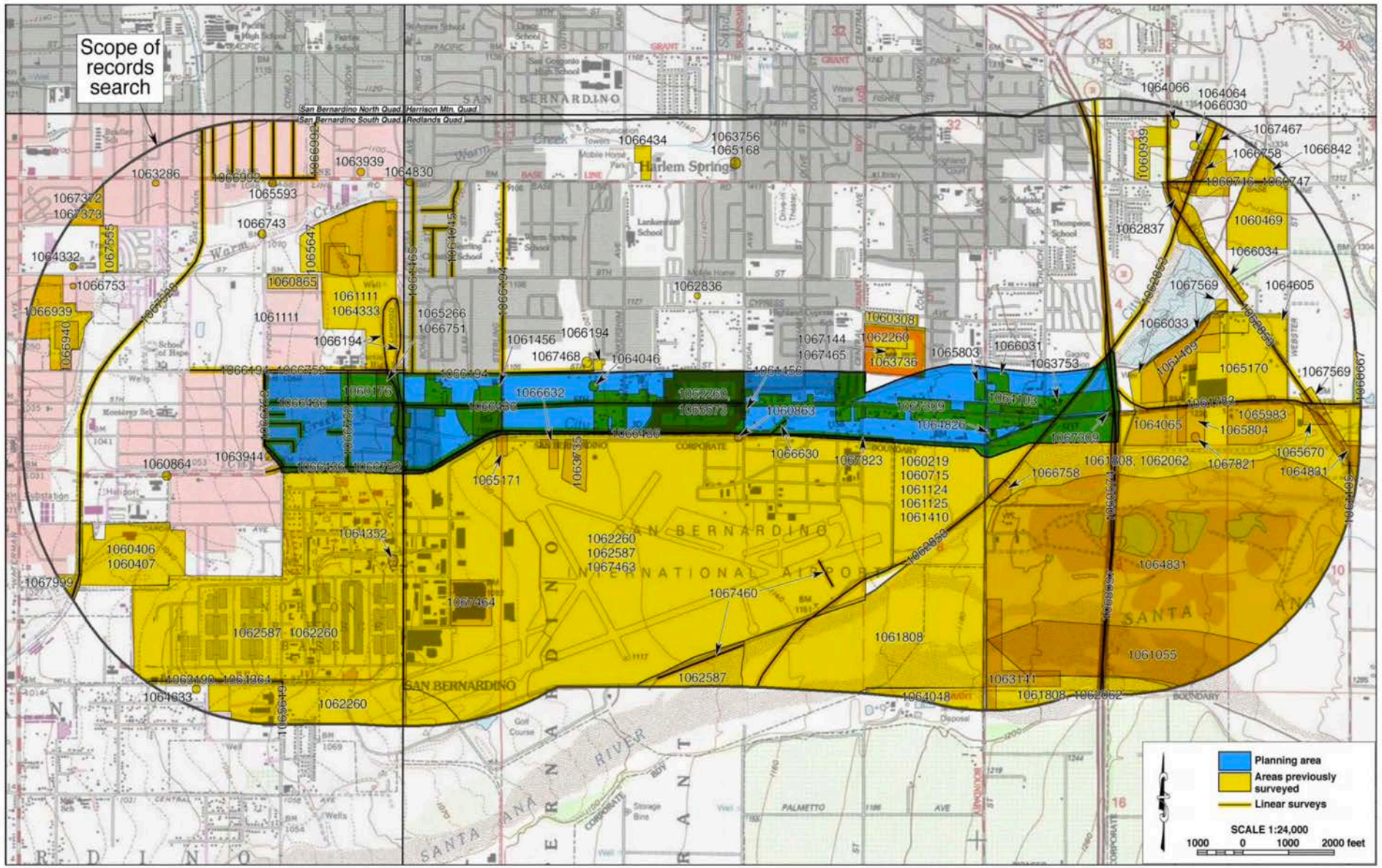

Figure 2. Previous cultural resources studies in the vicinity of the planning area, listed by SCCIC file number. (See Appendix 3 for locations of known archaeological sites)

FIGURE 4.6-2

Tom Dodson & Associates
Environmental Consultants

Previous Cultural Resource Studies in Planning Area

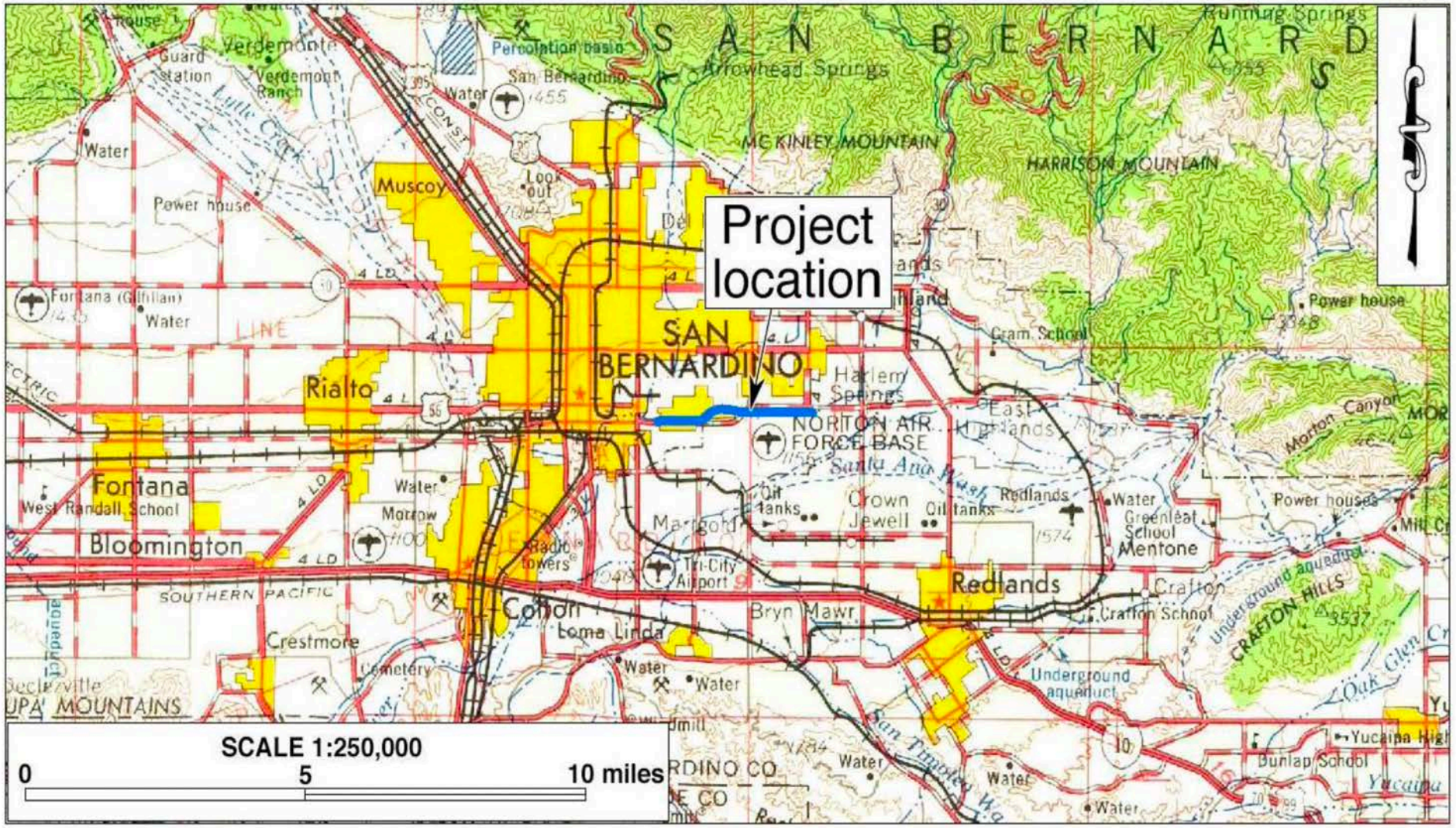

Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 120'x60' quadrangle [USGS 1969])

FIGURE 4.6-3

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Environmental Consultants

Project Vicinity 1969

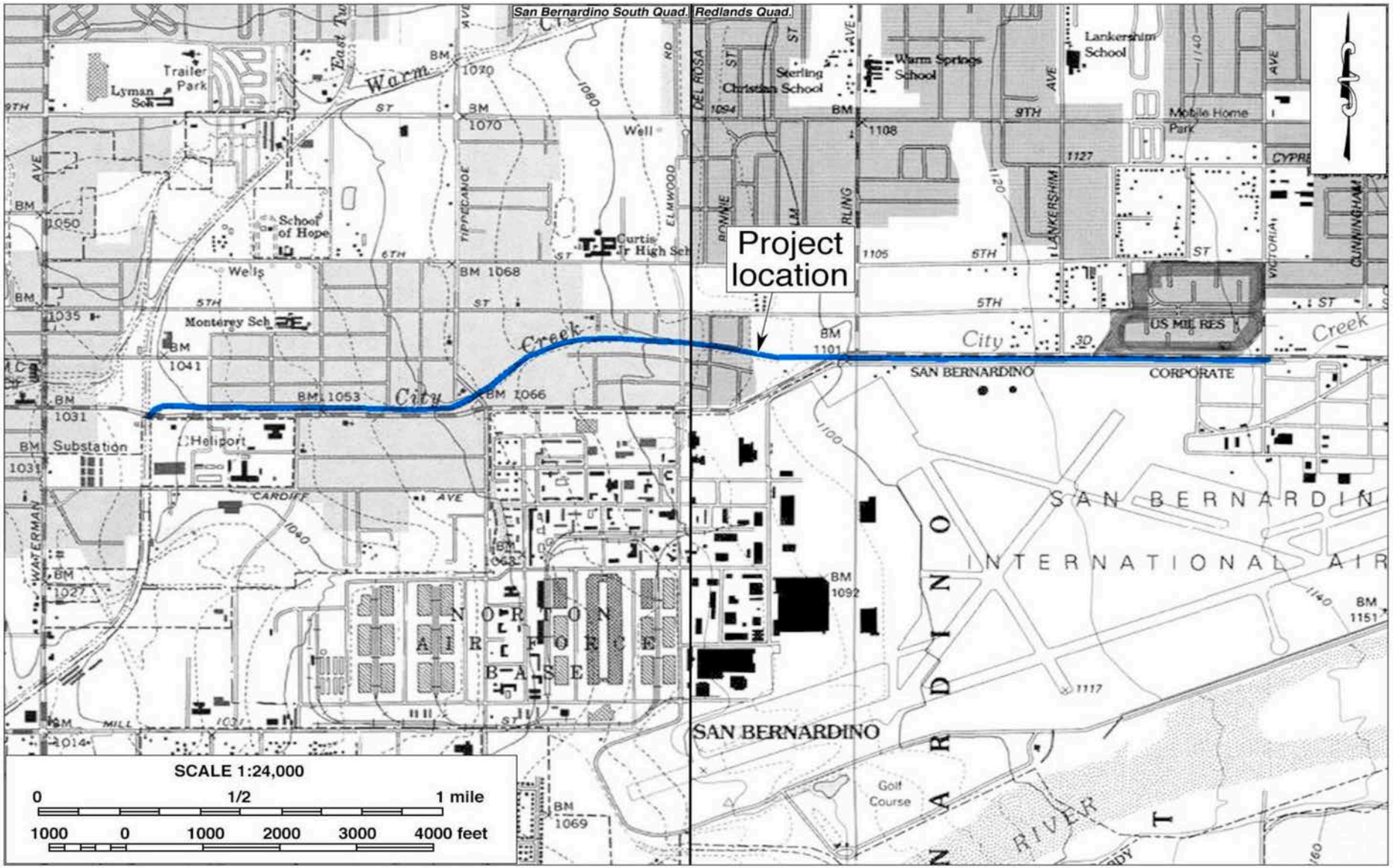

Figure 2. Project area. (Based on USGS San Bernardino South and Redlands, Calif., 7.5' quadrangles [USGS 1980; 1996])

FIGURE 4.6-4

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Environmental Consultants

Project Area 1980

FIGURE 4.6-5

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Environmental Consultants

Aerial Project Location

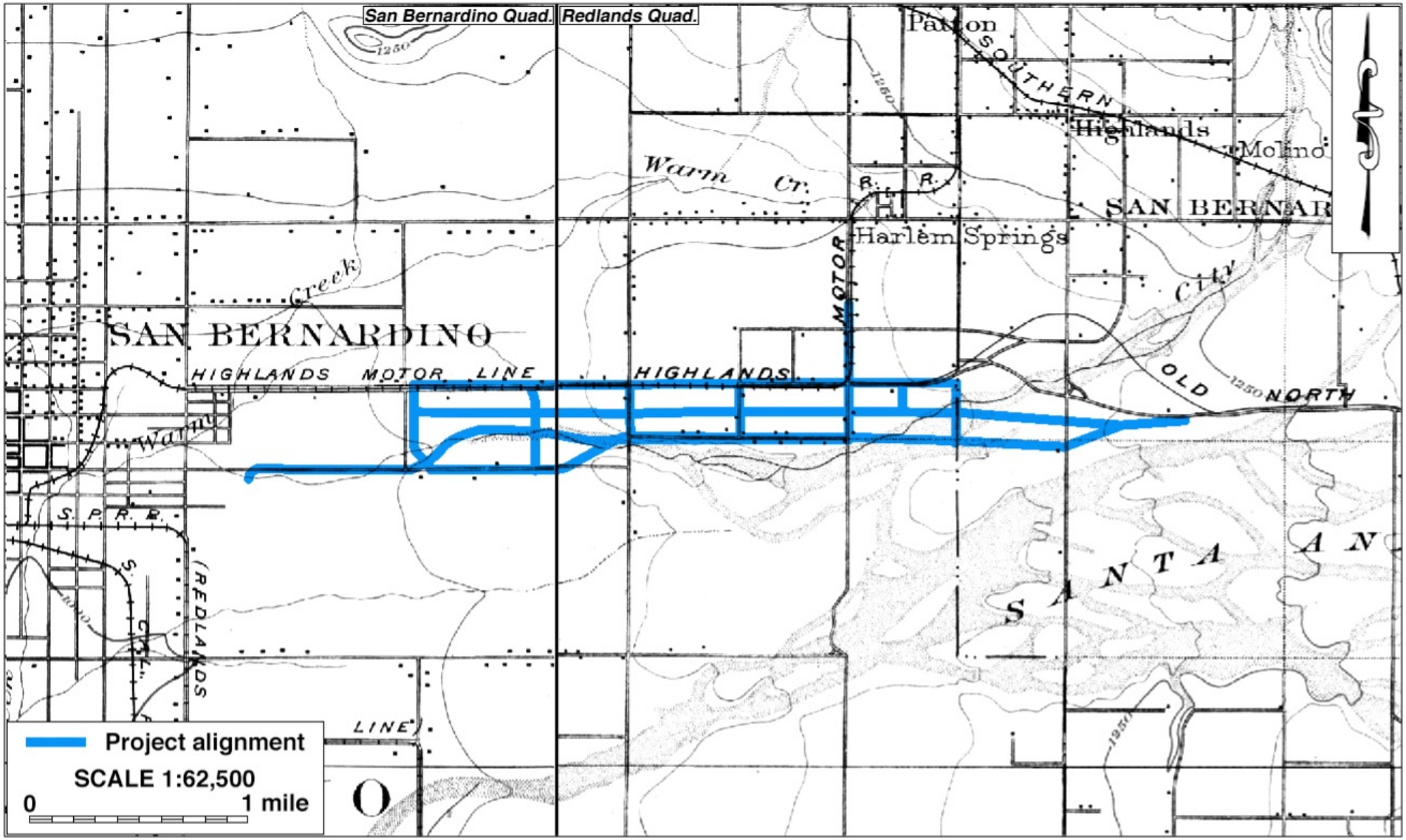

FIGURE 4.6-6

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The Project Area and Vicinity in 1893-1899.

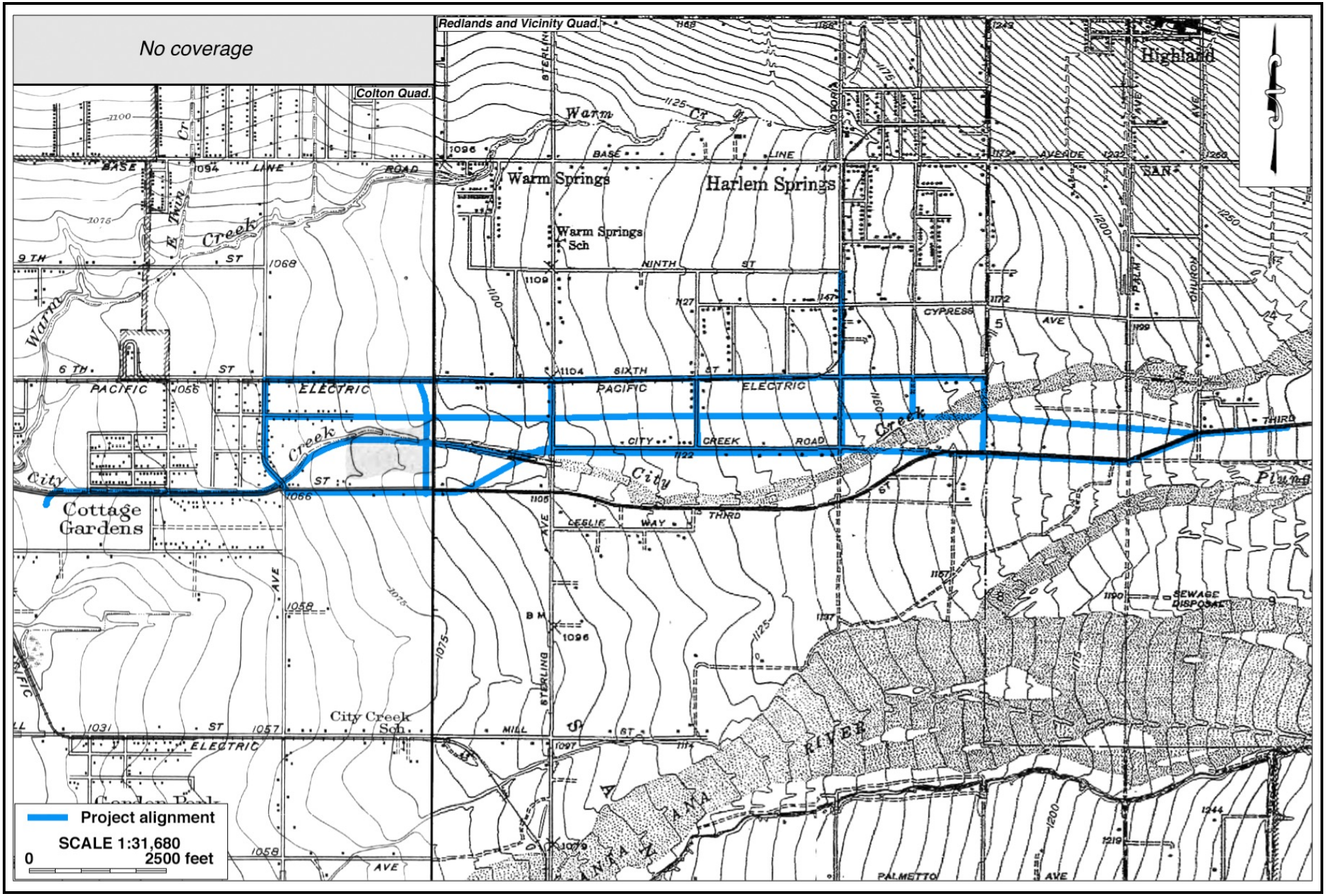

FIGURE 4.6-7

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The Project Area and Vicinity in 1936-1939.

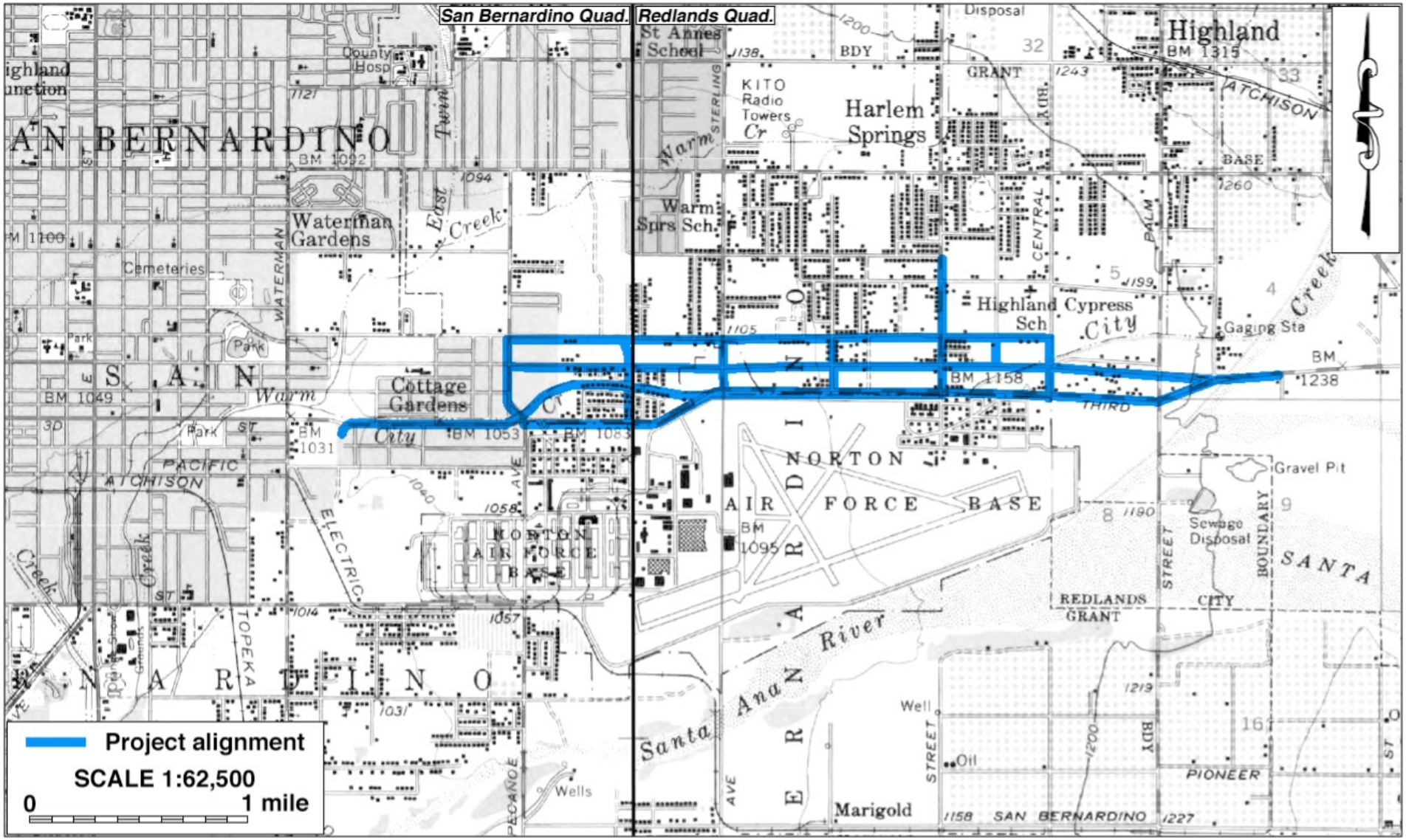

FIGURE 4.6-8

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The Project Area and Vicinity in 1952-1954.

Typical bridges and culverts along the City Creek Channel. *Clockwise from upper left*: Third Street crossing, view to the east; Del Rosa Avenue crossing, view to the southwest; Tippecanoe Avenue crossing, view to the east; Pedley Road crossing, view to the southeast. (Photographs taken on December 10, 2019)

FIGURE 4.6-9

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Environmental Consultants

Typical Bridges and Culverts along the City Creek Channel

4.7 ENERGY

4.7.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of energy from implementation of the proposed Inland Valley Infrastructure Corridor (IVIC).

This document is a full-scope Draft Environmental Impact Report (DEIR) for the above-described project and all of the standard issues related to Energy identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

This document is a DEIR for the above-described project and all of the standard issues related to energy identified in Appendix G of the State CEQA Guidelines are evaluated. The issues pertaining to Energy will be discussed below as set forth in the following framework:

4.7.1 Introduction
4.7.2 Regulatory Setting
4.7.3 Environmental Setting
4.7.4 Thresholds of Significance
4.7.5 Environmental Impacts
4.7.7 Cumulative Impacts
4.7.8 Unavoidable Significant Adverse Impacts

No comments were received during the NOP comment period on this topic.

The following reference documents were used in preparing this section of the DEIR.

- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*
- Urban Crossroads, June 3, 2024. *Inland Valley Infrastructure Corridor Air Quality Impact Analysis* (AQIA)
- Urban Crossroads, January 15, 2021. *Airport Gateway Specific Plan Energy Analysis* (EA)

4.7.2 Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

4.7.2.1 Federal

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations

(MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

The Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

4.7.2.2 California Regulations

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (California Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report (IEPR).

The 2022 IEPR was adopted February 2023, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2022 IEPR introduces a new framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2022 IEPR.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

California Code of Regulations Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations Title 24 (Title 24) Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2022 version of Title 24 was adopted by the CEC and will be effective on January 1, 2023. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons. The IVIC would be required to comply with the applicable standards in place at the time building permit document submittals are made. These may require, among other items:

Nonresidential Mandatory Measures

- **Short-term bicycle parking**. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking.** For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- **Designated parking for clean air vehicles.** In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **EV (electric vehicle) charging stations.** New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.
- **Outdoor light pollution reduction.** Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- **Construction waste management.** Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- **Excavated soil and land clearing debris.** 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- **Water conserving plumbing fixtures and fittings.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

- Water Closets. The effective flush volume of all water closets shall not exceed
  - 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed
  - 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- **Outdoor potable water uses in landscaped areas.** Nonresidential developments shall comply with a local water efficient landscape ordinance or the current MWELO, whichever is more stringent (5.304.1).
- **Water meters.** Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- **Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf.** Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- **Commissioning.** For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2)

AB 1493 Pavley Regulations and Fuel Efficiency Standards

AB 1493 Pavely Regulations and Federal Fuel Efficiency Standards (Pavely), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

California's Renewable Portfolio Standard

First established in 2002 under SB 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020.

Clean Energy and Pollution Reduction Act Of 2015

In October 2015, the legislature approved, and the Governor signed the Clean Energy and Pollution Reduction Act of 2015 (SB 350), which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and

improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the CPUC, the CEC, and local publicly owned utilities.
- Reorganize the ISO to develop more regional electrified transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western U.S.

100 Percent Clean Energy Act of 2018

In September 2018, the legislature approved, and the Governor signed the 100 Percent Clean Energy Act of 2018 (SB 100), which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

Executive Order N-79-20 and Advanced Clean Cars II

On August 25, 2022 CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

4.7.2.3 City of Highland

City of Highland General Plan Policies

The City of Highland General Plan offers the following Conservation and Open Space Element, Policies and Programs regarding energy:

Conservation and Open Space Element: Goal 5.16
Continue to encourage, support and adopt energy-conservation practices.

Conservation and Open Space Element: Policy 1
Consolidate and adopt energy-saving practices for all City departments.

Conservation and Open Space Element: Policy 2
Monitor energy usage for all City facilities.

Conservation and Open Space Element: Policy 3
Provide information on free energy audits for the public given by public utilities.

Conservation and Open Space Element: Policy 4
Distribute energy-conservation information, in both English and Spanish, to residents and businesses through:

- Links to energy agencies and utilities on City's homepage
- Brochures available at City Hall and other public facilities
- Information and tips on utility bills.
- Outreach programs to schools and businesses.
- Environmental Learning Center

Conservation and Open Space Element: Policy 5
Coordinate energy-related policies and actions with local utilities and energy agencies.

Conservation and Open Space Element: Goal 5.17
Continue to encourage, support and adopt energy-conservation practices.

Conservation and Open Space Element: Policy 1
Encourage energy and environmentally sustainable designs— such as "Green Development Standards"—in the design and approval of new projects.

Conservation and Open Space Element: Policy 2
Orient buildings on the site to maximize the natural ventilation provided by prevailing breezes.

Conservation and Open Space Element: Policy 3
Incorporate passive solar design techniques including building orientation, energy-saving materials, roof overhangs, and window and door placement.

Conservation and Open Space Element: Policy 4
Increase minimum building insulation standards.

Conservation and Open Space Element: Policy 5
Encourage landscape design that cools buildings and blocks solar rays, such as the planting of deciduous trees on south and west facing elevations, and give Title 24 credit for landscaping.

Conservation and Open Space Element: Policy 6
Channel runoff to permeable surfaces through the design of roofs and rain gutter systems and drainage courses.

Conservation and Open Space Element: Policy 7
Encourage energy-efficient retrofitting of existing buildings, where practical, throughout the City including assisting applicants in the installation of more efficient HVAC (heating, ventilation, air conditioning) systems.

Conservation and Open Space Element: Policy 8
Distribute and participate in incentive programs for incorporation of solar and photovoltaic panels (active solar) into existing or new buildings.

Conservation and Open Space Element: Policy 9
Establish a "green building" site design incentive program, such as density or height bonuses, reduced parking requirements, expedited plan check, and recognition programs.

Conservation and Open Space Element: Policy 10
Adopt LEED (Leadership in Energy and Environmental Design) design standards for public buildings.

Conservation and Open Space Element: Policy 11
Participate in the CEEP (Community Energy Efficiency Program) Certificate and Recognition Program.

Conservation and Open Space Element: Policy 12
Encourage a grey water recycling plan.

4.7.2.4 City of San Bernardino

City of San Bernardino General Plan Policies

The City of San Bernardino General Plan offers the following Goals, Policies and Programs regarding energy:

Utilities Element: Goal 9.6
Ensure an adequate, safe, and orderly supply of electrical energy is available to support existing and future land uses within the City on a project level.

Utilities Element: Policy 9.6.1
Require that approval of new development be contingent upon the ability to be served with adequate electrical facilities. (LU-1)

Utilities Element: Policy 9.6.2
Underground utilities, including on-site electrical utilities and connections to distribution facilities, unless such undergrounding is proven infeasible. (U-2)

Utilities Element: Policy 9.6.3
Provide adequate illumination of all streets, alleys (under special conditions), and public areas; upgrading areas that are deficient and maintaining lighting fixtures in good working order.

Utilities Element: Policy 9.6.4
Require improvements to the existing street light system and/or new street light systems necessitated by a new development proposal be funded by that development.

Utilities Element: Policy 9.6.5
Encourage and promote the use of energy-efficient (U.S. Department of Energy "Energy Star" or equivalent) lighting fixtures, light bulbs, and compact fluorescent bulbs in residences, commercial, and public buildings, as well as in traffic signals and signs where feasible. (LU-1)

Utilities Element: Goal 9.7
Ensure an adequate supply of natural gas is available to support existing and future land uses within the City at a project level.

Utilities Element: Policy 9.7.1
Work with the Southern California Gas Company to ensure that adequate natural gas facilities are available to meet the demands of existing and new developments.

Utilities Element: Policy 9.7.2
Require that all new development served by natural gas install on-site pipeline connections to distribution facilities underground, unless such undergrounding is infeasible due to significant environmental or other constraints. (U-2)

Utilities Element: Goal 9.9
Use the City's available geothermal resources as an alternative to natural gas and electricity.

Utilities Element: Policy 9.9.1
Provide for the continued development and expansion of geothermal energy distribution lines. (U-3)
Provide public funding to expand the existing geothermal production and distribution system. (U-3)

Utilities Element: Policy 9.9.2
Promote the use of geothermal resources particularly in the South San Bernardino Area.

Energy and Water Conservation Element: Goal 13.1
Use the City's available geothermal resources as an alternative to natural gas and electricity.

Utilities Element: Policy 13.1.1
Reduce the City's ongoing electricity use by 10 percent and set an example for residents and businesses to follow.

Utilities Element: Policy 13.1.2
Ensure the incorporation of energy conservation features in the design of all new construction and site development in accordance with State Law. (LU-1)

Utilities Element: Policy 13.1.3
Consider enrollment in the Community Energy Efficiency Program (CEEP), which provides incentives for builders who attain energy savings 30 percent above the National Model Energy Code, the Energy Star Program, which is sponsored by the United States Department of Energy and the Environmental Protection Agency and encourages superior energy efficiency by residents and businesses, or the State's Energy

Efficiency and Demand Reduction Program, which offer rebates and incentives to agencies and developers who reduce energy consumption and use energy efficient fixtures and energy-saving design elements. (EWC-1)

Utilities Element: Policy 13.1.4
Require energy audits of existing public structures and encourage audits of private structures, identifying levels of existing energy use and potential conservation measures. (EWC-3)

Utilities Element: Policy 13.1.5
Encourage energy-efficient retrofitting of existing buildings throughout the City. (EWC-1)

Utilities Element: Policy 13.1.6
Consider program that awards incentives to projects that install energy conservation measures, including technical assistance and possible low-interest loans. (EWC-1)

Utilities Element: Policy 13.1.7
Ensure that new development consider the ability of adjacent properties to utilize energy conservation design. (LU-1 and EWC-1)

Utilities Element: Policy 13.1.8
Educate the public regarding the need for energy conservation, environmental stewardship, and sustainability techniques and about systems and standards that are currently available for achieving greater energy and resource efficiency, such as the U.S. Green Building Council's "Leadership in Energy and Environmental Design" (LEED) standards for buildings.

Utilities Element: Policy 13.1.9
Encourage increased use of passive and active solar and wind design in existing and new development (e.g., orienting buildings to maximize exposure to cooling effects of prevailing winds, daylighting design, natural ventilation, space planning, thermal massing and locating landscaping and landscape structures to shade buildings). (LU-1)

Utilities Element: Policy 13.1.10
Consider adopting an ordinance relating to energy conservation, environmental stewardship, and sustainability for new development that incorporates the LEED standards.

4.7.3 Environmental Setting: Energy

4.7.3.1 Overview

The most recent data for California's estimated total energy consumption is from 2017 and natural gas consumption is from 2020, released by the U.S. Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included:[1]

- As of 2020, approximately 6,923 trillion British thermal units (BTUs) of energy was consumed.
- As of 2020, approximately 524 million barrels of petroleum was consumed.
- As of 2021, approximately 2,101 billion cubic feet of natural gas was consumed.
- As of 2021, approximately 1 million short tons of coal was consumed.

According to the EIA, in 2021 the U.S. petroleum consumption comprised about 77% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels. In 2021, about 249,790 million gallons (or about 5.95 million barrels) of finished petroleum products were consumed in the U.S., an average of about 684 million gallons per day (or about 16 million barrels per day). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day). The most

[1] US Energy Information Administration, 2024. California State Energy Profile https://www.eia.gov/state/print.php?sid=CA (Accessed 06/19/24)

recent data provided by the EIA for energy use in California by demand sector is from 2020 and is reported as follows:

- Approximately 34.0% transportation
- Approximately 24.6% industrial
- Approximately 21.8% residential
- Approximately 19.6% commercial

According to the EIA, California used approximately 247,250 gigawatt hours (GWh) of electricity in 2021. By sector in 2021, residential uses utilized 36.5% of the State's electricity, followed by 43.9% for commercial uses, 19.2% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building.

According to the EIA, California used approximately 200,871 million therms of natural gas in 2021. In 2021 (the most recent year for which data is available), by sector, industrial uses utilized 33% of the State's natural gas, followed by 30% used as fuel in the electric power sector, 21% from residential, 11% from commercial, 1% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself. While the supply of natural gas in the U.S. and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas.

In 2021, total system electric generation for California was 277,764GWh. California's massive electricity in-state generation system generated approximately 194,127 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (18%). Natural gas is the main source for electricity generation at 50.2% of the total in-state electric generation system power as shown in **Table 4.7-1.**

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- In 2022, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2022, the State ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states.
- In 2020, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all but three other states.
- In 2022, renewable resources, including hydroelectric power and small-scale, customer-sited solar power, accounted for 49% of California's in-state electricity generation. Natural gas fueled another 42%. Nuclear power supplied almost all the rest.
- In 2022, California was the fourth-largest electricity producer in the nation. The State was also the nation's third-largest electricity consumer, and additional needed electricity supplies came from out-of-state generators.

As indicated below, California is one of the nation's leading energy producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Program, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Program—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Program.

Table 4.7-1
TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2022)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix (GWh)	Total California Power Mix
Coal	273	0.13%	181	5,716	5,897	6,170	2.15%	273
Natural Gas	96,457	47.46%	44	7,994	8,038	104,495	36.38%	96,457
Oil	65	0.03%	-	-	-	65	0.2%	65
Other (Waste Heat/Petroleum Coke)	315	0.15%	-	-	-	315	0.11%	315
Unspecified	-	0.0%	12,485	7,943	20,428	20,428	7.11%	-
Total Thermal and Unspecified	**97,110**	**47.78%**	**12,710**	**21,653**	**34,363**	**121,473**	**45.77%**	**97,110**
Nuclear	17,627	8.67%	397	8,342	8,739	26,366	9.18%	17,627
Large Hydro	14,607	7.19%	10,803	1,118	11,921	26,528	9.24%	14,607
Biomass	5,366	2.64%	771	25	797	6,162	2.15%	5,366
Geothermal	11,110	5.47%	253	2,048	2,301	13,412	4.67%	11,110
Small Hydro	3,005	1.48%	211	13	225	3,230	1.12%	3,005
Solar	40,494	19.92%	231	8,225	8,456	48,950	17.04%	40,494
Wind	13,938	6.86%	8,804	8,357	17,161	31,099	10.83%	13,938
Total Non-GHG and Renewables	**106,147**	**52.22%**	**21,471**	**28,129**	**49,599**	**155,747**	**54.23%**	**106,147**
SYSTEM TOTALS	***203,257***	***100.0%***	***34,180***	***49,782***	***83,962***	***287,220***	***100.0%***	***203,257***

Source: CECs 2022 Total System Electric Generation

4.7.3.2 Electricity

The usage associated with electricity use were calculated using CalEEMod Version 2022.1.1.12. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station. While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the SWRCB's once-through cooling policy, the retirement of the San Onofre Nuclear Generating Station complicated the situation. California Independent System Operator (ISO) studies revealed the extent to which SCAB and the San Diego Air Basin region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts. Similarly, the subsequent 2022 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

California's electricity industry is an organization of traditional utilities, private generating companies, and State agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California ISO is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability,

and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes, the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities.

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/ modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western U.S. electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2021 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.

Tables 4.5-2 identifies SCE's specific proportional shares of electricity sources in 2021. As indicated in **Table 4.5-2**, the 2021 SCE Power Mix has renewable energy at 31.4% of the overall energy resources. Geothermal resources are at 5.7%, wind power is at 10.2%, large hydroelectric sources are at 2.3%, solar energy is at 14.9%, and coal is at 0%.

Table 4.7-2
SCE 2021 POWER CONTENT MIX

Energy Resources	2021 SCE Power Mix
Eligible Renewable	**31.4%**
Biomass & waste	0.1%
Geothermal	5.7%
Small Hydroelectric	0.5%
Solar	14.9%
Wind	10.2%
Coal	**0.0%**
Large Hydroelectric	**2.3%**
Natural Gas	**22.3%**
Nuclear	**9.2%**
Other	**0.2%**
Unspecified Sources of power*	34.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

4.7.3.3 Natural Gas

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800,000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.

The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the State's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja – Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the CPUC may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system).

Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The State's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities – Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage – help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the CPUC has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' websites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993 when the CPUC removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The CPUC also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the CPUC assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the CPUC adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the CPUC. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent CPUC decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the CPUC adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E BTS, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order to properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties – the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California."

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the State in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

4.7.3.4 Transportation Energy Resources

The IVIC Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The California Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California, and those vehicles consume an estimated 17.2 billion gallons of fuel each year[2]. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Program patrons and employees via commercial outlets.

[2] Fuel consumptions estimated utilizing information from EMFAC2021.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles. While gasoline consumption has been declining since 2008, it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 8% of the nation's total consumption. The State is the largest U.S. consumer of motor gasoline and jet fuel, and 83% of the petroleum consumed in California is used in the transportation sector.

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2021, about 33% of the natural gas delivered to consumers went to the State's industrial sector, and about 31% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2021. The residential sector, where three-fifths of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1%.

4.7.4 Thresholds of Significance

In compliance with Appendix G of the *State CEQA Guidelines,* this DEIR analyzes the project's anticipated energy use to determine if the project would:

EN-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

EN-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

4.7.5 Environmental Impacts

EN-1 Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Airport Gateway Specific Plan (AGSP) Energy Analysis (EA) prepared in 2021 covered a portion of the development contemplated by the IVIC. In fact, the EA contemplated the entire Specific Plan, which included much of the infrastructure proposed as part of the IVIC. As a result, the analysis below utilizes the estimations from the AGSP EA from which to draw conclusions, as these impacts would be overestimated when compared to the IVIC infrastructure specific Project that is being proposed as part of this DEIR. In short, the AGSP planned infrastructure within nearly identical boundaries compared to the IVIC, in addition to the development of the land therein totaling up to 9.27 million square feet of Mixed Use Business Park. The IVIC does not propose any conventional land development beyond the proposed EVWD Reservoir and Well Development, which would be installed within land that would fall outside of infrastructure corridors proposed to be developed under the IVIC Project (refer to Chapter 3, Project Description). Thus, the analysis presented in the EA for the AGSP would be an overestimation of energy impacts.

Summary of Impacts

Construction Energy Demands

The estimated power cost of on-site electricity usage during the construction, estimated total electricity usage during construction, and estimated in single event consumption of diesel fuel

would not be atypical for the type of construction proposed. This is because there are no aspects of the IVIC Project's proposed construction process that are unusual or energy-intensive, and IVIC Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures (BACMs) inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the IVIC Project would not be atypical for the type of construction proposed. This is because there are no aspects of the IVIC Project's proposed construction process that are unusual or energy-intensive. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements.

Thus, due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed IVIC Project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related to electricity and fuel consumption would be less than significant.

Operational Energy Demands

Electricity and Natural Gas**:** Operation of the proposed IVIC Project would mostly consist of the continued, improved, and/or expanded use of infrastructure, such as roadways, stormwater collection (i.e. City Creek Bypass), but would also include energy demand in support of the EVWD Well, in addition to the existing and possibly expanded use of energy to support the existing booster pump station(s) that would fill the EVWD Reservoir. The EVWD project components would consume energy as part of building operations and transportation activities.

The IVIC Project would be designed and constructed in accordance with the City of Highland, City of San Bernardino, or the San Bernardino County's latest adopted energy efficiency standards, which are based on the Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation. As supported by the preceding discussions, IVIC Project operational energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. Impacts would be less than significant.

Fuel: As mentioned previously, the proposed IVIC Project does not include any substantive new stationary or mobile sources of emissions, and therefore, by its very nature, will not generate substantive amounts of energy demand from IVIC Project operations. The IVIC Project does not propose trip-generating land use and while it is anticipated that the IVIC Project would require

intermittent maintenance, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Furthermore, a goal of the IVIC Project is to strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements, which includes alternative energy technologies. Thus, the IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

Conclusion of Impacts

As supported by the preceding analyses, IVIC Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. The IVIC Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

EN-2 Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The IVIC Project includes construction activity and associated improvements and would not obstruct a state or local plan for renewable energy or energy efficiency. As discussed above, the IVIC Project will be powered by electricity from the grid, and will therefore be more energy efficient and rely on renewable energy as the grid moves towards more efficiency and renewable energy sources.

Construction

As discussed above, the proposed IVIC Project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by CARB. The proposed IVIC Project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed IVIC Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related energy efficiency and renewable energy standards consistency impacts would be less than significant.

Operation

California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan GHG emissions reductions. The Project would be designed and constructed in accordance with the City of Highland, City of San Bernardino, and the San Bernardino County's latest adopted energy efficiency standards, which are based on the Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, Title

24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Compliance with the aforementioned mandatory measures would ensure that future development would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

4.7.6 Cumulative Impacts

The proposed IVIC would contribute to the cumulative use of energy within San Bernardino Valley region. The region is anticipating moderate population growth and associated housing, commercial, and industrial developments that would cumulatively increase the demand for energy, including that which would be demanded by the proposed project. While the IVIC aims at reducing overall energy consumption from the proposed development, it would minimally increase the overall energy demands over the approximately 20-year horizon in which IVIC would be implemented. The IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed; it would support the installation of alternative energy technology, provision of electric vehicle (EV) charging stations, utilization of electric equipment, and would require future development to meet Green Building Code Standards, in additional utilization of high efficiency lighting, etc. These measures would minimize the IVIC's energy footprint over the 20-year horizon and beyond such that the proposed project's cumulative energy demand would be less than significant.

4.7.7 Unavoidable Significant Adverse Impacts

The evaluation of energy presented in the preceding analysis demonstrates that neither construction nor operation of individual projects under the proposed IVIC Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources; affect local and regional energy supplies; or conflict with or obstruct existing energy standards or a State or local plan for renewable energy or energy efficiency. Therefore, no unavoidable significant impact to energy would result from implementing the proposed IVIC Project.

4.8 GEOLOGY AND SOILS

4.8.1 Introduction

This subchapter evaluates the environmental impacts to geology and soils from implementation of the proposed Project. These issues will be discussed below as set in the following framework:

4.8.1 Introduction
4.8.2 Regulatory Setting
4.8.3 Existing Conditions
4.8.4 Thresholds of Significance
4.8.5 Methodology
4.8.6 Environmental Impacts
4.8.7 Mitigation Measures
4.8.8 Cumulative Impacts
4.8.9 Significant and Unavoidable Impacts

References utilized for this section include:

- City of Highland, March 2006. *General Plan*
- City of San Bernardino, November 1, 2005. *General Plan*.
- NSPE-CA, 2024. Inception of the CA PE Act. https://www.nspe-ca.org/licensure/inception-of-the-ca-pe-act (accessed 04/23/24)
- San Bernardino County, November 2, 2020. *San Bernardino Countywide Plan*.
- Simas & Associates, LTD, 2024. What is the Board for Professional Engineers, Land Surveyors, and Geologists? https://simasgovlaw.com/what-is-the-board-for-professional-engineers-land-surveyors-and-geologists/ (accessed 04/23/24)

The General Plans and General Plan EIRs for the two cities have been used to characterize the existing Geology and Soils environment for the IVIC Project area. The Geology and Soils description that follows is intended to summarize the site specific environmental conditions. No comments related to geology and soils were received in response to the Notice of Preparation.

4.8.2 Regulatory Setting

Federal, State and local laws, regulations, plans, or guidelines that are applicable to the proposed Project are summarized below.

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the act established the National Earthquake Hazard Reduction Program ("NEHRP"), which refined the description of agency responsibilities, program goals, and objectives. NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

State

California Alquist-Priolo Earthquake Fault Zoning Act

The California Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972, and amended, with its primary purpose being to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. This act (or state law) was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The act requires the State Geologist (California Geologic Survey, CGS) to delineate regulatory zones known as "earthquake fault zones" along faults that are "sufficiently active" and "well defined" and to issue and distribute appropriate maps to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Pursuant to this act and as stipulated in Section 3603(a) of the California Code of Regulations, structures for human occupancy are not permitted to be placed across the trace of an active fault. The act also prohibits structures for human occupancy within 50 feet of the trace of an active fault, unless proven by an appropriate geotechnical investigation and report that the development site is not underlain by active branches of the active fault, as stipulated in Section 3603(a) of the California Code or Regulations. Furthermore, the act requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting, as stipulated in Section 3603(d) of the California Code of Regulations.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, Sections 2690-2699.6) was adopted to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as "zones of required investigation," where regional (that is, not site-specific) information suggests that the probability of a hazard requiring mitigation is adequate to warrant a site-specific investigation. The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical investigation, that appropriate MMs have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed MMs. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in California Geological Survey (CGS) Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board (CGS, 2008).

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building

standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The current CBC is based on the 2018 International Building Code published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction, and the American Concrete Institute. ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The building department of every city and county is required to enforce all the provisions of the CBC, and is authorized to issue a construction permit for the erection, construction, reconstruction, installation, moving, or alteration of any building or structure.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), including excavation, grading, and fills (Section 1804). The CBC requires geotechnical investigations to be conducted prior to construction unless waived by the designated building official (which could occur when satisfactory data from adjacent areas demonstrates an investigation is not necessary). Chapter 18 also describes the analysis for expansive soils and the determination of the depth of the groundwater table. Appendix G, Section VII, of the State CEQA Guidelines states that expansive soil would be characterized as defined in Table 18-1-B of the 1994 Uniform Building Code. However, that table is no longer used[1] and the CBC's current definition of expansive soils is as follows:

> 1803.5.3, Expansive Soil. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1,2 and 3 shall not be required if the test prescribed in Item 4 is conducted:
>
> 1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318;
> 2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422;
> 3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422; and/or
> 4. Expansion index greater than 20, determined in accordance with ASTM D 4829.

The CBC also includes earthquake design requirements that take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications for individual projects are then determined according to the SDC.

[1] The Uniform Building Code is no longer the basis for the CBC, which is now based on the 2018 International Building Code. Because the considerations in State CEQA Guidelines Appendix G are advisory rather than compulsory, and Section VII thereof has not yet been revised to reflect this change, this EIR relies on the 2018 International Building Code, which provides the basis for the CBC.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (Chapter 9, Division 2, Section 2710 et seq. of the California Public Resources Code) requires the State Mining and Geology Board to adopt State policies for reclaiming mined lands and conserving mineral resources. Title 24 of the California Code of Regulations, Division 2, Chapter 8, Subchapter 1 contains these policies.

In accordance with SMARA, the State has established the California Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels.

The California Professional Engineers Act

California currently regulates the use of the practice and the use of the title of Civil, Electrical, and Mechanical Engineer through the California Professional Engineers Act (Building and Professions Code Sections 6700-6799). These three are known as Practice Acts. Only those registered are authorized to use the title, practice, or offer to practice in that discipline.[2]

Code of Professional Conduct, as administered by the California Board of Professional Engineers, Land Surveyors, and Geologists

The Board for Professional Engineers, Land Surveyors, and Geologists (BPELS) regulates the practices of engineering, land surveying, geology, and geophysics in the State of California in order to safeguard the life, health, property, and welfare of the public.

The main purpose and duties of BPELS include:[3]

- Licensing qualified individuals (not companies) as professional engineer, land surveyors, geologist, and geophysicists, based on experience and successfully passing examinations.
- Establishing regulations and promoting professional conduct.
- Enforcing laws and regulations.
- Providing information to the public on using professional engineering and land surveying services.

To protect and safeguard the health, safety, welfare, and property of the public, every person who is licensed by the BPELS as a professional engineer, including licensees employed in any manner by a governmental entity or in private practice, shall comply with this Code of Professional Conduct. A violation of this Code of Professional Conduct in the practice of professional engineering constitutes unprofessional conduct and is grounds for disciplinary action.

Storm Water Pollution Prevention Plans

Pursuant to the Clean Water Act, in 2012, the State Water Resources Control Board issued a statewide general NPDES Permit for stormwater discharges from construction sites (National Pollutant Discharge Elimination System No. CAS000002). Under this Statewide General Construction Activity permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater

[2] NSPE-CA, 2024. Inception of the CA PE Act. https://www.nspe-ca.org/licensure/inception-of-the-ca-pe-act (accessed 04/23/24)
[3] Simas & Associates, LTD, 2024. What is the Board for Professional Engineers, Land Surveyors, and Geologists? https://simasgovlaw.com/what-is-the-board-for-professional-engineers-land-surveyors-and-geologists/ (accessed 04/23/24)

discharges or be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the State Water Resources Control Board and developing and implementing a Storm Water Pollution Prevention Plan ("SWPPP"). Each applicant under the General Construction Activity Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list best management practices (BMPs) implemented on the construction site to protect stormwater runoff and must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

Local

City of Highland General Plan

To assist in understanding the City of Highland geology, active faults and liquefaction areas, maps from the General Plan Public Health and Safety are provided in this document. **Figure 4.8-1** (General Plan Figure 6.1) shows the general geology underlying the City of Highland; **Figure 4.8-2** (General Plan Figure 6.2) shows the location of active faults (Alquist-Priolo Zones) in the City; and **Figure 4.8-3** (General Plan Figure 6.3) shows the location of areas that may be susceptible to liquefaction in the City. The following Highland General Plan goals and policies addressing geology and soils constraints are applicable to the project.

Public Health, Safety, and Environmental Justice Element: Goal 3
Minimize risks, such as loss of life, injury, property damage, and natural resource destruction from natural and human-caused hazards.

Public Health, Safety, and Environmental Justice Element: Policy 3.5
Enforce development standards to reduce geologic risk.

Action 3.5a: Soil Reports in Liquefaction Zones. When applicable, continue to require soil reports and implement recommendations for projects in identified areas where liquefaction or other soil issues exist.

Action 3.5b: Soil Reports for Projects on Fill. When applicable, continue to require a preliminary soil report and a report of satisfactory placement of fill prepared by a licensed geotechnical engineer or civil engineer for all buildings and structures supported on fill.

Action 3.5c: Foundation Reports. When applicable, continue to require a preliminary report for all buildings and structures supported on natural ground unless the foundations have been designed in accordance with current standards.

Action 3.5d: Renovations. Continue to require seismic retrofits for major renovations in accordance with Historic and Building Code provisions.

Public Health, Safety, and Environmental Justice Element: Policy 3.6
Prioritize seismic retrofits of buildings that pose the greatest risk.

Action 3.6a: Unreinforced Masonry Structures. Consistent with State law and when applicable, require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards. Incentivize seismic retrofits through permit fee waiver or other city incentive.

Action 3.6b: Retrofitting of Essential Facilities. When feasible, seismic retrofit essential facilities to minimize damage in the event of seismic or geologic hazards.

City of San Bernardino General Plan

To assist in understanding the City of San Bernardino geology, active faults and liquefaction areas, maps from the General Plan Public Health and Safety are provided in this document. **Figure 4.8-4** (General Plan Figure S-3) shows the shows the location of Alquist-Priolo Zones in

the City of San Bernardino and **Figure 4.8-5** (General Plan Figure S-4) shows the location of active fault traces within the City; **Figure 4.8-6** (General Plan Figure S-5) shows the location of areas that may be susceptible to liquefaction in the City; and **Figure 4.8-7** (General Plan Figure S-6) shows the areas of the City that may be subject to regional subsidence. The following San Bernardino General Plan goals and policies addressing geology and soils constraints are applicable to the project.

Safety: Goal 10.7
Protect life, essential lifelines, and property from damage resulting from seismic activity.

Safety Policy 10.7.1
Minimize the risk to life and property through the identification of potentially hazardous areas, establishment of proper construction design criteria, and provision of public information.

Safety Policy 10.7.2
Require geologic and geotechnical investigation for new development in areas adjacent to known fault locations and approximate fault locations (Figure S-3) as part of the environmental and/or development review process and enforce structural setbacks from faults identified through those investigations. (LU-1)

Safety Policy 10.7.3
Enforce the requirements of the California Seismic Hazards Mapping and Alquist-Priolo Earthquake Fault Zoning Acts when siting, evaluating, and constructing new projects within the City. (LU-1)

Safety Policy 10.7.4
Determine the liquefaction potential at a site prior to development, and require that specific measures be taken as necessary, to prevent or reduce damage in an earthquake.

Safety Policy 10.7.5
Evaluate and reduce the potential impact of liquefaction on new and existing lifelines.

Safety: Goal 10.9
Minimize exposure to and risk from geologic activities.

Safety Policy 10.9.1
Minimize risk to life and property by properly identifying hazardous areas, establishing proper construction design criteria, and distribution of public information.

Safety Policy 10.9.2
Require geologic and geotechnical investigations in areas of potential geologic hazards as part of environmental and/or development review process for all new structures. (LU-1)

4.8.3 Environmental Setting: Geology and Soils

4.8.3.1 Geology

The San Bernardino Valley extends from San Antonio and Chino Creeks on the west to the margins of the San Bernardino Mountains on the east where the Santa Ana River and Mill Creek discharge to the valley floor. From west to east the geologic environmental setting is relatively consistent with mountains forming the northern and eastern boundary (San Gabriel and San Bernardino Mountains with steep slopes); transitioning to alluvial fans where streams exit the mountains (with shallower slopes and minimal bedrock exposure); and finally the Valley floor with the Santa Ana River serving as the lowest elevation point to which all water flows through and then out of the Upper Santa Ana River Watershed at Prado Dam (with minimal slope and minimal bedrock exposure). Cajon and Lytle Creeks flow out of the mountains and divide the San Gabriel from the San Bernardino Mountains. The east San Bernardino Valley extends from Lytle/Cajon

Creek channels to the discharge points of the Santa Ana River and Mill Creek in the City of Highland.

The IVIC Project area occupies a site that overlies alluvial fill, but more in the flat valley area just north of the Santa Ana River floodplain, than on the slightly steeper alluvial fans that occur to the north. **Figure 4.8-1** shows the underlying alluvial area that provides the geologic setting for the Project area and the area in general. There are no surface bedrock outcrops within the IVIC Project area and only one creek channel, the City Creek Bypass, traverses the Project area, in this case from east to west adjacent to 3rd Street, which generally forms the southern boundary of the IVIC Project area. As a result of the shallow slope of the IVIC Project area, and lack of exposed bedrock, the Project area is not subject to either landslide or rock fall hazards.

Although the IVIC Project area has relatively little geologic and soil variability, the east San Bernardino Valley contains a variety of geologic/geotechnical hazards (constraints). The primary constraint is the presence of numerous active faults capable of generating substantial earthquakes, including fault rupture of the ground surface and substantial groundshaking. **Figures 4.8-2, 4.8-4 and 4.8-5** show the location of active faults in the east San Bernardino Valley and the associated Alquist-Priolo Study Zones. Within these areas the potential exists to experience ground surface rupture during an earthquake with an epicenter in the Study Zone. Of note the IVIC Project area north of the San Bernardino International Airport is not located within any Alquist-Priolo Study Zone.

However, groundshaking from regional seismic events (earthquakes) can affect the proposed IVIC Project area. According to the City of Highland General Plan (page 6-3), the San Andreas Fault is capable of generating an earthquake with a magnitude of up to 8.3 on the Richter scale and the nearby San Jacinto Fault Zone has a comparable maximum credible earthquake of 8.5. The IVIC Project area is located in a Zone 4 hazard area assigned by the CBC. This requires future buildings and supporting infrastructure to be constructed in accordance with the current strictest seismic building code in the State. Further, the future site-specific infrastructure facilities within the Project area will be required to prepare and comply with site-specific geotechnical studies that will identify the degree of seismic hazard at a specific location and the required foundation and facility design requirements to mitigate groundshaking hazards to the extent feasible (protective of human life and survival of the infrastructure system with limited damage requiring repair).

Figures 4.8-3 and 4.8-6 show the areas of the Project area that have a high liquefaction susceptibility. Liquefaction is a seismically induced form of ground failure, which is associated with a high groundwater table (typically groundwater table within 50 feet of the ground surface) and unconsolidated granular materials with silt and clay content of less than 30 percent. The IVIC Project area potentially contains these conditions, so a high liquefaction hazard is identified for the western half of the Project area, essentially west of Victoria Avenue. The exposure to this hazard has lessened within the Project area in recent years due to lowering of the groundwater table in this area. However, this general hazard must be addressed to minimize its potential adverse impact to infrastructure facilities from liquefaction.

Thus, future development within the whole of the Project area will likely be required to prepare and comply with site-specific geotechnical studies that will identify current liquefaction hazards at a given development site and the required foundation and structural design requirements to mitigate liquefaction hazards.

Figure 4.8-7 shows the area in the Valley that may be subject to potential ground subsidence. Ground subsidence can occur when the ground beneath a building foundation experiences consolidation, typically of a few inches. Broad scale subsidence on the order of several feet can occur within an area where the groundwater table has been lowered and the soils above consolidate or where soil contains substantial organic matter that oxidizes and the soils consolidate as a result of this loss of organic matter. The subsidence area identified in **Figure 4.8-7** is assumed to have been caused by lowering the groundwater table and related consolidation of the sedimentary deposits. Potential for actual subsidence at future sites can be assessed by geologists and geotechnical engineers. Thus, the future site-specific developments within both jurisdictions will be required to prepare and comply with site-specific geotechnical studies that will include an evaluation of subsidence hazards at the site and the required foundation and building design requirements to mitigate subsidence hazards.

4.8.3.2 Soils

Similar to geology, the primary concerns related to soils within a Project area are any constraints that they may have for a particular use (except for agriculture in this case). **Table 4.8-1** lists the soil series (soils with certain common characteristics) that are found within the IVIC Project area. **Figure 4.8-8** shows the locations of these soils.

Table 4.8-1
SOILS WITHIN THE IVIC PROJECT AREA

Grangeville fine sandy loam	Saline-alkali
Hanford coarse sandy loam	2 to 9 percent slopes
Psamments Fluvents and frequently flooded soils	
Soboba gravelly loamy sand	0 to 9 percent slopes
Soboba stony loamy sand	2 to 9 percent slopes
Tujunga loamy sand	0 to 5 percent slopes
Tujunga gravelly loamy sand	0 to 9 percent slopes

These data were obtained from the Web Soil Survey National Cooperative Soil Survey. All of these soils have evolved on alluvial valley floors, fans and terraces, which is as expected for the Project area. The TvC soil series (Tujunga gravelly loamy sand, 0 to 9 percent slopes) comprises about 56% of the Project area. Descriptions of each soil series are provided in Appendix 5 in Volume 2 of this DEIR for more detailed information. At a general level, none of these soils pose major constraints to future development. However, the future infrastructure facilities within the Project area will be required to prepare and comply with site-specific geotechnical studies (except the well site) that will identify any onsite soil constraints/hazards at the site and the required foundation and facility design requirements to mitigate possible site-specific soil hazards.

Due to certain soil characteristics, including shallow slopes and highly pervious soils, soil erosion has not been an important factor within the IVIC Project area. Extensive field investigations within the IVIC Project area did not identify any existing sites within the Project area that exhibit substantial erosion. As previously indicated, the Project area contains only one stream channel, the City Creek Bypass. Within the Project area most surface runoff currently flows along the existing streets and street shoulders. The north-south streets within the Project area deliver stormwater runoff to the City Creek Bypass channel, which in turn transports these surface flows

west to the Bypass channel's confluence with Warm Creek/Twin Creek, just east of Waterman Avenue.

4.8.4 Thresholds of Significance

Geology and soil impacts are evaluated using the following questions posed in the State CEQA Guidelines Initial Study Environmental Checklist Form. These are:

GEO-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- ii) Strong seismic ground shaking?
- iii) Seismic-related ground failure, including liquefaction?
- iv) Landslides?

GEO-2 Result in substantial soil erosion or the loss of topsoil?

GEO-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

GEO-4 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

By thoroughly evaluating these issues using substantial evidence, the potential impacts of each Geology/Soil issue listed above can be fully addressed.

4.8.5 Methodology

The following analysis of impacts is based upon a review of the area geology and soil resources found within the IVIC Project area. Since no site-specific development proposal accompanies the IVIC, no site specific geotechnical investigation has been conducted within the Project area related to specific infrastructure Projects. This environmental document relies on the information contained in the General Plans and General Plan EIRs in both cities.

4.8.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 Million Gallon (MG) storage reservoir located in the Lower Zone

- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of new sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities by individual facility due to the varied nature of the infrastructure proposed by the IVIC Project. However, in some cases, the impacts from the whole of the IVIC Project are discussed as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.8.6.1 Impact Analysis

GEO-1 Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The proposed Project is located within an area of California known to contain a number of active and potentially active faults. However, review of **Figures 4.8-2, 4.8-4 and 4.8-5** shows that no active faults are known to occur within the Project area and the site is not located within an Alquist-Priolo Earthquake Fault Zone, which are zones that have been established by the State of California to restrict the construction of new habitable structures across identifiable traces of known active faults. Therefore, the evaluation of this issue concludes that the likelihood of surface fault rupture within the Project area is minimal to non-existent. Therefore, **no impacts** are anticipated related to fault rupture, and no mitigation is required.

ii) Strong seismic ground shaking?

According to the information in the General Plans, the Project area is located within an area of California known to contain a number of active and potentially active faults. Due to the proximity of the area to nearby active faults (between the San Andreas and San Jacinto Faults), strong ground shaking is probable within the Project area during the life of the Project. The possibility of ground shaking at the site may be considered similar to the southern California region as a whole. Due to the potential for ground shaking exposure, the future site-specific infrastructure Projects within the IVIC Project area will be required to conform to the latest CBC regulations adopted at the time of Project approval, which includes seismic design criteria and standards.

However, conformance to the criteria for seismic design does not constitute any kind of guarantee or assurance that adverse structural damage will not occur in the event of a substantial ground shaking event that may affect the site. Potential damage to any structure(s) would likely be greatest from the vibrations and impelling force caused by the inertia of a structure's mass. This potential would be no greater for future site-specific infrastructure Projects than that for other

existing infrastructure improvements in the immediate vicinity. The potential for significant impacts to occur due to strong seismic shaking can be reduced to a less than significant level with implementation of standard seismic design requirements appropriate for the specific type of facility and expected level of seismic shaking.

Roadway Improvements

Construction of the proposed roadway improvements would be temporary, and would be developed at or below grade and outdoors. Construction workers would generally only be at risk when working indoors. This is because seismic ground shaking may cause structural damage that would could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or atop a roof of a structure. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, impacts would be less than significant.

The potential impacts to roadways due to strong seismic groundshaking consists of pavement buckling and damage, with minimal potential harm to humans unless a person is on a roadway damaged by the groundshaking. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. In addition to compliance with standard CBC design requirements, which are mandatory, implementation of **MM GEO-1** ensures that future geotechnical recommendations will be enforced as requirements for such projects. In most instances roadways can be repaired over a short period and placed back into operation. Potential for harm to humans is considered low with no harm to residential structures as they do not occur within the roadways. Thus, impacts would be less than significant through the implementation of mitigation.

City Creek Bypass Channel

Construction of the proposed Channel improvements would be temporary, and would be developed at or below grade and outdoors Construction workers would generally only be at risk when working indoors. This is because seismic ground shaking may cause structural damage that would could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or atop a roof of a structure. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, impacts would be less than significant.

The potential impacts to due to strong seismic groundshaking consists of potential damage to the channel (such as sidewalls and bridges), with minimal potential harm to humans unless the groundshaking coincides with high volume flows in the channel and an associated breach of the Channel. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. In addition to compliance with standard CBC design requirements, which are mandatory, implementation of **MM GEO-1** ensures that future geotechnical recommendations will be enforced as requirements for such projects. Potential harm to humans is considered very low and the Channel repairs can proceed in a timely manner without damage to any residences since such structures are not allowed within the Channel. Thus, impacts would be less than significant through the implementation of mitigation.

EVWD Well Development

Construction of the proposed well would be temporary. A small portion of the well construction would occur indoors or would occur as the structure housing the proposed well is being installed. Thus, construction workers would generally only be at risk when working indoors. This is because

seismic ground shaking may cause structural damage that would could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or when installing solar atop a habitable structure. The structures within which the well would be installed, would be designed and developed to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the IVIC Project area. This would ensure that as the structure is built, the structure is able to withstand the potential impacts related to seismic ground shaking. Furthermore, construction within the interior or on the roof of any existing structures would not post any greater seismic ground shaking risk than that which exists during operation of the EVWD's existing facilities, which includes a number of wells, at present. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, impacts would be less than significant.

During operation, a groundwater production well could have the well casing damaged from strong groundshaking, but damage to a well should not have any potential to harm humans. The well can be repaired by re-drilling or pulling the casing and replacing it. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. Potential harm to humans is considered very low and the well casing repairs can proceed in a timely manner without damage to any residences since such structures would not occur within the EVWD Well Development site. Thus, impacts would be less than significant.

EVWD Reservoir

Construction of the proposed reservoir would be temporary. A small portion of the reservoir construction would occur indoors or would occur as the interior of the reservoir is being installed. Thus, construction workers would generally only be at risk when working indoors. This is because seismic ground shaking may cause structural damage that would could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or when installing solar atop a habitable structure. The reservoir structure would be designed and developed to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the IVIC Project area. This would ensure that as the structure is built, the structure is able to withstand the potential impacts related to seismic ground shaking. Furthermore, construction within the interior or on the roof of any existing structures would not post any greater seismic ground shaking risk than that which exists during operation of the EVWD's existing facilities, which includes a number of reservoirs, at present. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, impacts would be less than significant through the implementation of mitigation.

Based on past experiences with significant earthquake groundshaking, specific design requirements for water storage reservoirs, including a requirement for interior freeboard to allow sloshing without damage to the reservoir structure. Reservoir sites do not include any residential component, so unless a reservoir ruptures and releases water, the potential for human impacts are considered low. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. In addition to compliance with standard CBC design requirements, which are mandatory, implementation of **MM GEO-1** ensures that future geotechnical recommendations will be enforced as requirements for such projects. Potential harm to humans is considered very low and the well casing repairs can

proceed in a timely manner without damage to any residences since such structures would not occur within the EVWD Well Development site. Thus, impacts would be less than significant.

Sewer Installation

Construction of the proposed sewers would be temporary, and would be developed at or below ground and outdoors. Construction workers would generally only be at risk when working indoors. This is because seismic ground shaking may cause structural damage that would could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or atop a roof of a structure. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, impacts would be less than significant.

Sewers are typically placed beneath public ROWs, mostly roadways. Groundshaking can damage sewer lines, but when properly installed, the potential for sewers to incur damage due to such events is relatively low and can be quickly repaired. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. In addition to compliance with standard CBC design requirements, which are mandatory, implementation of **MM GEO-1** ensures that future geotechnical recommendations will be enforced as requirements for such projects. In most instances roadways can be repaired over a short period and placed back into operation. Potential for human impacts from sewer collection infrastructure is considered low. Thus, impacts would be less than significant through the implementation of mitigation.

Mitigation Measure:

GEO-1: ***Prior to the construction of each IVIC improvement a design-level geotechnical investigation, including the collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including ground shaking hazard, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential as appropriate relative to the type of facility and risk to human life. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible, a second tier CEQA evaluation shall be completed.***

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-1** would reduce the potential impacts from ground shaking hazards through a design level geotechnical investigation with the implementation of specific design recommendations.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction occurs as a result of a substantial loss of shear strength or shearing resistance in loose, saturated, cohesionless earth materials subjected to earthquake induced ground shaking. Potential impacts from liquefaction include loss of bearing capacity, liquefaction-related settlement, lateral movements, and surface manifestation such as sand boils. According to **Figures 4.8-3 and 4.8-6** the western portion of the IVIC Project area, essentially west of Victoria

Avenue, is ostensibly exposed to liquefaction hazards. Although this finding may be ameliorated by recent historical lowering of the groundwater table in this general area by groundwater extractions in the Bunker Hill Basin, the potential does exist for liquefaction to function as a seismic hazard in the Project area.

Construction of the proposed facilities would be temporary, with the majority of the proposed facilities proposed to be developed underground and outdoors. Construction workers would generally only be at risk when working indoors. This is because liquefaction may cause structural damage that would could affect persons inside structures to be exposed to risk associated with liquefaction when indoors. The structures developed under the IVIC Project would be designed and developed to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the IVIC Project area. This would ensure that as these structures are built, the structures are able to withstand the potential impacts related to liquefaction. Furthermore, construction within the interior or on the roof of any existing structures would not post any greater liquefaction risk than that which exists during operation of the existing EVWD wells and reservoirs, at present. Overall, construction would be temporary in nature and the probability of liquefaction during construction is low. Thus, impacts would be less than significant.

The implementation of **MM GEO-1** would reduce the potential impacts from liquefaction hazards through a design level geotechnical investigation with the implementation of specific design recommendations. Through the implementation of **MM GEO-1**, the IVIC Project facilities can be designed with measures to reduce the potential for significant damage to the facilities and any human occupants. If mitigation is insufficient to protect the IVIC Project facilities from significant liquefaction-ground failure impacts, a follow-on environmental document will be prepared to address this situation and alternative locations.

*Mitigation Measure: Implementation of **MM GEO-1** is required to minimize impacts to a level of less than significant.*

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-1** would reduce the potential impacts from liquefaction hazards through a design level geotechnical investigation with the implementation of specific design recommendations.

iv) Landslides/Subsidence?

According to **Figures 4.8-3 and 4.8-8** the IVIC Project area is not located within any identified area that contains potential for landslides. The Project area is located in Area II, areas of low relief, with little to no potential for adverse impacts due to landslides. No landslides are known to exist, or have been mapped, in the vicinity of the Project area. Thus, the IVIC Project area will not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in on- or off-site landslide. Thus, the Project area will not be exposed to any landslide hazards and no mitigation is required.

Subsidence hazards in the Project area are identified on **Figure 4.8-7** based on historic areas where subsidence has occurred. Subsidence at this location is not seismic-related, but within the Project area and areas to the south has been associated with groundwater extraction in the lower Bunker Hill groundwater basin, upstream of the San Jacinto Fault Zone (refer to **Figure 4.8-5**). Subsidence hazards appear negligible east of Victoria Avenue in the Project area. But west of

Victoria a potential for substantial adverse subsidence impacts has been identified, and to minimize this potential, the subsidence topic must be addressed in the geotechnical report required by **MM GEO-1**. With implementation of this measure, potential subsidence impact will result in a less than significant impact for the City Creek Bypass Channel and the EVWD Well Development. Roadways experiencing subsidence can incur damage requiring repairs; the storage reservoir can compensate for potential subsidence through design of the foundation (**MM GEO-1**); and sewers could also incur damage, such as line breaking or breach, from subsidence. This is because, as discussed above, these facilities are not typically susceptible to severe damage from subsidence and landslide, and furthermore are subject to industry standards that will minimize the potential risk of damage. Thus, minimal or no human impacts would occur due to subsidence impacts on infrastructure. Impacts would be less than significant through the implementation of **MM GEO-1** to minimize subsidence impacts related to the City Creek Bypass Channel and the EVWD Well Development.

*Mitigation Measure: Implementation of **MM GEO-1** is required to minimize impacts to a level of less than significant.*

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-1** would reduce the potential impacts from subsidence and liquefaction hazards through a design level geotechnical investigation with the implementation of specific design recommendations.

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

During construction of the proposed IVIC infrastructure facilities, site disturbance will expose soil to both wind and water erosion. A potential for significant adverse erosion impact both during construction and after development can result from implementing the IVIC in the future. Implementation of the proposed Project facilities may also result in potential impacts that could result in substantial soil erosion or the loss of topsoil; change deposition, siltation, or erosion that may modify a stream channel; result in an increase in water erosion either on or off site; or be impacted by or result in an increase in wind erosion of soils and fugitive dust generation, either on or off site.

Within the current Project area there are three programs being implemented to control the effects of erosion. First, during construction on sites greater than one acre in size, the party implementing an infrastructure facility must implement a Storm Water Pollution Prevention Plan (SWPPP). The Construction General Permit NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit) guides the preparation of the SWPPP. This document identifies the Best Management Practices (BMPs) that will be implemented during construction to control runoff from a construction site with the goal of minimizing erosion and sedimentation both onsite and downstream. The SWPPP must be filed through a Notice of Intent with the State Water Resources Control Board. The actual SWPPP document is required to be made available to the local Regional Board and the City/County in which the Project is being implemented, and a copy of the SWPPP must be retained on the Project site for verification that the BMPs are being implemented. Both the Regional Board and local jurisdictions have the responsibility to inspect the construction site and verify the BMPs are being implemented and that they are effective in controlling erosion, sedimentation and storm water runoff with minimal degradation of water quality in stormwater discharged from the site. At the end of construction, the developer/contractor must close out the

SWPPP, which then transitions to the Water Quality Management Plan (WQMP) for long-term management of the water quality of stormwater discharged from the disturbed site.

The second program implemented to control water quality of stormwater runoff is implemented when development is completed. A site-specific WQMP is prepared by the property developer and it identifies the long-term BMPs that will be installed and maintained onsite to control degradation of water quality in stormwater runoff from the Project site over the long-term. This program is called MS4 (Municipal Separate Stormwater Sewer System) and the Regional Board has issued an MS4 permit to San Bernardino County (Santa Ana RWQCB Order No. R8-2010-0036). This permit is actually implemented by either the County or the City (in this case either Highland or San Bernardino) with jurisdiction over the Project by reviewing and approving the WQMP submitted for the Project site. As in the case of the SWPPP, implementation is monitored by the local agency with the jurisdiction conducting field inspections to verify that the BMPs have been installed, are being maintained, and are functioning properly.

The final program being implemented to manage stormwater runoff is broadly termed Low Impact Development (LID). LID programs are intended to minimize discharges from each property being developed in order to achieve both onsite treatment of stormwater and reduction of the volume of discharge after development. The LID goal is to reduce onsite discharges to the volume of surface runoff previous to development and minimize the need to install larger flood control facilities downstream in the future. Facilities designed to retain runoff onsite are also typically designed to achieve water quality objectives, such as bioretention basins, dry wells, or French drains.

The area of disturbance for the sewer installation, EVWD Well and potentially the EVWD Reservoir would be less than one acre, so a SWPPP would be not be required. Without the implementation of BMPs, a significant erosion impact could occur. The implementation of **MM GEO-2** would ensure that the proposed sewer installation, EVWD Well and potentially the EVWD Reservoir that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs. Thus, through the implementation of mitigation, impacts related to implementation of the sewer installation, EVWD Well and potentially the EVWD Reservoir would be less than significant.

Larger projects (one-acre or more) must implement SWPPPs that are mandated by the State and County to control runoff during construction and WQMPs must be implemented to control runoff and erosion from specific facility sites once the construction is completed. Without the implementation of BMPs, a significant erosion impact could occur. For projects larger than one acre the SWPPP and WQMP would specify BMPs that would minimize erosion impacts to a level of less than significant.

Mitigation Measure:

GEO-2: ***For each site-specific project that is less than one acre in size requiring ground disturbing activities such as grading, the implementing agencies shall identify and implement BMPs to minimize soil erosion and loss of topsoil comparable to that which would be required under a SWPPP (BMPs may include, but are not limited to hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-2** would ensure that the sewer installation, EVWD Well and potentially the EVWD Reservoir that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs. Larger projects (one-acre or more) must implement SWPPPs that are mandated by the State and County to control runoff during construction and WQMPs must be implemented to control runoff and erosion from specific facility sites once the construction is completed. Again, this is a mandatory requirement that the implementing agencies will implement and ensure that post-development runoff and erosion potential is controlled.

GEO-3 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Please refer to the discussion of these topics under issue **GEO-1** above. The soils that have been identified for the IVIC Project area have very few development constraints/hazards. The following issues have been addressed under section a): landslides, subsidence and liquefaction. Although the potential for lateral spreading and collapse in these soils is low, the implementation of **MM GEO-1** is necessary to ensure that any site-specific soil constraints are managed through geotechnical engineering solutions incorporated into the infrastructure Project geotechnical report. No additional mitigation is required.

*Mitigation Measure: Implementation of **MM GEO-1** is required to minimize impacts to a level of less than significant.*

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-1** would reduce the potential impacts from soil instability through a design level geotechnical investigation with the implementation of specific design recommendations.

GEO-4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

When expansive soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from structure foundations or underground utilities, and can result in structural distress and/or damage. Most of the IVIC Project area is comprised of old alluvial fans, which vary in consistency. As stated above, soils throughout the Project area mainly consist of soils that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. A review of the soil characteristics for the seven soil series identified in Appendix 5 indicates that none of these soils is considered expansive as identified in Table 18-1-B of the 1994 Uniform Building Code. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. Thus, there is a minor possibility the expansive soils could be encountered within the IVIC Project area as part of construction of the proposed infrastructure. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

*Mitigation Measure: Implementation of **MM GEO-1** is required to minimize impacts to a level of less than significant.*

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM GEO-1** would reduce the potential impacts from expansive soils through a design level geotechnical investigation with the implementation of specific design recommendations.

GEO-5 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The whole of the IVIC Project area is presently sewered, but more important none of the proposed IVIC infrastructure facilities will be occupied by humans that could generate wastewater. As a result, none of the future development implemented under the IVIC is forecast to require or utilize septic tanks or alternative wastewater disposal systems. Therefore, no adverse impacts from use of alternative wastewater disposal systems will result from implementing the proposed Project.

Mitigation Measures: None required.

Level of Significance After Mitigation: No Impact

GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The evaluation of the existing environmental setting for geology, indicates that there are no known unique geological resources located within the IVIC Project area. Therefore, no adverse impact to unique geological resources can occur from implementing the AGSP. Further, the IVIC Project area is located on alluvial fan deposits of varying ages. Such deposits can contain paleontological resources, but they are not common. Based on the available data, only minimal paleontological resources have been encountered during the past 70-years of development within the Project area. The San Bernardino Countywide Plan and Big Bear Lake General Plan indicate that only limited portions of Big Bear Valley areas are sensitive to paleontological resources (refer to **Figure 4.8-9**, which depicts the San Bernardino Countywide Plan EIR Paleontological Sensitivity-Mountain Region Map, the Conveyance Facilities traverse through areas with low-to-high paleontological sensitivity). If previously unknown potentially unique paleontological resources are uncovered during excavation or construction, significant impacts could occur. Thus, even with a low potential for encountering subsurface paleontological resources, it is necessary to incorporate mitigation to ensure that accidental exposure of such resources is managed in a manner to protect the valuable information that can be gained from such exposure during construction. Mitigation would ensure that impacts to paleontological resources are reduced to a level of less than significant. Therefore, impacts would be less than significant with mitigation incorporated.

Mitigation Measure:

GEO-3 At any location where a subsurface paleontological resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed resource materials:

- ***Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

Level of Significance Before Mitigation: Less Than Significant

The implementation of **MM GEO-3** would mitigate impacts to potentially significant paleontological resources through the creation of procedures to address circumstances in which such resources are uncovered during constriction. This would ensure that impacts under this issue are lowered to a level of less than significant.

4.8.7 Mitigation Measures

The following mitigation measures shall be implemented to eliminate or mitigate geotechnical and erosion impacts identified in the preceding impact analysis.

GEO-1: ***Prior to the construction of each IVIC improvement a design-level geotechnical investigation, including the collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including ground shaking hazard, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential as appropriate relative to the type of facility and risk to human life. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible, a second tier CEQA evaluation shall be completed.***

GEO-2: ***For each site-specific project that is less than one acre in size requiring ground disturbing activities such as grading, the implementing agencies shall identify and implement BMPs to minimize soil erosion and loss of topsoil comparable to that which would be required under a SWPPP (BMPs may include, but are not limited to hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

GEO-3 ***At any location where a subsurface paleontological resource is accidentally exposed, the following shall be required to minimize impacts to any accidentally exposed resource materials:***

- ***Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appro-***

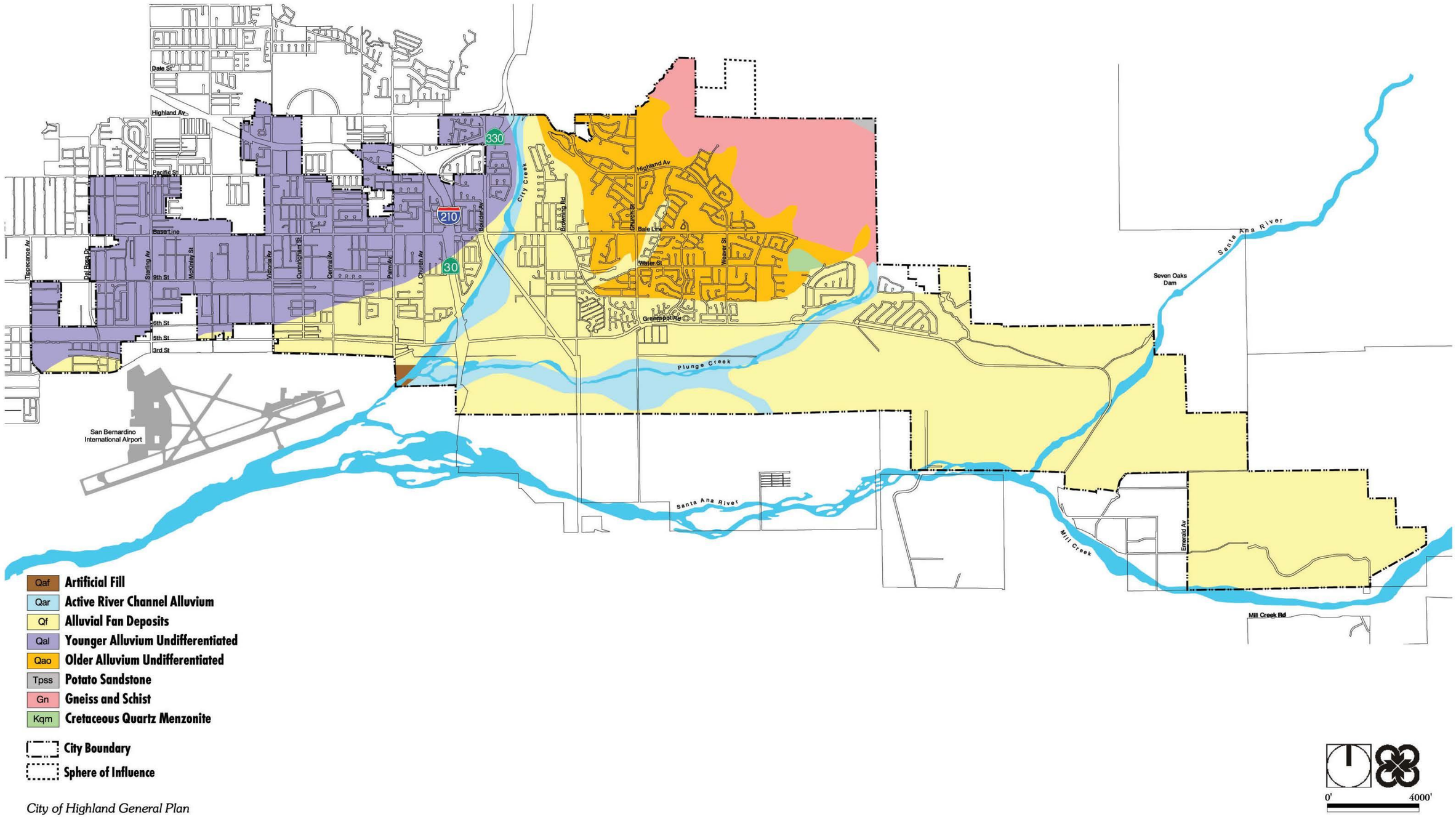
priate mitigation measures within the guidelines of the California Environmental Quality Act.

4.8.8 Cumulative Impacts

Development of the IVIC Project area will be affected by limited geotechnical constraints at locations where infrastructure is installed and on the privately developed properties within the Project area. None of the future on-site or off-site Project-related activities are forecast to cause significant changes in geology or soils or the constraints/hazards affecting the Project area that cannot be fully mitigated. Geology and soil resources are inherently site specific and the only cumulative exposure would be to a significant geological or soil constraint (onsite fault, significant ground shaking that could not be mitigated, or steep slopes creating a landslide exposure). Therefore, the Project has no potential to make a cumulatively considerable contribution to any significant geology or soils impact. Project soil and geology impacts are forecast to be less than significant, or less than cumulatively considerable.

4.8.9 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, no significant and/or unavoidable impacts relating to geology and soils will occur as a result of implementing the proposed IVIC Project with implementation of mitigation measures.



SOURCE: City of Highland General Plan, March 2006 (Figure 6.1)

FIGURE 4.8-1

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Generalized Geology

SOURCE: City of Highland General Plan, March 2006 (Figure 6.2)

FIGURE 4.8-2

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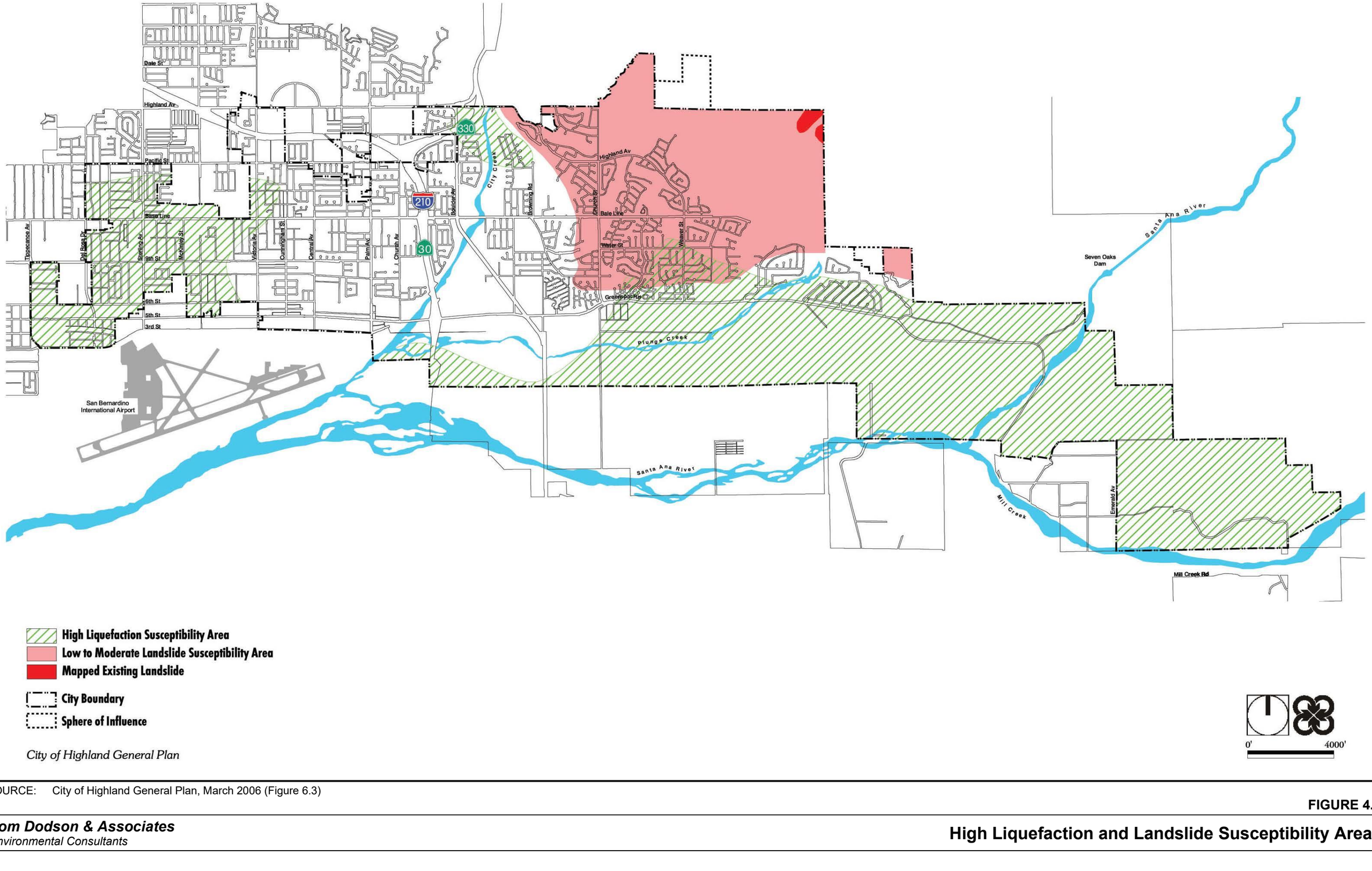
Environmental Consultants

Potential Geologic Hazards



SOURCE: City of Highland General Plan, March 2006 (Figure 6.3)

FIGURE 4.8-3

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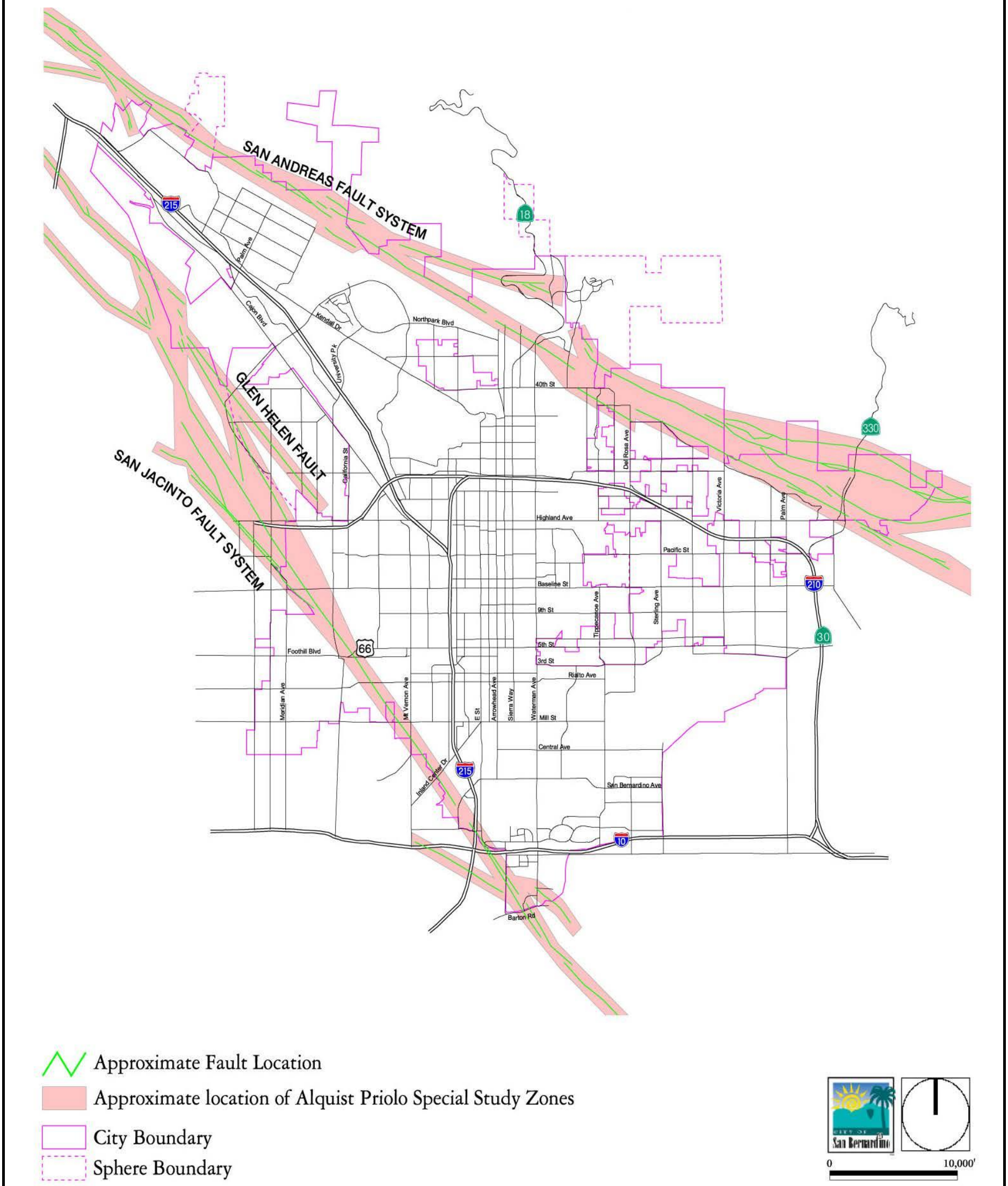
High Liquefaction and Landslide Susceptibility Areas



SOURCE: City of San Bernardino General Plan, November 2005 (Figure S-3)

FIGURE 4.8-4

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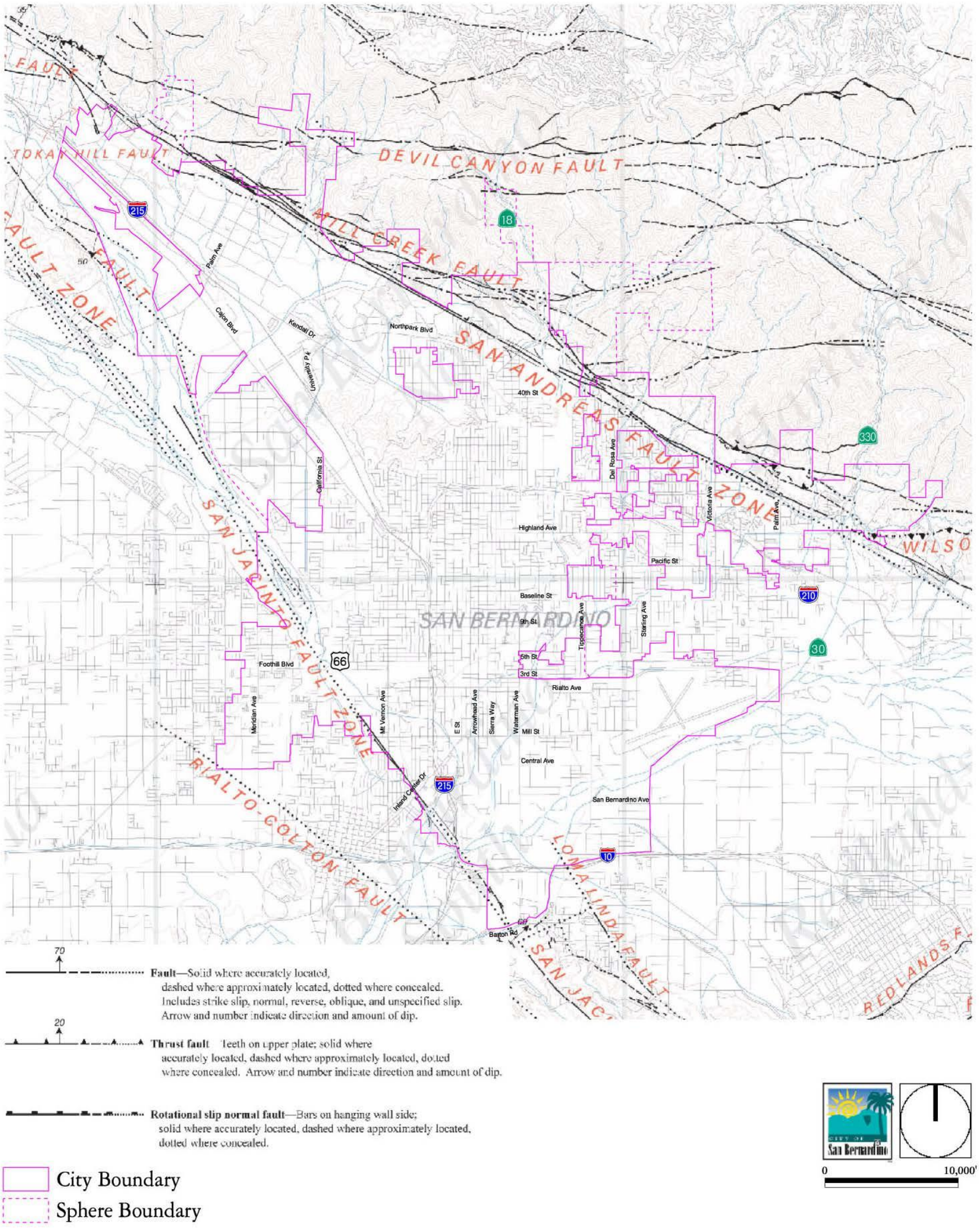
Alquist-Priolo Study Zones



SOURCE: City of San Bernardino General Plan, November 2005 (Figure S-4)

FIGURE 4.8-5

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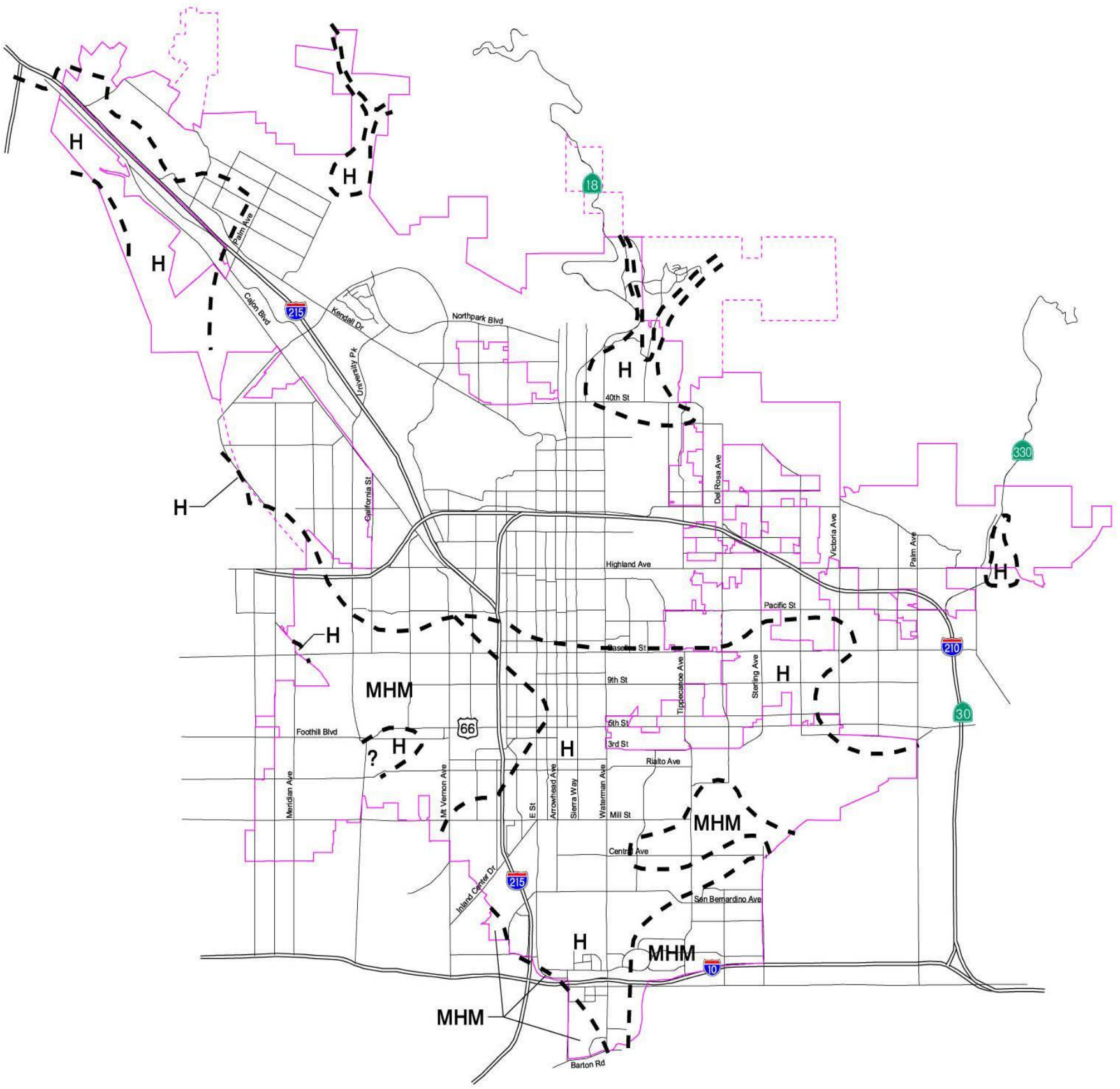
Regional Faults



SOURCE: City of San Bernardino General Plan, November 2005 (Figure S-5)

FIGURE 4.8-6

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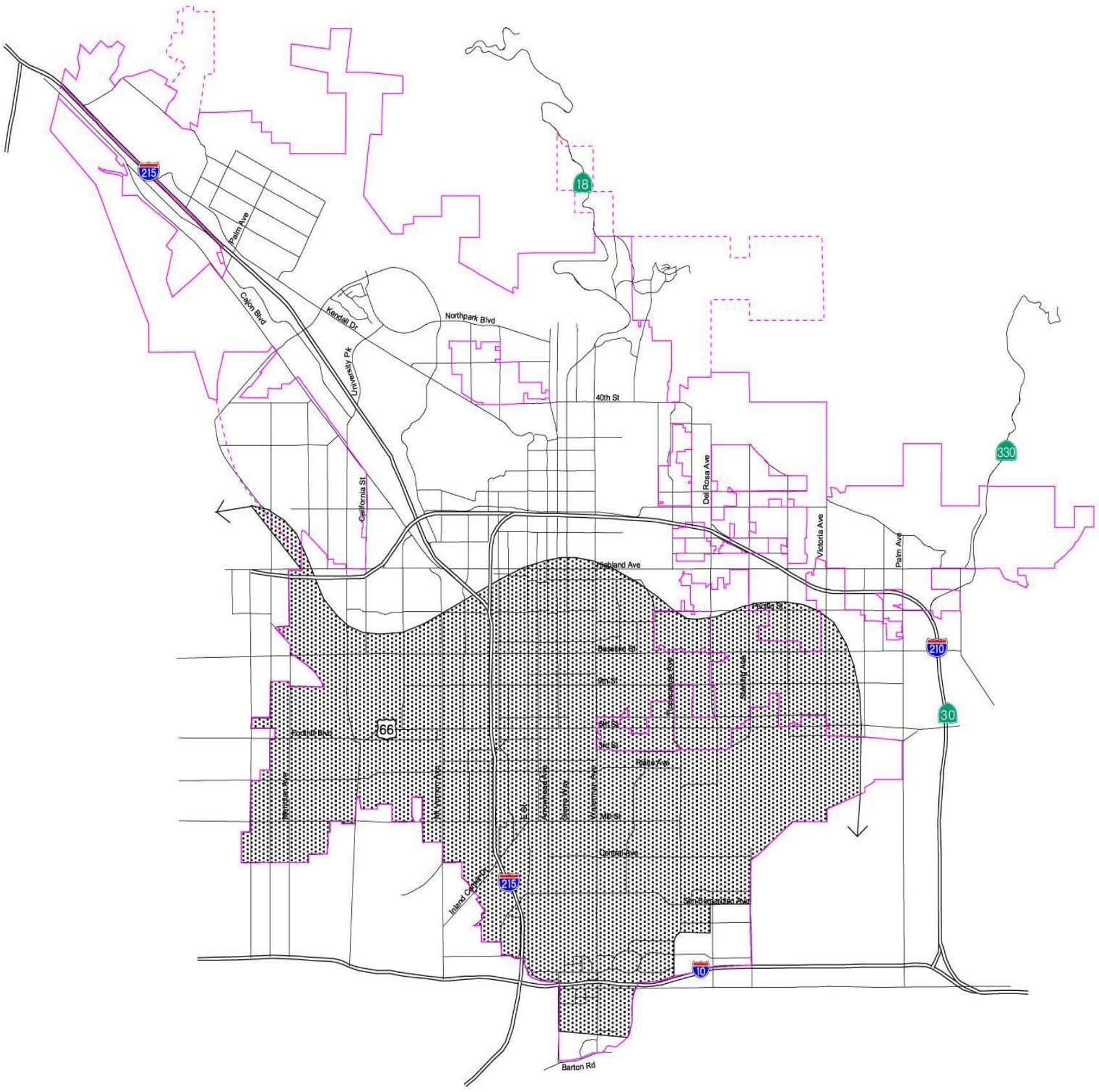
Liquefaction Susceptibility



SOURCE: City of San Bernardino General Plan, November 2005 (Figure S-6)

FIGURE 4.8-7

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Potential Subsidence Areas

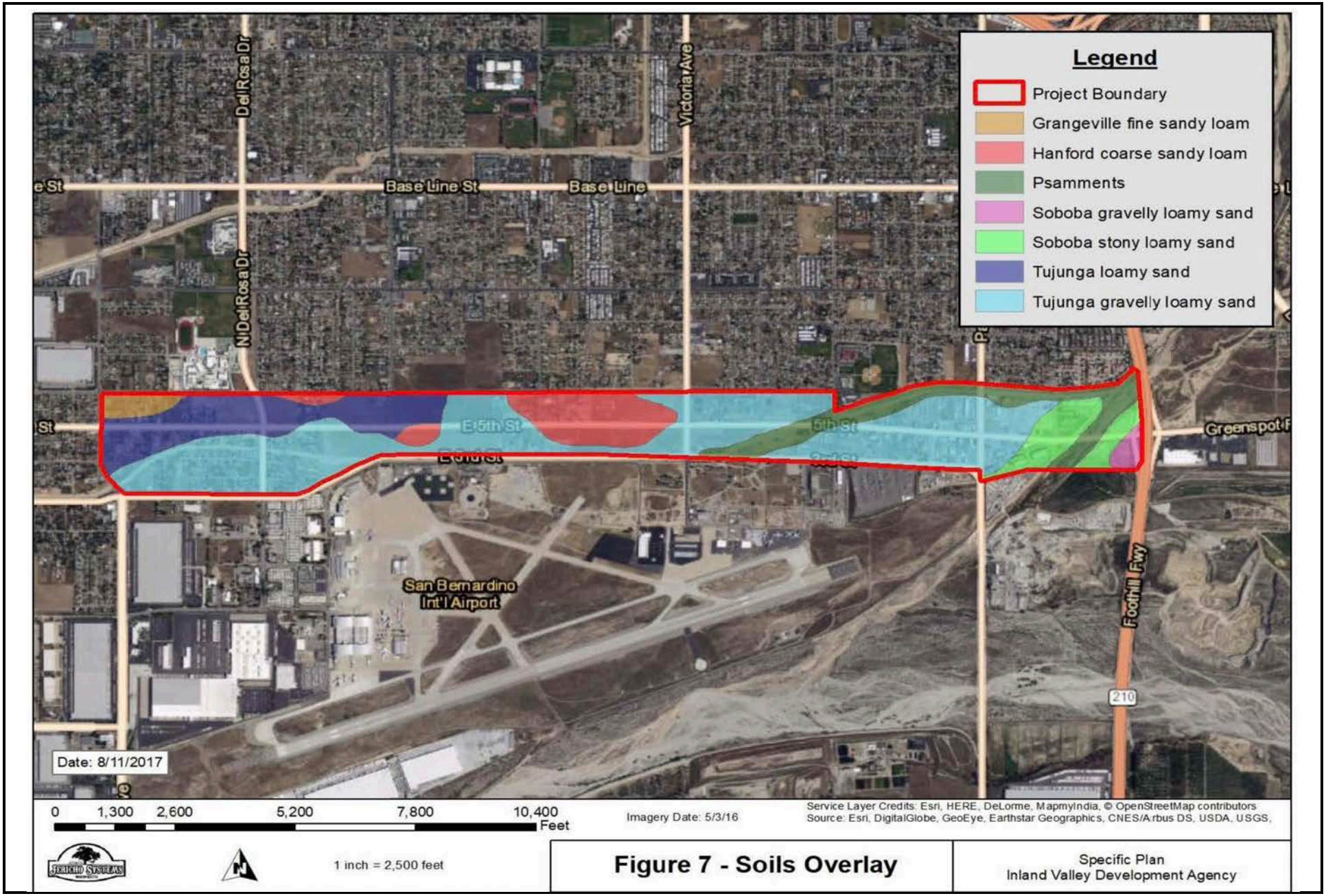

FIGURE 4.8-8

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Soils Overlay

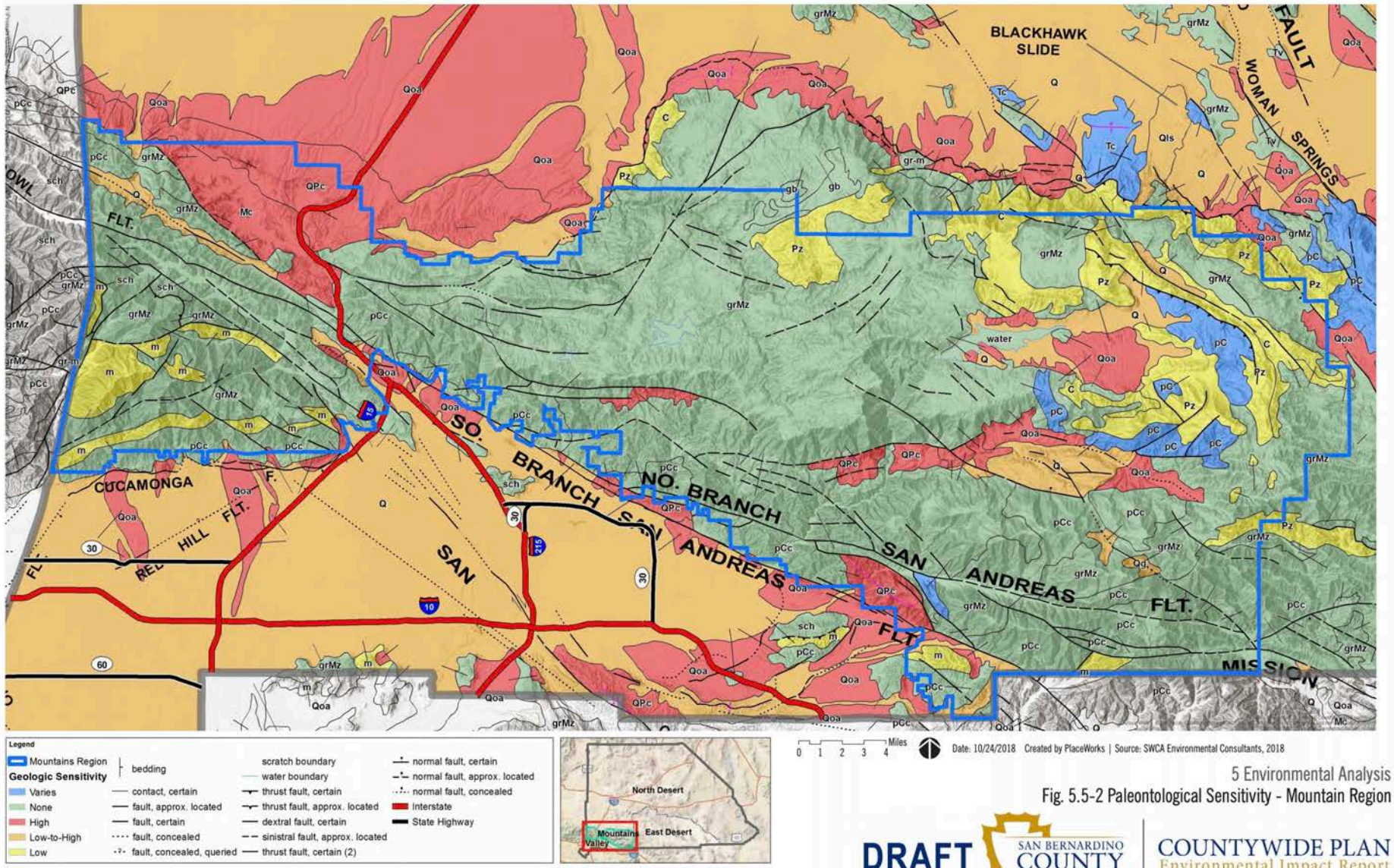

FIGURE 4.8-9

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Paleontological Sensitivity

4.10 HAZARDS AND HAZARDOUS MATERIALS

4.10.1 Introduction

This subchapter evaluates the potential environmental impacts to Hazards and Hazardous Materials from implementation of the Inland Valley Infrastructure Corridor (IVIC), the proposed project. These issues will be discussed below as set in the following evaluation framework:

4.10.1 Introduction
4.10.2 Regulatory Setting
4.10.3 Environmental Setting
4.10.4 Thresholds of Significance
4.10.5 Methodology
4.10.6 Environmental Impacts
4.10.7 Mitigation Measures
4.10.8 Cumulative Impacts
4.10.9 Significant and Unavoidable Impacts

References utilized for this section include:

- DTSC, 2024. EnviroStor. http://www.envirostor.dtsc.ca.gov/public/ (accessed 04/16/24)
- City of Highland, March 2006. *General Plan*
- City of San Bernardino, November 1, 2005. *General Plan*.
- San Bernardino County, November 2, 2020. *San Bernardino Countywide Plan*.
- SWQCB, 2024. GeoTracker. http://geotracker.waterboards.ca.gov/. (accessed 04/16/24)

The General Plans and General Plan EIRs for the two cities have been used to characterize the existing Hazards and Hazardous Materials environment for the IVIC Project area. The Hazards and Hazardous Materials description is intended to summarize the general environmental conditions related to these topics. In addition, the various databases that list contaminated sites have been identified and queried to determine whether any locations within the Project area have any known contaminated sites.

No comments regarding hazards and hazardous materials issues were raised at the public scoping meeting or as part of the Notice of Preparation.

4.10.2 Regulatory Setting

Federal, State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Federal

U.S. Environmental Protection Agency

The EPA is the primary Federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the Federal level is delegated to State and local environmental regulatory agencies. Federal regulations such as the CERCLA and the Superfund Amendments and Reauthorization Act (SARA), regulate the cleanup of known hazardous waste sites and compile lists of the sites investigated, or currently being investigated, for a release or potential release of a regulated hazardous substance under the CERCLA regulations. The National Priority List (NPL) of Superfund Sites is the EPA's database of hazardous waste sites currently identified

and targeted for priority cleanup action under the Superfund program including Proposed NPL sites, Delisted NPL sites, and NPL Recovery sites. The NPL Liens database contains a list of filed notices of Federal Superfund Liens. Under the authority granted the EPA by CERCLA of 1980, the EPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability.

The Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 requires hazardous waste handlers (generators, transporters, treaters, storers, and disposers of hazardous waste) to provide information about their activities to State environmental agencies. These agencies pass the information to regional and national EPA offices. The RCRA also set forth a framework for managing nonhazardous wastes. Later amendments required phasing out land disposal of hazardous waste and added underground tanks storing petroleum and other hazardous substances.

The Toxic Substances Control Act (TSCA) of 1976 (15 USC § 2601 et seq.) gave the EPA the ability to track the 75,000 industrial chemicals produced or imported into the U.S. The EPA repeatedly screens these chemicals; can require reporting or testing of any that may pose an environmental or human health hazard; and can ban the manufacture and import of chemicals that pose an unreasonable risk. The EPA tracks the thousands of new chemicals each year with unknown or dangerous characteristics. The TSCA supplements other Federal statutes, including the CAA and the Toxics Release Inventory under the Emergency Planning and Community Right-to-Know Act (EPCRA) (42 USC § 11001 et seq.).

Federal Emergency Management Agency

FEMA is responsible for ensuring the establishment and development of policies and programs for emergency management at the Federal, State, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to, and recover from a full range of emergencies.

Department of Defense

USGS maintains the U.S. Department of Defense (DOD) database, which consists of Federally owned or administered lands, administered by the DOD, that have an area equal to or greater than 640 acres in the U.S., Puerto Rico, and/or the U.S. Virgin Islands.

Formerly Used Defense Sites

USACE maintains a database of locations of Formerly Used Defense Sites (FUDS) where USACE is actively working or will take necessary cleanup actions.

Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 requires employers to provide a safe and healthful workplace. The Occupational Safety and Health Administration (OSHA) sets and enforces standards for safe and healthful working conditions. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes as might be encountered during excavation of contaminated soil) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations.

OSHA Regulation 29 CFR Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, State, and local requirements also govern the

removal of asbestos or suspected ACMs, including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition following all applicable regulations.

Department of Transportation

The U.S. Department of Transportation (DOT) includes the Pipeline and Hazardous Materials Safety Administration (PHMSA) which is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines. CFR Title 49 governs the manufacturing of packaging and transport containers; packing and repacking; labeling; and the marking of hazardous material transport.

Department of Housing and Urban Development

Federal and State regulations govern the renovation and demolition of structures where materials containing lead and asbestos are present. The U.S. Department of Housing and Urban Development (HUD) provides guidelines regulating lead exposure. CFR Part 61, Subpart M regulates asbestos exposure.

State

The primary State agencies with jurisdiction over hazardous chemical materials management are the DTSC and the Santa Ana Regional Water Quality Control Board. Other State agencies involved in hazardous materials management are the California Department of Industrial Relations (California Division of Occupational Safety and Health [Cal/OSHA] implementation), California Office of Emergency Services (Cal OES)—California Accidental Release Prevention (CalARP), CARB, Caltrans, California Office of Environmental Health Hazard Assessment (OEHHA— Proposition 65 implementation), and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations:

Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.)

The Hazardous Waste Control Act (HWCA) is the State equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, and transportation and permitting requirements, as well as in its penalties for violations.

California Accidental Release Prevention Program

The purpose of California Accidental Release Prevention Program (CalARP) is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures.

California Hazardous Materials Release Response Plans and Inventory Law of 1985

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of hazardous materials business plans (HMBP) and

disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code §§ 25500-25519). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State. Local agencies are responsible for administering these regulations.

Several State agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

Business Plan Act applies to this Project—for hazardous chemicals necessary for storage at the AWPF—because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

California Health and Safety Code, Section 25500 et seq.

This code and the related regulations in 19 California Code of Regulations Sections 2620 et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit an HMBP to their local CUPA and to report releases to the local CUPA and Cal OES. This code would apply to the Project because the contractors would be required to prepare a HMBP that would provide procedures for the safe handling, storage, and transportation of hazardous materials.

California Division of Occupational Safety and Health

California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. Cal/OSHA applies to this Project because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Government Code Section 65962.5, Cortese List

The provisions in Government Code Section 65962.5 are commonly referred to as the “Cortese List” (after the Legislator who authored and enacted the legislation). The list, or a site’s presence on the list, has bearing on the local permitting process, as well on compliance with CEQA. The list is developed with input from the State Department of Health Services, SWRCB, CIWMB, and DTSC. At a minimum, at least annually the DTSC shall submit to the Secretary for Environmental Protection a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the California Health and Safety Code.

2. All land designated as hazardous waste property or border zone property pursuant to Sections 25220-25227) of the California Health and Safety Code.
3. All information received by the DTSC pursuant to Section 25242 of the California Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the California Health and Safety Code.
5. All sites included in the Abandoned Site Assessment Program.
6. All underground storage tanks for which an unauthorized release report is filed pursuant to Section 25295 of the California Health and Safety Code.
7. All solid waste disposal facilities from which there is a migration of hazardous waste and for which a California RWQCB has notified the DTSC pursuant to Water Code Section 13273(e).
8. All cease-and-desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharge of wastes that are hazardous materials.
9. All solid waste disposal facilities from which there is a known migration of hazardous waste.

The Secretary for Environmental Protection shall consolidate the information submitted pursuant to this section and distribute it in a timely fashion to each city and county in which sites on the lists are located. The Cortese List does not apply to this Project because there are no sites on the Cortese List within the Project APE.

Hazardous Materials Transportation

Section 31303 of the California Vehicle Code and DOT regulate hazardous materials transport. The California Highway Patrol and Caltrans are the enforcement agencies. Cal OES provides emergency response services involving hazardous materials incidents. This regulation applies to the Project because hazardous materials may be transported periodically in support of the operation of the EVWD Well, which may require storage of hazardous chemicals.

Utility Notification Requirements

Title 8, Section 1541 of the California Code of Regulations requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (§§ 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to California Government Code Section 4216.1, operators of subsurface installations that are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig.

Local

City Fire Regulations

Fire codes are important to all building construction. The Project area is not located within an area identified as a moderate, high or very high fire hazard severity, as shown on Figures 4.10-1 and 4.10-2, Fire Hazard Areas of the Highland area and the San Bernardino area, respectively.

According to the text of the two City General Plans, the urban, low-lying areas in both cities are classified as having no Wildfire Hazard.

The two cities have adopted the California Building Standards Code, which includes the most current version of the California Fire Code and the California Building Code (CBC). The Uniform Fire Code established by the International Fire Code Institute and the Uniform Building Code (UBC) established by the International Conference of Building Officials, both prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection. The City Fire Departments are authorized and directed to enforce the provisions of the California Fire Code throughout both cities. The California Fire Code contains standards for access to a site, building design, water supply, storage of hazardous materials and brush clearance. The California Building Code prescribes performance characteristics and materials to be used to achieve acceptable levels of fire protection based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed.

For purposes of this DEIR, whatever fire or building code is current and adopted by each City at the time of future site-specific development for the particular issue/regulation being referenced in the DEIR shall be the applicable code.

The City Fire Departments (The City Fire Marshal in Highland and County Fire Department in San Bernardino) charge project applicants deposit-based fees, established in City ordinances, for the review and related processing of all planning case applications by the conducted by the Departments. In addition, development impact fees are collected in each City to help offset the cost of providing new fire protection infrastructure.

Certified Unified Program Agency

In 1993, SB 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a Certified Unified Program Agency (CUPA) that would be responsible for the permitting process and collection of fees. CUPA would be responsible for implementing the Unified Program at the local level, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Waste
- Hazardous Materials Business Plan (HMBP)
- California Accidental Release Prevention Program (CalARP)
- Underground Hazardous Materials Storage Tanks
- Aboveground Petroleum Storage Tanks/Spill Prevention Control & Countermeasure Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

In the San Bernardino County, the Hazardous Materials Division of the SBCFD is designated as the CUPA responsible for implementing the above-listed program elements. The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials and submit an HMBP that describes the hazardous materials usage, storage, and disposal to the CUPA. The contractors constructing the specific project and the implementing agency as the operator of the facility would be required to prepare and implement an HMBP.

In San Bernardino County, the Business Emergency/Contingency Plan (Business Plan) is also used to satisfy the contingency plan requirement for hazardous waste generators. Any business subject to any of the CUPA permits is required in San Bernardino County to file a Business Plan using the California Environmental Reporting System. This submission is used as the basis for the permit application. A new business going through the process of obtaining San Bernardino County planning or building approval is required to comply with the Business Plan requirement prior to obtaining final certificate of occupancy and prior to bringing hazardous materials onto the property.

The quantities that trigger disclosure are based on the maximum quantity on site at any time excluding materials under active shipping papers or for direct retail sale to the public. The basic quantities are: hazardous materials at or exceeding 55 gallons, 500 lbs, or 200 cubic feet at any time in the course of a year; specified amounts of radioactives, and extremely hazardous substances above the threshold planning quantity (SBCFD, 2023).

City of Highland General Plan

Hazardous Materials and Waste

The City General Plan states: *San Bernardino County has a County Hazardous Waste Management Plan (HWMP). As further required by the State, all cities within the County must also adopt a City HWMP. Ordinance No. 171, in accordance with state law and the HWMP, regulates hazardous materials management in the City and requires businesses that use hazardous materials or generate hazardous waste to include an inventory of amounts and types of hazardous materials, practices for management and reductions, and emergency response procedures.*

City of Highland General Plan goals and policies regarding hazardous materials/waste management include the following:

Public Health, Safety, and Environmental Justice Element: Goal 3
Minimize risks, such as loss of life, injury, property damage, and natural resource destruction from natural and human-caused hazards.

Public Health, Safety, and Environmental Justice Element: Policy 3.3
Implement programs and standards to mitigate wildfire risk in high wildfire hazard severity zones.

Action 3.3a: New Development. All development shall be required to meet the minimum standards for adequate fire protection. The most restrictive law, regulation, or ordinance regarding fire safety applicable to development in Highland will take precedence, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations if applicable. All perimeter development within the Very High Fire Hazard Severity Zone, adjacent to open space, shall construct perimeter fire roads in compliance with City policy.

Action 3.3b: New Residential Development in Areas Designated Very High Fire Hazard Severity Zone (VHFHSZ). Residential development within areas designated as VHFHSZs should be avoided or risks mitigated through compliance with applicable codes and standards, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction around Buildings and Structures Regulations. If residential development occurs within VHFHSZ, a Fire Protection Plan that describes

Action 3.3c: Home Improvements for Vulnerable Populations. For qualifying households, promote the use of local, county, and state rehabilitation programs and defensible space assistance, and provide information to vulnerable residents to assist with efforts to improve fire safety.

Action 3.3d: Wildfire Retrofits. Encourage structural hardening retrofits for existing structures in the VHFHSZ, consistent with the current standards.

Action 3.3e: New and Existing Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the High Fire Hazard Area shall be retrofitted to be consistent with the current standards.

Action 3.3f: Maintain Emergency Evacuation Routes. Ensure that the entity charged with maintenance of the road complies with the requirements of the State Fire Code and San Bernardino Consolidated Fire Codes regarding street width, surface, grade, radius, turnarounds, turnouts, bridge construction, and lengths of fire apparatus access roads. All requirements and any deviations will be at the discretion of the Fire Code Official. Enforce these standards on new development in VHFHSZ through development review, and on existing development through code enforcement. Work with the City's Geographic Information Systems (GIS) mapping services to identify any residential areas that do not have at least two emergency evacuation routes or are otherwise inadequate due to access or timeliness of evacuation. Develop an evacuation route improvement plan upon identification of evacuation route inadequacies.

Action 3.3g: Recover from Large Fires Safely. Perform an evaluation of fire-related development standards should a major wildfire require large portions of the City be rebuilt to ensure that redevelopment standards are as fire-safe as reasonably possible.

Action 3.3h: Adequate Peakload Water Supply will be Supported. The City will coordinate with the East Valley Water District to maintain long-term integrity of peakload water supply for structural fire-fighting and wildland fire-fighting and ensure new construction is serviceable by water supply.

Public Health, Safety, and Environmental Justice Element: Policy 3.4
Ensure that public facilities and infrastructure have adequate capacity to respond to wildfires and other relevant hazard events.

Action 3.4a: Performance Standards. Apply fire unit deployment performance measures with future planning of fire stations.

Action 3.4b: Emergency Equipment. Consider the long-term maintenance needs of emergency equipment and facilities when developing the annual budget.

Action 3.4c: Storm Drain Capacity. Continue to ensure that existing and new storm drain and street capacities are adequate to manage a 100-year flood event.

Action 3.4d: New Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the VHFHSZ shall be retrofitted to be consistent with the current standards.

Public Health, Safety, and Environmental Justice Element: Policy 3.7
Limit the potential hazards from the transportation and disposal of hazardous waste.

Action 3.7a: Hazardous Materials Storage and Transport. Continue to require businesses that store or transport hazardous materials to prepare a Hazardous Materials Business Plan for review and approval by the Lead Environmental Agency.

Action 3.7b: Hazardous Materials Studies. When appropriate, require new development to prepare a hazardous materials inventory and/or prepare Phase I or Phase II hazardous materials studies, including any required cleanup measures.

Action 3.7c: Household Education. Educate the public on household hazardous wastes and the proper methods of disposal.

Public Health, Safety, and Environmental Justice Element: Goal 4
Maintain adequate emergency preparedness and response capabilities.

Public Health, Safety, and Environmental Justice Element: Policy 4.1
Create culturally appropriate hazard preparation and education.

Action 4.1a: Emergency Alerts for Air Pollution. Use the emergency alert systems and other standard City communications to alert the public when local air quality reaches "Very Unhealthy" levels.

Action 4.1b: Neighborhood-Based Preparedness. Convene and regularly train neighborhood-based emergency response teams (e.g., CERT) and explore incorporating climate change response and recovery. Ensure CERT recruiting includes a diverse set of community members and leaders.

Action 4.1c: Disaster Kits. Work with local places of worship and community organizations to provide disaster kits to vulnerable populations.

Public Health, Safety, and Environmental Justice Element: Policy 4.2
Create resilience centers throughout Highland.

Action 4.2a: Back Up Power. Continue to ensure that critical City facilities have back up energy sources such as battery storage. Prioritize clean energy sources, such as solar, where feasible.

Action 4.2b: Refrigeration. Install refrigerators at resilience centers, such as existing cooling centers and emergency shelter locations, to provide storage for medication in black out or other hazard events.

Action 4.2c: Audit Emergency Childcare. Work with non-profit organizations, such as the Red Cross, to offer emergency childcare for frontline workers in the event that schools are closed in a hazard event.

Action 4.2d: Food Distribution. Work with local foodbanks to distribute food and pop-up food pantries during hazard events.

Action 4.2e: Advertise Regional Programs. Include information on regional assistance programs in appropriate languages during a hazard event.

Public Health, Safety, and Environmental Justice Element: Policy 4.3
Prepare residential areas for flooding and wildfire.

Action 4.3a: Elevate and Anchor. Educate and encourage property owners in flood zones to elevate and anchor critical utilities, including electrical panels, propane tanks, sockets, wiring, appliances, and heating systems.

Action 4.3b: Sandbags. Implement a sandbag program available for residents in flood zones prior to heavy storms.

Action 4.3c: Fire Safe Communications. Prior to fire season, use outreach events and City communication resources to educate the public on how they can create a defensible space around their place of residence and evacuate in case of fire.

Action 4.3d: Require evacuation assessments on residential projects requiring an Environmental Impact Report in designated wildfire hazard severity zones.

Public Health, Safety, and Environmental Justice Element: Policy 4.4
Ensure the Emergency Operations Center (EOC) has adequate capacity to respond to hazard events.

Action 4.4a: EOC Technology. Continue to conduct a periodic review of technology used to support the EOC to ensure systems are updated and effective, including City GIS.

Action 4.4b: EOC Equipment. When feasible, update EOC equipment and supplies as necessary to ensure effectiveness.

Action 4.4c: Staff Training. Continue EOC training and exercise plan for the City staff with EOC responsibilities, and cross train city staff at various EOC positions.

Action 4.4d: Online Training. Expand staff training by conducting quarterly online WebEOC training for EOC staff. Include extended training formats as applicable.

Action 4.4e: Mutual Aid Participation. Continue to participate in Statewide Master Mutual Aid Agreements and local automatic aid agreements.

Public Health, Safety, and Environmental Justice Element: Goal 5
Improve the quality of the built and natural environments to reduce disparate health and environmental impacts.

Public Health, Safety, and Environmental Justice Element: Policy 5.1
Adopt land use regulations that protect residential and park uses from the impacts of industrial and roadway pollution.

Action 5.1a: Land Use Review. Conduct a review of existing Municipal Code to determine where existing legislation encourages or allows land uses and programs that are detrimental to the health of residents in DACs.

Action 5.1b: Monitor Industrial Areas. Establish a monitoring program to periodically evaluate and report the immediate and long-term health and environmental impacts of the proximity of residential and park uses to industrial areas in DACs.

Action 5.1c: Siting Industrial Uses. Disallow siting and construction of new industrial uses that could impact the health of residents in the DACs.

Public Health, Safety, and Environmental Justice Element: Policy 5.2
Remediate and prevent pollution arising from industrial and household sources.

Action 5.2a: Pollution Review. Conduct a review to determine where existing pollution sources are impacting residents in the DACs.

Action 5.2b: Hazards Cleanup. In conjunction with other local and regional agencies, ensure the cleanup of contaminated surface water, groundwater, and soils in affected DACs.

Action 5.2c: Green Streets. Prevent future groundwater pollution by implementing green street strategies to support a sustainable approach to stormwater, drainage, groundwater recharge, and landscaping, and incorporating green streets standard and guidelines in all streetscape improvements where feasible.

Wildland fire is a topic that was historically addressed as part of Chapter 4.10, Hazards and Hazardous Waste. Due to the increasing significance of wildland fire hazards where the urban-wildland interface occurs, a new issue category was added to the Initial Study Environmental Checklist Form, Wildfire. Please refer to Subchapter 4.20 of this document for a full discussion of Wildfire hazards within the IVIC Project area.

City of San Bernardino General Plan

Hazardous Materials and Waste

The City General Plan states: *The City's goals and policies for hazardous materials and uses are designed to ensure the protection of the public health, safety, and welfare, and environmental resources in the City. Planning practices emphasize waste reduction, recycling, proper management of hazardous materials, siting of facilities, and effective emergency response…*

The San Bernardino County Fire Department is responsible for implementing the County Hazardous Waste Management Plan in the City of San Bernardino. Adopted in the early 1990's. this plan established regulations at the local level for the creation, storage, and handling of hazardous waste material. The management plan provides the following components:

- *Planning process for waste management*
- *Permit process for new and expanded facilities*
- *Appeal process to the State for certain local decisions*

City of San Bernardino General Plan goals and policies regarding hazardous materials/waste management include the following:

Hazardous Waste Management Plan

Safety: Goal 10.1
Protect the environment, public health, safety, and welfare from hazardous wastes.

Safety Policy 10.1.1
Employ effective emergency preparedness and emergency response strategies to minimize the impacts from hazardous materials emergencies, such as spills or contamination.

Safety Policy 10.1.2
Ensure the protection of surface and groundwater quality, land resources, air quality, and environmentally sensitive areas through safe transportation of waste through the City and comprehensive planning of hazardous materials, wastes, and sites.

Safety Policy 10.1.3
Execute long-range planning programs to protect resources and the public from the potential impacts that could be created by the use, storage, transport, and disposal of hazardous waste and materials.

Safety Policy 10.1.4
Continue to support the role that the Fire and the Police Departments play in the on-site identification of hazardous wastes and emergency response to hazardous waste accidents in cooperation with the County Department of Environmental Health Services.

Hazardous Waste Operations

Safety: Goal 10.2
Promote proper operations of hazardous waste facilities and ensure regulations applicable to these facilities are enforced.

Safety Policy 10.2.1
Require the proper handling, treatment, movement, and disposal of hazardous materials and hazardous waste.

Safety Policy 10.2.2
Encourage businesses to utilize practices and technologies that will reduce the generation of hazardous wastes at the source.

Safety Policy 10.2.3
Implement federal, state, and local regulations for the disposal, handling, and storage of hazardous materials.

Safety Policy 10.2.4
Work with the Department of Environmental Health Services to promote waste minimization, recycling, and use of best available technology in City businesses.

Safety Policy 10.2.5
Participate in the process of selecting routes that are the most acceptable for the safe transportation of hazardous waste material within the City limits. Streets with high concentrations of people, such as the downtown, or with sensitive facilities, such as schools and parks, should be avoided to the maximum extent possible.

Household Hazardous Waste

Safety: Goal 10.3
Minimize risk of injuries or damages caused by household hazardous waste.

Safety Policy 10.3.1
Conduct educational programs to educate the public about the proper handling and disposal of household hazardous wastes.

Safety Policy 10.3.2
Enforce the proper disposal of Household Hazardous Wastes.

4.10.3 Environmental Setting: Hazards and Hazardous Materials

Hazards and Hazardous Waste

The San Bernardino County Fire Department, Hazardous Materials Division (HMD) serves as the Certified Unified Program Agency (CUPA) for the whole County, including the cities of Highland and San Bernardino. The CUPA oversees disposal, processing, storage and treatment of local hazardous material and waste management issues. A key component of this process is the preparation and submittal of a Hazardous Materials Business Plan (Plan) by individual businesses based on handling of hazardous materials and generation of hazardous waste. The Plan must include a list of hazardous materials or wastes managed onsite and emergency response plans and procedures required to manage an accidental spill or release. The Business Plans are required to be updated by March 1 each year to ensure it accurately reflects onsite business activities. The Business Plan is used by first responders to manage emergency responses to a facility with hazardous materials/wastes onsite. HMD conducts periodic compliance inspections of facilities that file Business Plans.

The County manages a household hazardous waste collection center in the City of San Bernardino. The San Bernardino Collection Center is located at 2824 "W" Street, located just south of 3rd Street and east of Victoria Avenue at the San Bernardino International Airport. Residents of nearby cities can drop off small quantities of household hazardous wastes instead of disposing of such materials in their municipal trash. Certain wastes, such as cathode ray tubes and electronic waste material are accepted by recyclers throughout the County, with the nearest recycler to the two cities located in Rialto. There are no commercially permitted hazardous recycling, treatment, storage and disposal (TSDF) facilities located in either city.

The City of San Bernardino has an estimated seven hazardous waste transportation companies within the City (General Plan page 5.6-7). Based on a review of the transporter addresses, none of these facilities is located within the IVIC Project area. Similarly, the City of Highland does not identify any hazardous waste transportation companies within its boundaries.

Hazardous materials and wastes are primarily transported over the interstate highways, state highways, and railroads. The California Highway Patrol (CHP) is in charge of responses to emergencies involving hazardous material transport on these major transportation corridors. The only highway that actually borders the IVIC Project area is Interstate 210 on the eastern edge of the Project area. Interstates 10 and 215 are located a few miles from the IVIC Project area, and no national railroad tracks occur within the Project area. On local roadways the County Sheriff and local fire departments manage emergencies involving hazardous materials.

There are two sites on the National Priorities List (NPL) in the City of San Bernardino. The NPL identifies sites with substantial contamination that require sustained remediation. The first site is the Newmark Groundwater contamination site. Substantial hydrocarbon chemicals were released (Tri- and Per-chlorethylene) into the soil that migrated to the groundwater table. The Newmark site is located in the northwestern portion of the City (north of 30th Street and west of Waterman) and groundwater clean-up continues. However, this site has no direct adverse impact on the IVIC Project area.

The second NPL site is former Norton Air Force Base. The Air Base was shuttered in 1994 and the Air Force properties were ultimately transferred to the San Bernardino International Airport Authority and Inland Valley Development Agency. The Air Force identified approximately 100 sites with potential contamination on the approximate 2,100-acre property. The Air Force assumed responsibility for clean-up (remediation) of these sites, and all but two have been fully remediated. The remaining two sites are the practice shooting range which contains lead contamination and a hydrocarbon contaminated groundwater plume that extended off the Airport to the southwest. The shooting range (located in the southeast portion of the Airport) is nearing complete remediation and the groundwater plume has been reduced to hydrocarbon concentrations less than the State maximum contaminant level (MCL) at this time. The Air Force groundwater treatment facilities remain in place should any hydrocarbons in the soil migrate to the groundwater table and cause further contamination. Neither of these contaminated sites pose any direct hazard to the IVIC Project area.

The City of Highland has no NPL or other major contaminated sites. Agricultural areas may have some residual contamination (pesticides and fertilizers), but typically these do not require special treatment, just blending of soils when a site's soils are prepared for development. The IVIC Project area has not been subject to intensive, long-term farming. One site in the City has been identified on the Department of Toxic Substances Control (DTSC) data base as possibly having contamination, but it is located in the northern portion of the City and has no potential impact on the IVIC.

One of the most common sources of hazardous contamination in urban environments is related to underground storage tanks (USTs) and accidental releases from these facilities if and when they leak. The State maintains an extensive data base of leaking underground storage tanks (LUFTs). The lists in the General Plans identify one LUFT at the boundary of the IVIC Project area on Tippecanoe Avenue at 24914 5th Street. In the City of Highland, a total of four LUFT sites have been identified. All of these are located in the vicinity of 5th Street and Palm Avenue. What follows is a listing the potential sites with contamination and their status located internal to the IVIC area of potential effect (APE). Status is based on a review of the current GeoTracker data base (Appendix 7 of Volume 2) for the Project area and the status of the site contamination.

Site Name	Address	City	Status
Arco #5541	25330 3rd Street	Highland	Case Closed
Circle K #335	24901 E 5th Street	San Bernardino	Case Closed
High School	1428 E 6th Street	San Bernardino	No Further Action
Iskandar Texaco	24914 5th Street	San Bernardino	Case Closed
Mobil #18	2742 Del Rosa Avenue	San Bernardino	Case closed
Tech Park HS	3rd St. and Tippecanoe Ave.	San Bernardino	Inactive
Unocal #5128	2736 Del Rosa Avenue	San Bernardino	Case Closed
Arco AM PM #5617	27323 5th Street	Highland	Case Closed
Safety-Kleen Sys. Inc	7979 Palm Avenue	Highland	No Action
Safety-Kleen Sys. Inc	7979 Palm Avenue	Highland	No Further Action
Cal Disposal	26009 6th Street	Highland	Case Closed

As the preceding data indicate, none of the sites are presently active.

No other sources of contamination are known to exist within the IVIC Project area.

San Bernardino International Airport

An airport often contains safety protection zones and influence zones that extend outside of the actual airport boundary. San Bernardino International Airport (SBIA or Airport) safety and influence zones are shown on **Figures 4.10-3 and 4.10-4**. Based on this map, the IVIC Project area is located in both the Traffic Pattern Zone and the Airport Influence Zone. The inner turn zone on the north side of the Airport affects a small area around Palm Avenue and 3rd and 5th Streets. All of these zones are considered to be of low risk or negligible risk to the underlying population. Also, the IVIC Project area is nearly entirely located outside of the Airport's 65 dBA Ldn noise contour (refer to Figure 4.10-6), so noise impacts are not considered to be significant within the IVIC based on current forecasts for air operations.

4.10.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the Initial Study Environmental Checklist Form, a project would normally have a significant effect on the environment if the project would:

HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

HAZ-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area.

HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evaluation plan.

HAZ-7 Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.10.5 Methodology

The Project area is too large to have site-specific Phase I Environmental Site Assessment (ESA). Therefore, at this stage of project review, use of the General Plan data bases and the GeoTracker database provides sufficient information to assess the general potential for hazards or hazardous materials to constrain future development or to pose a hazard for future development. At this point in time, the broad-based data available from the City General Plans and General Plan EIR along with the current GeoTracker data base for the IVIC Project area are sufficient to evaluate the current exposure to hazards within the area, and furthermore, contingencies to prevent future encounters with unanticipated hazardous material is addressed in the analysis below.

4.10.6 Environmental Impacts

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities into two groups. The first category, the **City Creek Bypass Channel, Roadway Improvements & Sewer Installation**, includes facilities proposed under the IVIC Project that occur within existing rights-of-way. In this case, the rights-of-way (ROW) include the channel ROW and the road ROW within and adjacent to which the roadway improvements would occur, and within which the sewer improvements would occur. The second category is the **EVWD Well Development and Reservoir**, which would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones. Thus, these two categories are analyzed separately as the impacts from the facilities therein can be characterized as similar and comparable based on the types of facilities proposed.

4.10.6.1 Impact Analysis

HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed IVIC Project is an infrastructure project intended to improve the infrastructure within the Project area, and does not propose any specific land use projects, other than the development of a Reservoir and Well, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: Construction of City Creek Bypass Channel, Roadway Improvements, and Sewer Installation can require delivery of hazardous materials (such as petroleum products) to support their installation. Implementation of mitigation outlined below, is necessary to avoid a significant impact under this issue and ensure that the use and generation of hazardous substances in support of both construction and operation of City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would not pose a significant hazard to workers, adjacent land uses, or the environment. **MM HAZ-1** would require implementation of an HMBP and the BMPs therein to minimize the potential for accidental release of hazardous materials. **MM HAZ-2**

would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials. **MM HAZ-4** would require disposal of hazardous materials in compliance with State and Federal law. **MM HAZ-5** would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law. These MMs will be applied to future infrastructure improvements under the proposed Project and would reduce potential impacts to a level of less than significant.

Operation: Long-term operation of the City Creek Bypass Channel, Roadway Improvements, and Sewer would not require use of hazardous materials. These facilities would be installed belowground, at grade (roadway improvements) or below grade (in the case of City Creek Bypass Channel), and would function in a similar manner to that which occurs under present conditions. For instance, the roadways act as a means of transport for vehicles carrying various materials, some of which potentially hazardous, at present and will continue to do so once widened and/or improved. There will be no greater risk than that which presently exists within this corridor as a result of implementation of the proposed IVIC Project. Furthermore, based on the development of a better road, risk should be reduced from that which exists at present, as is the case for the improvement of City Creek Bypass Channel. Thus, no potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials exists. No impacts would occur.

EVWD Well Development and Reservoir

Construction: In most instances these proposed facilities would not involve the routine transport, use, or disposal of hazardous materials. Construction activities would be required for the installation of proposed EVWD Well Development and Reservoir. Construction activities required for implementation of the facilities would potentially involve drilling, trenching, excavation, grading, and other ground-disturbing activities. The anticipated construction activities described above would temporarily require the transport, use, and disposal of hazardous materials including gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials. The implementation of mitigation, outlined below, is required to ensure that the use and generation of hazardous substances in support of construction of the EVWD Well Development and Reservoir would not pose a significant hazard to workers, adjacent land uses, or the environment. **MM HAZ-1** would require implementation of an HMBP and the BMPs therein to minimize the potential for accidental release of hazardous materials. **MM HAZ-2** would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials. **MM HAZ-4** would require disposal of hazardous materials in compliance with State and Federal law. **MM HAZ-5** would require cleanup of any contaminated areas as a result of accidental release during construction to ensure that the site contamination level has been reduced to a level that complies with State and Federal law. These MMs will be applied to future infrastructure developed under the IVIC Project and would reduce potential impacts to below a level of less than significant.

Operation: In most instances these proposed EVWD Well Development and Reservoir would not involve the routine transport, use, or disposal of hazardous materials. However, in certain instances hazardous materials are used routinely in support of drilling monitoring wells and installing and operating pump stations, and related treatment operations, and thus, some activities in support of EVWD Well Development and Reservoir may generate routine transport of hazardous materials. Long term operation of the EVWD Well Development and Reservoir can

require small quantities of hazardous materials such as cleaning supplies and petroleum products, but typically only minimal quantities to keep equipment operating safely and efficiently. Additionally, operational activities could require the installation of treatment facilities that use chemicals to ensure that recovered water from well pumping would be safe for drinking. For instance, during extractions from the Upper Santa Ana Groundwater Basin, groundwater is treated with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for the proposed EVWD Well and Reservoir would be less than significant.

The implementation of **MMs HAZ-1** through **HAZ-5**, outlined below, is necessary to avoid a significant impact under this issue and ensure that the use and generation of hazardous substances in support of both construction and operation of the EVWD Well Development and Reservoir facilities would not pose a significant hazard to workers, adjacent land uses, or the environment. **MM HAZ-1** would require implementation of an HMBP and the BMPs therein to minimize the potential for accidental release of hazardous materials. **MM HAZ-2** would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials. **MM HAZ-3** would require modeling of pathways for hazardous materials to contain hazardous material and manage hazardous materials appropriately to avoid exposure of hazardous materials at nearby sensitive receptors, thereby preventing hazardous materials impacts from storage and use onsite. **MM HAZ-4** would require disposal of hazardous materials in compliance with State and Federal law.**MM HAZ-5** would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law. These **MMs** will be applied to future infrastructure developed under the IVIC Project and would reduce potential impacts to below a level of less than significant.

Mitigation Measures:

HAZ-1: ***For IVIC infrastructure that handles hazardous materials or generate hazardous waste, the HMBP prepared and submitted to the CUPA shall incorporate BMPs designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for HMBPs. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The HMBP shall be approved prior to operation of the given facility.***

HAZ-2: ***The HMBP shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.***

HAZ-3: ***Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.***

HAZ-4: All hazardous materials during both operation and construction of IVIC infrastructure shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and Federal law.

HAZ-5: Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and Federal law.

Level of Significance After Mitigation: Less than Significant

MM HAZ-1 would require implementation of an HMBP and the BMPs therein to minimize the potential for accidental release of hazardous materials.

MM HAZ-2 would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials.

MM HAZ-3 would require modeling of pathways for hazardous materials to contain hazardous material and manage hazardous materials appropriately to avoid exposure of hazardous materials at nearby sensitive receptors, thereby preventing hazardous materials impacts from storage and use onsite.

MM HAZ-4 would require disposal of hazardous materials in compliance with State and Federal law.

MM HAZ-5 would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law.

HAZ-2 Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: As discussed above, construction activities associated with implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials used in construction activities and equipment. Construction activities may involve the use of adhesives, solvents, paints, thinners, petroleum products, and other chemicals. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. If not properly handled, however, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. Agencies implementing IVIC projects are required to comply with all relevant and applicable Federal, State, and local laws and regulations that pertain to the accidental release of hazardous materials during construction of proposed facilities such as California Health and Safety Code Sections 25500 et seq. Compliance with all applicable Federal, State, and local regulations can reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant impact, but a contingency MM is provided

to ensure accidental releases and any related contamination would not significantly affect the environment at facility locations, thereby avoiding a potentially significant impact. **MM HAZ-6**, would minimize the potential hazard to the public or environment due to accidental release.

The use of hazardous materials and substances during construction would be subject to the Federal, State, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Setting. With compliance with these regulations, and preparation and implementation of **MM HAZ-6**, hazardous material impacts related to construction activities would be less than significant.

Operation: Operation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer would function similar to that which occurs at present. The capacities for the sewer collection system, City Creek Bypass Channel, and Roadways would be expanded under the proposed Project to accommodate future growth that is anticipated to occur within the IVIC Project area. These facilities would be installed belowground, at grade (roadway improvements) or below grade (in the case of City Creek Bypass Channel), and would function in a similar manner to that which occurs under present conditions. As stated under issue **HAZ-1**, above, the roadways act as a means of transport for vehicles carrying various materials, some of which potentially hazardous, at present and will continue to do so once widened and/or improved. There will be no greater risk for accidental release of hazardous materials than that which presently exists within this corridor as a result of implementation of the proposed IVIC Project. Furthermore, based on the development of a better road, risk should be reduced from that which exists at present, as is the case for the improvement of City Creek Bypass Channel. Thus, the Project would have a less than significant potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, operational impacts would be less than significant.

EVWD Well Development and Reservoir

Construction: Construction impacts would generally be the same as that which is discussed under **City Creek Bypass Channel, Roadway Improvements & Sewer Installation**, above. While it is not anticipated that EVWD Well Development and Reservoir would be developed on sites that require demolition of structures, a possibility exists for this to occur. Thus, where structures would be required to be demolished, such structures would need appropriate abatement of identified asbestos prior to demolition. Federal and State regulations govern the demolition of structures where materials containing lead and asbestos are present. ACMs are regulated both as a hazardous air pollutant under CAA and as a potential worker safety hazard under the authority of Cal/OSHA. These requirements include SCAQMD Rules and Regulations pertaining to asbestos abatement (including Rule 1403); Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from California Code of Regulations Title 8; CFR Title 40, Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by HUD. Asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services.

In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos would be conducted in accordance with Cal/OSHA standards. Adherence to existing regulations and the MM provided below would ensure that potential impacts related to ACMs and LBPs would be less

than significant. Compliance with all applicable Federal, State, and local regulations can reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant impact, but a contingency **MM** is provided to ensure accidental releases and any related contamination would not significantly affect the environment at facility locations, thereby avoiding a potentially significant impact. **MM HAZ-6**, would minimize the potential hazard to the public or environment due to accidental release. Impacts would be less than significant through the implementation of mitigation.

Operation: Operation of the proposed facilities could include the storage and use of chemicals. Any storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Setting. The delivery and disposal of chemicals to and from the Well or Reservoir site would occur in full accordance with all applicable Federal, State, and local regulations. The established handling protocols per Federal, State, and local laws and regulations would ensure operational impacts for EVWD Well Development and Reservoir facilities would be less than significant.

As noted in the Regulatory Setting, an HMBP must be prepared to avoid a significant adverse impact. Thus, **MMs HAZ-1** and **HAZ-2** shall be implemented for the proposed IVIC infrastructure as required by the San Bernardino County CUPA. The HMBP would minimize hazards to human health and the environment from fires, explosions, or an accidental release of hazardous materials into air, soil, surface water, or groundwater. Compliance with all applicable Federal, State, and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Mitigation Measures: ***MMs HAZ-1*** *and* ***HAZ-2*** *are required to minimize impacts as well as the following:*

HAZ-6: ***All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the IVIC. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.***

Level of Significance After Mitigation: Less Than Significant

MM HAZ-1 would require implementation of an HMBP and the BMPs therein to minimize the potential for accidental release of hazardous materials.

MM HAZ-2 would require assessment of the accidental release scenarios and identify equipment and personnel training necessary to control and prevent the spread of any accidentally released hazardous materials, thereby minimizing exposure to and spread of hazardous materials.

MM HAZ-3 would require modeling of pathways for hazardous materials to contain hazardous material and manage hazardous materials appropriately to avoid exposure of hazardous materials

at nearby sensitive receptors, thereby preventing hazardous materials impacts from storage and use onsite.

MM HAZ-4 would require disposal of hazardous materials in compliance with State and Federal law.

MM HAZ-5 would require cleanup of any contaminated areas as a result of accidental release during construction or operation to ensure that the site contamination level has been reduced to a level that complies with State and Federal law.

MM HAZ-6 would minimize the potential hazard to the public or environment due to accidental release.

HAZ-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

There are four schools adjacent to the IVIC Project area or within one-quarter mile proximity to the Project area. These schools include: Curtis Middle School; Indian Springs High School; Cypress Elementary School; and School of Hope.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: Due to the potentially extensive nature of City Creek Bypass Channel, Roadway Improvements, and Sewer Installation, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials during construction of pipelines and ancillary facilities, such as gasoline and diesel fuel. Additionally, future Implementing Agencies would be required to comply with all relevant and applicable Federal, State, and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable Federal, State, and local regulations, as well as the implementation of **MMs HAZ-1** through **HAZ-6**, would reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school. This is because **MM HAZ-1**, which would ensure proper management upon any incident of accidental release of hazardous materials, would be required, reducing impacts under this issue to a level of less than significant.

Operation: Operation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer would consist of infrastructure improvements and capacity expansion. These facilities would be installed belowground, at grade (roadway improvements) or below grade (in the case of City Creek Bypass Channel), and would function in a similar manner to that which occurs under present conditions. As stated under issues **HAZ-1 and HAZ-2**, above, the roadways act as a means of transport for vehicles carrying various materials, some of which potentially hazardous, at present and will continue to do so once widened and/or improved. There will be no greater risk for emission of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school than that which presently exists within this corridor as a result of implementation of the proposed IVIC Project. Furthermore, based on the development of a better road, risk should be reduced from that which exists at present, as is the case for the improvement of City Creek Bypass Channel. The Implementing Agency is required to comply with all relevant and applicable Federal, State, and local laws and regulations that pertain to the release of hazardous materials during operation of proposed facilities. Compliance with all applicable federal, State and local regulations and **MMs HAZ-1** through **HAZ-6** would reduce potential operational impacts to schools within one-quarter

mile of the project sites. Impacts would be less than significant with incorporation of applicable laws and regulations, as well as implementation of mitigation.

EVWD Well Development and Reservoir

Construction: As the locations of the EVWD Well and Reservoir are not presently known beyond that the Reservoir would be located in the Lower Zone and the Well would be located in the Intermediate Zone (refer to **Figure 3-15**), it is possible that construction of proposed EVWD Well and Reservoir would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials, such as gasoline and diesel fuel. As a general rule, well and reservoir construction activities do not require any acutely hazardous materials. Additionally, the Implementing Agency is required to comply with all relevant and applicable Federal, State, and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable Federal, State, and local regulations and **MMs HAZ-1** through **HAZ-6** would reduce potential impacts to the public or the environment regarding hazardous waste discharges or emissions within one-quarter mile of a school during construction. Construction impacts would be less than significant with implementation of mitigation.

Operation: Operation of the proposed EVWD Well and Reservoir would consist of facilities designed to produce and move water out of the groundwater basin and store EVWD's water supply. With one exception, hazardous materials would not be associated with the regular operation of the EVWD Well and Reservoir, and no hazardous materials would be emitted or handled within one-quarter mile of a school. One exception is, if during extractions from the Upper Santa Ana Groundwater Basin, groundwater is treated with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The established handling protocols per Federal, State, and local laws and regulations would ensure operational impacts for the proposed EVWD Well and Reservoir would be less than significant.

HAZ-4 Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Based on the data contained in the preceding Existing Conditions discussion, there is are no known open clean-up sites within the IVIC Project area. There are several closed clean-up cases listed by DTSC and the State Water Resources Control Board within the IVIC Project Area, but as these contamination cases are closed, it would be unlikely that the former contamination would be encountered as a result of Project Activities.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: The hazardous sites analysis undertaken for this Project, including records searches on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed that there are no cleanup sites in the IVIC Project area. GeoTracker findings are shown on Appendix 7, which indicates that the proposed City Creek Bypass Channel, Roadway Improvements & Sewer Installation are not anticipated to be located on sites that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, given that there is one known open Clean-Up case located to the south of the APE at the San Bernardino International Airport (the Norton Airforce Base IRP-2 Landfill), unknown contaminants may, though are not likely to exist within the IVIC area. Thus, during project construction, it is possible

that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Additionally, occasionally, a Project that involves subsurface excavation or exploration may encounter an unknown contaminated site. Once encountered, there are existing protocols to address such contamination. In addition to implementing **MM HAZ-6**, which would address encounters with unknown contamination and avoid a potentially significant impact, notification of regulatory agencies and following their guidance would ensure that the proposed City Creek Bypass Channel, Roadway Improvements & Sewer Installation would have a less than significant impact related to contaminated sites. Implementation of **MM HAZ-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. With implementation of mitigation measures, potential conflicts with contaminated sites can be reduced to a less than significant impact.

Operation: Once the City Creek Bypass Channel, Roadway Improvements & Sewer are operational, there would be no new potential to encounter hazardous sites beyond that which is discussed under the construction header above. No soil excavation would occur during operation that could result in encountering an unknown contamination site. Thus, no impacts during operation would occur.

EVWD Well Development and Reservoir

Construction: The hazardous sites analysis undertaken for this Project, including records searches on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed that there are no cleanup sites in the IVIC Project area, and furthermore indicates that there are no open cleanup sites located within EVWD's Intermediate or Lower zones. The GeoTracker findings are shown on Appendix 7, which indicates that the proposed EVWD Well Development and Reservoir are not anticipated to be located on sites that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Occasionally, a Project that involves subsurface excavation or exploration may encounter an unknown contaminated site. Once encountered, there are existing protocols to address such contamination. However, in addition to implementing **MM HAZ-6**, which would address encounters with unknown contamination, notification of regulatory agencies and following their guidance would ensure that the EVWD Well and Reservoir would have a less than significant impact related to contaminated sites. Implementation of **MM HAZ-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. With implementation of mitigation measures, potential conflicts with contaminated sites can be reduced to a less than significant impact.

Operation: Once the EVWD Well and Reservoir are operational, there would be no new potential to encounter hazardous sites beyond that which is discussed under the construction header above. No soil excavation would occur during operation that could result in encountering an unknown contamination site. Thus, no impacts during operation would occur.

*Mitigation Measures: **MM HAZ-6** is required to minimize impacts as well as the following:*

HAZ-7: ***Should an unknown contaminated site be encountered during construction of IVIC infrastructure, all work in the immediate area shall cease; the type of contamination and its extent shall be determined by a hazardous materials specialist, such as an Environmental Scientist; and the local CUPA or other regulatory agencies (such as the DTSC or Santa Ana Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the CUPA or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.***

Level of Significance After Mitigation: Less Than Significant

While it is not anticipated that facilities under the proposed IVIC Project would be installed on a known site containing hazardous contamination, during project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Impacts would be potentially significant. Therefore, mitigation is necessary to minimize impacts. The implementation of **MM HAZ-6** would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of **MM HAZ-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. Therefore, impacts to the public and the environment related to hazardous materials sites would be less than significant with implementation of mitigation.

HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

The closest airport facility to the Project area is the San Bernardino International Airport, which lies immediately south of the IVIC Project area. Based on the data provided under the Existing Conditions above, the Project area is subject to the Airport Traffic Pattern Zone and Airport Influence Area. This Zone and Area encompass most of the IVIC Project area and pose low and negligible risk levels due to Airport operations. A small area of the Inner Turning Zone encompasses the triangle of land between 3rd Street and 5th Street at Palm. This whole area is currently fully developed, and no land use modifications are proposed by the IVIC beyond the installation of EVWD's Well and Reservoir, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: The City Creek Bypass Channel, Roadway Improvements & Sewer Installation would occur within and adjacent to existing road rights-of-way, and within the existing and adjacent Channel right-of-way. During construction of the City Creek Bypass Channel, Roadway Improvements & Sewer, which would be located in close proximity to the San Bernardino International Airport, there is a potential for workers at the site to be exposed to hazards from nearby airports. Construction contractors would be required to comply with Cal/OSHA regulations related to exposure to airport hazards, such as noise. The requisite adherence to these regulations would reduce construction worker exposure to airport-proximity related hazards such as noise, such that proposed IVIC construction activities would not expose employees to airport safety hazards. Construction impacts across all project categories related to airport and aircraft hazards would be less than significant, and no mitigation is required.

Operation: The City Creek Bypass Channel, Roadway Improvements & Sewer would not pose any specific conflict with any public airport operations because these features would continue to function with the same purposes as these facilities do at present. The City Creek Bypass Channel improvements would allow this channel to accommodate current and future flows anticipated to occur as a result of further development within the IVIC Project and surrounding area. The roadway capacities would be increased commensurate with that which has been identified in the General Plans that govern the IVIC Project area. The sewer would operate belowground, and therefore would have no conflicts with aboveground airport land use plans. As these facilities would enable transport of cars and trucks on roadways, stormwater, and wastewater, with no facilities that would be installed above-grade beyond new and existing signage and signals along

the IVIC area roadways, conflicts between the City Creek Bypass Channel, Roadway Improvements & Sewer and the San Bernardino International Airport would be reduced to a less than significant impact level.

EVWD Well Development and Reservoir

Construction: The EVWD Reservoir and Well Development could occur within the San Bernardino International Airport, Airport Traffic Pattern Zone and Airport Influence Area. During construction of the EVWD Reservoir and Well Development, which would be located in close proximity to the San Bernardino International Airport, there is a potential for workers at the site to be exposed to hazards from nearby airports. Construction contractors would be required to comply with Cal/OSHA regulations related to exposure to airport hazards, such as noise. The requisite adherence to these regulations would reduce construction worker exposure to airport-proximity related hazards such as noise, such that proposed IVIC construction activities would not expose employees to airport safety hazards. Construction impacts across all project categories related to airport and aircraft hazards would be less than significant, and no mitigation is required.

Operation: In order to ensure that the EVWD Well and Reservoir would not pose any specific conflict with any public airport operations, mitigation is necessary to ensure that the San Bernardino International Airport Authority (SBIAA) will have an opportunity to participate in a decision to locate EVWD facilities within safety zone or flight paths. With implementation of **MM HAZ-8**, conflicts between the EVWD Well and Reservoir and the San Bernardino International Airport would be reduced to a less than significant impact level.

Mitigation Measures:

HAZ-8: ***For projects within airport safety zones, facility design shall follow the guidelines of the appropriate ALUCP. If a potential conflict with an ALUCP is identified as a result of implementation of the proposed IVIC Project, the implementing agency shall relocate the facility outside the area of conflict, or if the site is deemed essential, the implementing agency shall propose an alternative design that reduces any conflict to a less than significant impact, with no conflicts with the ALUCP.***

Level of Significance After Mitigation: Less Than Significant

Most proposed projects' locations would occur within the Airport Traffic Pattern Zone and Airport Influence Area of the San Bernardino International Airport, which in turn could result in a safety hazard for people residing or working in the IVIC Project area. Therefore, airport hazard impacts could be potentially significant. Thus, mitigation is required. The implementation of **MM HAZ-8** would ensure compliance with the appropriate airport land use plan, minimization of conflicts with the airport safety review areas, and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the IVIC Project area during construction and operation of the IVIC Project facilities. **MM HAZ-8** would require facilities within the airport safety zones to be designed in conformance with the ALUCP, or, where a conflict with the ALUCP is identified, the facility shall be relocated or redesigned to avoid a conflict with the ALUCP, thereby avoiding a potentially significant conflict with an airport safety zone.

HAZ-6 Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: The City Creek Bypass Channel, Roadway Improvements & Sewer would require construction adjacent to or within public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. The City Creek Bypass Channel is located adjacent to road rights of way, but is unlikely that it would be required substantial encroachment onto the adjacent road rights of way. The Roadway Improvements and Sewer Improvements would require construction within road rights-of-way. The San Bernardino Countywide Plan identifies SR-210 in the vicinity of the IVIC Project area as emergency evacuation routes, this is illustrated on **Figure 4.10-6**, the San Bernardino Countywide Plan Evacuation Route Map. Though the proposed Project would not include activities that would encroach into the rights-of-way of this evacuation route, it could potentially limit access to the evacuation route as construction within 5th Street could require lane closure or other limits on access for emergency vehicles and persons traveling through the Project area. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts could be potentially significant. **MM TRAN-1**, identified under Subchapter 4.18, would be required to minimize construction related impacts under this issue to a level of less than significant.

Operation: Following construction, operation of the City Creek Bypass Channel, Roadway Improvements & Sewer would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as the sewer would operate belowground, and therefore would have no conflicts with aboveground emergency response plans or emergency evacuation plans. As these facilities would enable transport of cars and trucks on roadways, stormwater, and wastewater, with no facilities that would be installed above-grade beyond new and existing signage and signals along the IVIC area roadways, conflicts with emergency response plan or emergency evacuation plan would not be anticipated. Furthermore, these facilities would continue to function in a similar manner to that which occurs under present conditions, and in the instance of the roadways, the roadway and adjacent sidewalk improvements would facilitate better traffic circulation, thereby resulting in improved access to evacuation routes. Thus, operation of the City Creek Bypass Channel, Roadway Improvements & Sewer would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

EVWD Well Development and Reservoir

Construction: The proposed EVWD Well Development and Reservoir would be contained within the boundaries of their specific sites which would not encroach on adjacent roadways. It is not anticipated that the installation of pipelines or other facilities would encroach within road rights-of-way that surround the EVWD Well Development and Reservoir sites, making the possibility of interfering with evacuation routes highly unlikely. The truck trips associated with construction activities would not require closure of any roadways and would only temporarily slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impact related to an emergency evacuation plan would occur during the construction of the EVWD Well Development and Reservoir.

Operation: Operation of the proposed EVWD Well Development and Reservoir would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The EVWD Well Development and Reservoir infrastructure would not interfere with traffic flows

during operation. However, aboveground facilities would require periodic maintenance. Maintenance activities would be intermittent and require minimal trips on surrounding roadways. Impacts related to an adopted emergency plan would be less than significant during operation.
Mitigation Measures:

TRAN-1: ***Prepare and Implement Construction Transportation Management Plan (TMP)***
A construction TMP shall be developed and implemented by the implementing agency, in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: ***The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.***

Damage Repair: ***The TMP shall include the following requirements to minimize damage to the existing roadway network:***

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water Conveyance Pipelines.***
- ***The roadway network along the proposed City Creek Bypass Channel, Roadway Improvements & Sewer shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the implementing agency or its contractors shall repair all damage.***

Coordination with Emergency Services: ***The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public ROW if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.***

Coordination with Active Transportation Facilities: ***The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.***

Coordination with SBCTA: ***If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with Mountain Transit.***

Coordination with Caltrans: ***If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with***

Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.

<u>Coordination with Nearby Construction Sites:</u> The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures;***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips; and***
- ***The implementing agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

<u>Transportation Control and Safety:</u> The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.

<u>Plan Approval:</u> The TMP shall be submitted to SBCTA for review and approval.

Level of Significance After Mitigation: Less Than Significant

The City Creek Bypass Channel, Roadway Improvements & Sewer would require construction adjacent to or within public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. This construction activity, and other anticipated construction activities associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be potentially significant. Therefore, mitigation is necessary to minimize impacts. The implementation of **MM TRAN-1**, identified under **Subchapter 4.18** of this DEIR, would require the preparation of a TMP with comprehensive strategies to reduce potential disruption to emergency evacuation or an emergency response plan. Therefore, potential significant impacts to emergency access and evacuation would be reduced to a less than significant level.

HAZ-7 Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project site is not located within an area identified as a moderate, high or very high fire hazard severity areas of two cities' General Plans. According to the General Plans, the California Department of Forestry and Fire Protection (CAL FIRE) has recommended that the urban, low-lying areas in Highland and San Bernardino be classified as having a Moderate Fire Hazard.

<u>City Creek Bypass Channel, Roadway Improvements & Sewer Installation</u>
<u>Construction</u>: Given that the proposed facilities would be installed within urban areas with only a Moderate Fire Hazard potential, it is not anticipated that the construction of the proposed City Creek Bypass Channel, Roadway Improvements & Sewer Installation would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, as only minimal risk for wildland fires to occur in this area exists. Construction impacts would be less than significant.

Operation: Once the Creek Bypass Channel, Roadway Improvements & Sewer are installed, these facilities will continue to operate in a similar manner and with the same functions to that which occurs at present under the existing conditions. These facilities would not be constructed of flammable materials or involve any spark-producing activities. Thus, operation of the proposed Creek Bypass Channel, Roadway Improvements & Sewer would have a less than significant potential to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Operational impacts would be less than significant.

EVWD Well Development and Reservoir

Construction: Given that the proposed facilities would be installed within urban areas with only a Moderate Fire Hazard potential, it is not anticipated that the construction of the proposed EVWD Well Development and Reservoir would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, as only minimal risk for wildland fires to occur in this area exists. Construction impacts would be less than significant.

Operation: The proposed EVWD Well Development and Reservoir would be required to meet current CBC standards, which stipulates that all projects in fire hazard severity zones shall be designed, built, and operated in accordance with state regulations specifying building materials and structural designs for structures in such zones, including CBC Chapter 7A and California Fire Code Chapter 49; and regulatory requirements for defensible space including California Public Resources Code Sections 4291 et seq. and San Bernardino County Code of Ordinances Sections 23.0301 et seq. The facilities proposed under this Project will comply with the CBC. Furthermore, the proposed EVWD Well Development and Reservoir would be unmanned and would only require routine maintenance; therefore, no people would be exposed to a significant risk involving wildland fires. Operational impacts would be less than significant.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

4.10.7 Mitigation Measures

The mitigation measures summarized below shall be implemented to reduce potential hazards and hazardous material impacts to a less than significant level of impact.

HAZ-1: ***For IVIC infrastructure that handles hazardous materials or generate hazardous waste, the HMBP prepared and submitted to the CUPA shall incorporate BMPs designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for HMBPs. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The HMBP shall be approved prior to operation of the given facility.***

HAZ-2: ***The HMBP shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.***

HAZ-3: ***Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and***

specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.

HAZ-4: ***All hazardous materials during both operation and construction of IVIC infrastructure shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and Federal law.***

HAZ-5: ***Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and Federal law.***

HAZ-6: ***All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the IVIC. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.***

HAZ-7: ***Should an unknown contaminated site be encountered during construction of IVIC infrastructure, all work in the immediate area shall cease; the type of contamination and its extent shall be determined by a hazardous materials specialist, such as an Environmental Scientist; and the local CUPA or other regulatory agencies (such as the DTSC or Santa Ana Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the CUPA or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.***

HAZ-8: ***For projects within airport safety zones, facility design shall follow the guidelines of the appropriate ALUCP. If a potential conflict with an ALUCP is identified as a result of implementation of the proposed IVIC Project, the implementing agency shall relocate the facility outside the area of conflict, or if the site is deemed essential, the implementing agency shall propose an alternative design that reduces any conflict to a less than significant impact, with no conflicts with the ALUCP.***

TRAN-1: ***<u>Prepare and Implement Construction Transportation Management Plan (TMP)</u>***
A construction TMP shall be developed and implemented by the implementing agency, in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

<u>Construction Traffic Routes and Staging Locations:</u> The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes

shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.

<u>Damage Repair:</u> The TMP shall include the following requirements to minimize damage to the existing roadway network:

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water Conveyance Pipelines.***
- ***The roadway network along the proposed City Creek Bypass Channel, Roadway Improvements & Sewer shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the implementing agency or its contractors shall repair all damage.***

<u>Coordination with Emergency Services:</u> The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public ROW if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.

<u>Coordination with Active Transportation Facilities:</u> The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.

<u>Coordination with SBCTA:</u> If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with Mountain Transit.

<u>Coordination with Caltrans:</u> If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.

<u>Coordination with Nearby Construction Sites:</u> The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures;***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips; and***
- ***The implementing agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

<u>Transportation Control and Safety:</u> The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.

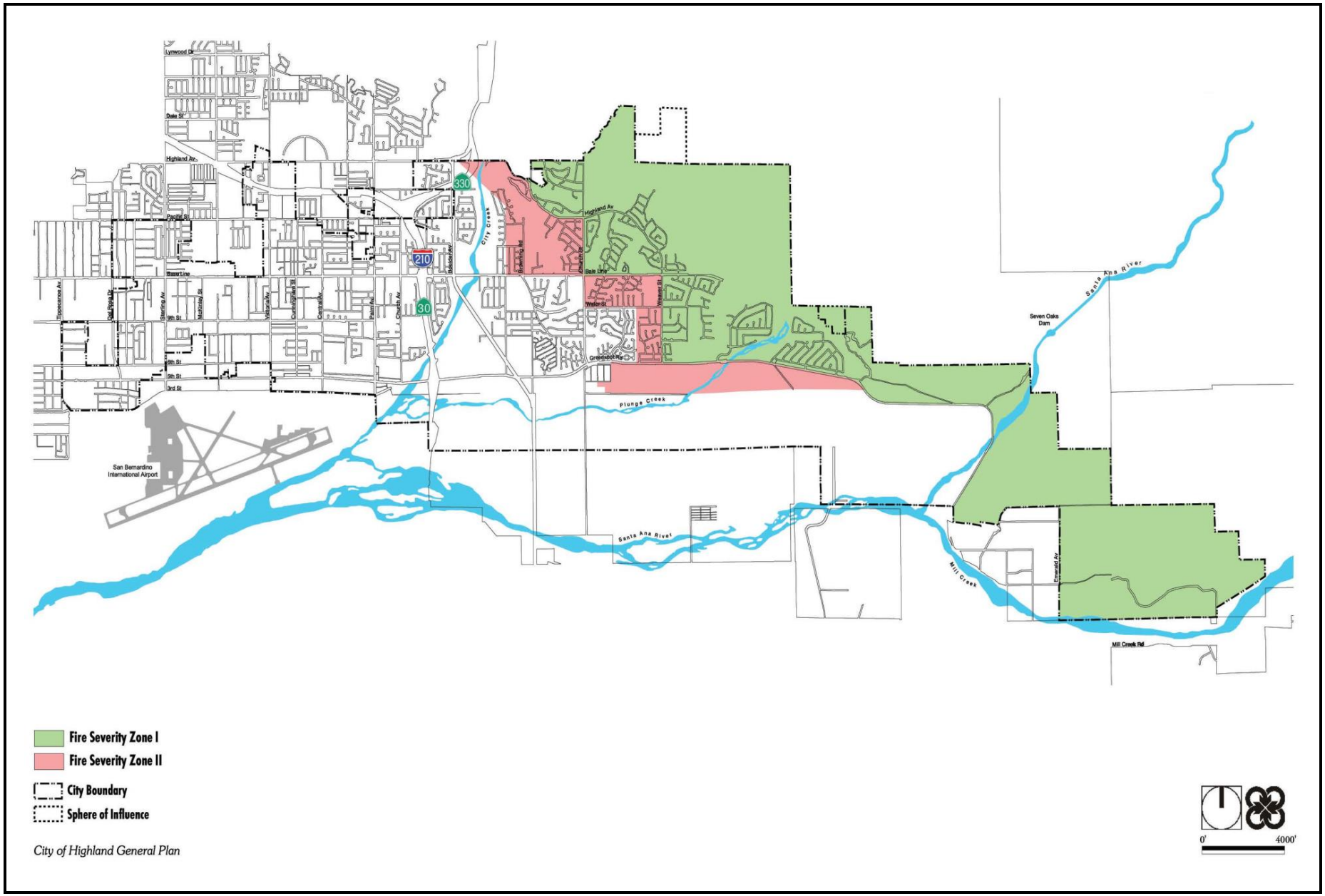
***Plan Approval:* The TMP shall be submitted to SBCTA for review and approval.**

4.10.8 Cumulative Impacts

The IVIC Project is not forecast to make a cumulatively considerable contribution to on- of off-site hazards and hazardous material issues. For those potential hazards or hazardous material issues with a potential for direct significant impact within the Project area, mitigation measures have been provided that can reduce the project's contribution to cumulative impacts to a less will be required to reduce site specific and ultimately cumulative impacts to a less than significant level. Because most of the project impacts contribute to cumulative demand for emergency services or protection of the public from hazards, all of the above measures shall be implemented. While cumulative development within the region may result in significant cumulative impacts related to exposure to hazards, the potential for the proposed IVIC Project to result in a cumulatively considerable contribution to such impacts has been minimized to a level of insignificance through the implementation of mitigation measures.

4.10.9 Significant and Unavoidable Impacts

As determined above, the data substantiate that no significant and/or unavoidable significant adverse impacts relating to hazards or hazardous materials will occur as a result of the implementing the IVIC Project.



SOURCE: City of Highland General Plan

FIGURE 4.10-1

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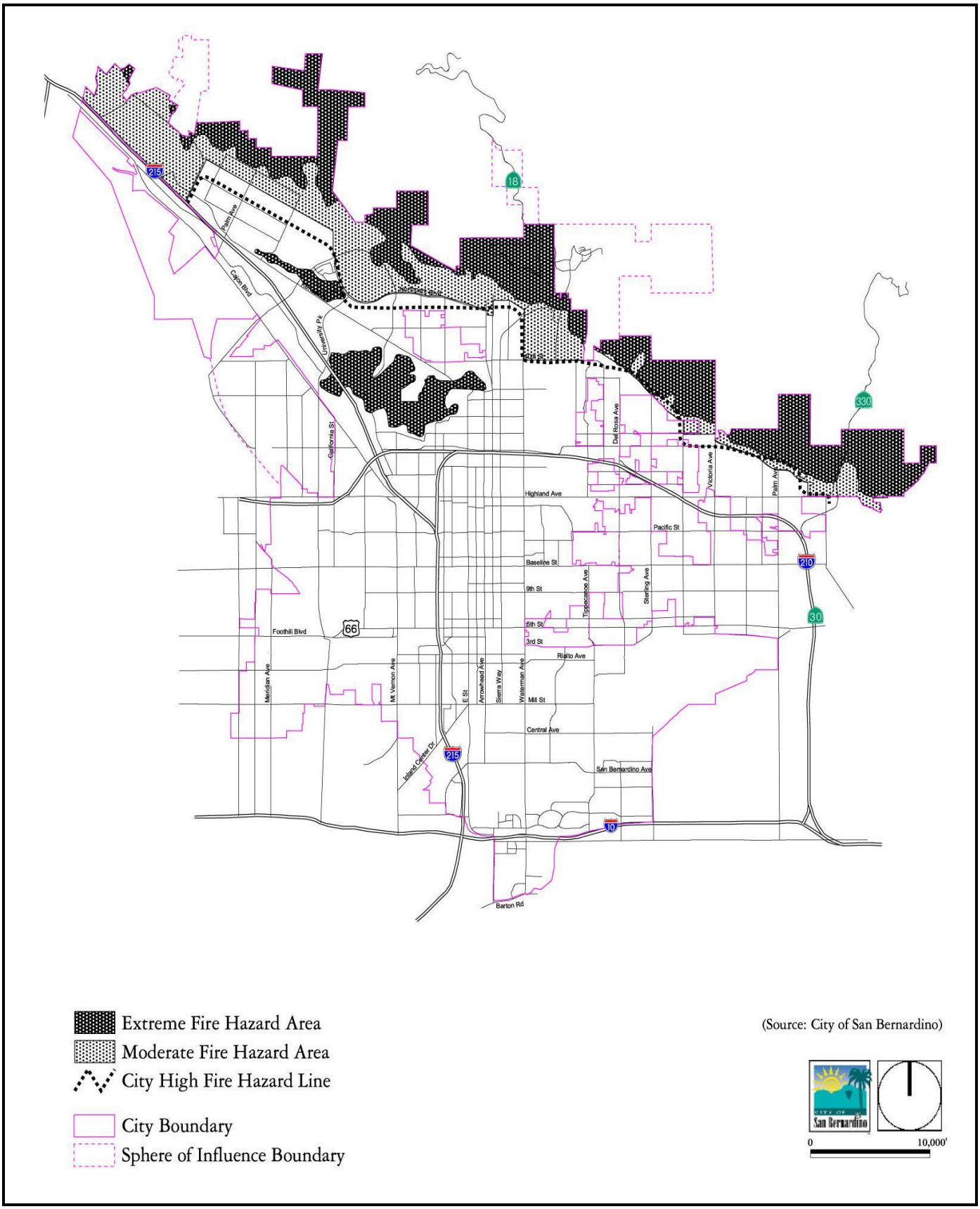
Fire Hazards and Safety Overlay Areas



SOURCE: City of San Bernardino General Plan, November 2005 (Figure S-9)

FIGURE 4.10-2

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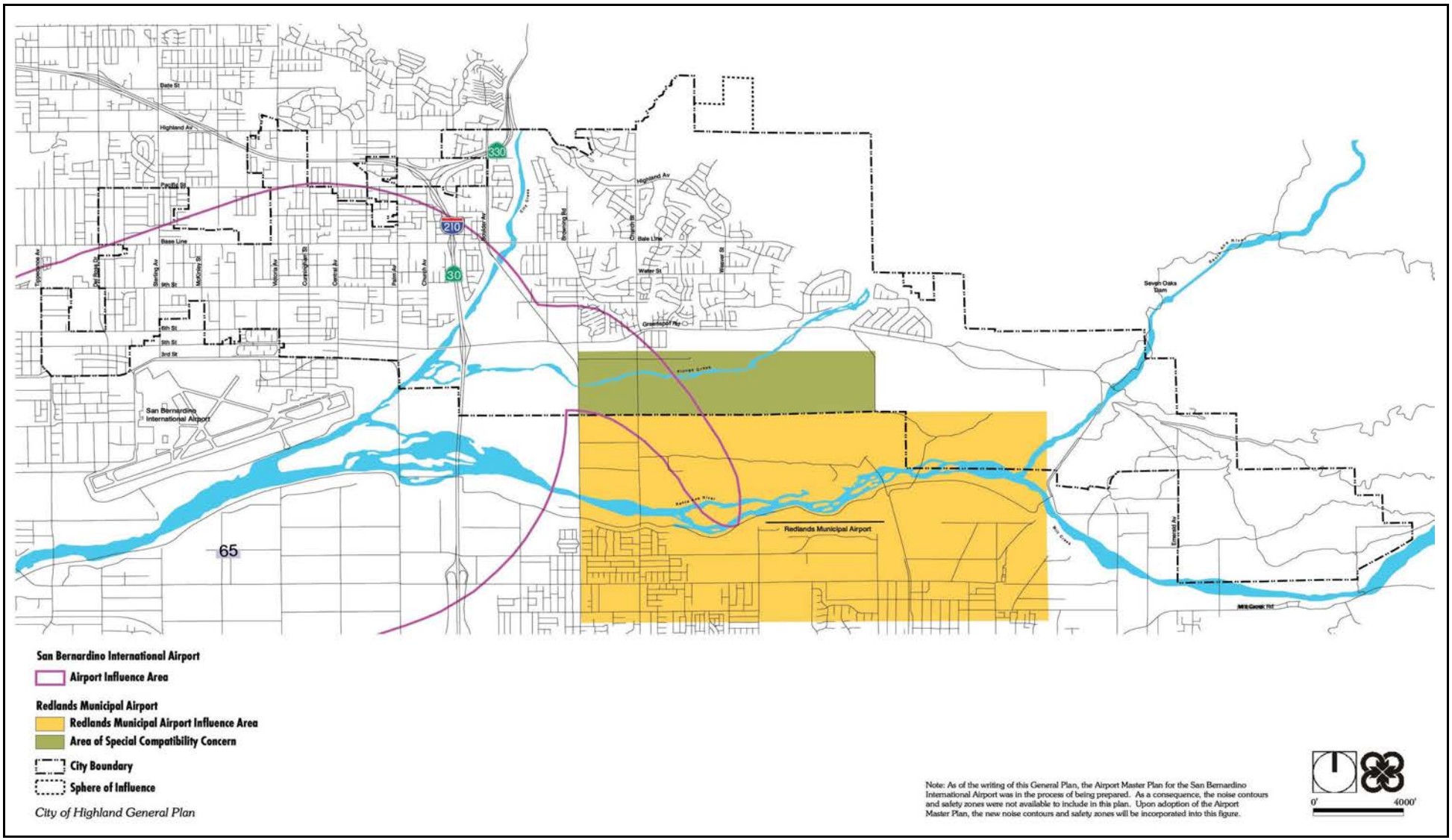
Fire Hazard Areas



Source: City of Highland General Plan EIR

FIGURE 4.10-3

Tom Dodson & Associates
Environmental Consultants

San Bernardino International Airport Influence Area (AIA) / Redlands Municipal Airport Compatibility Map

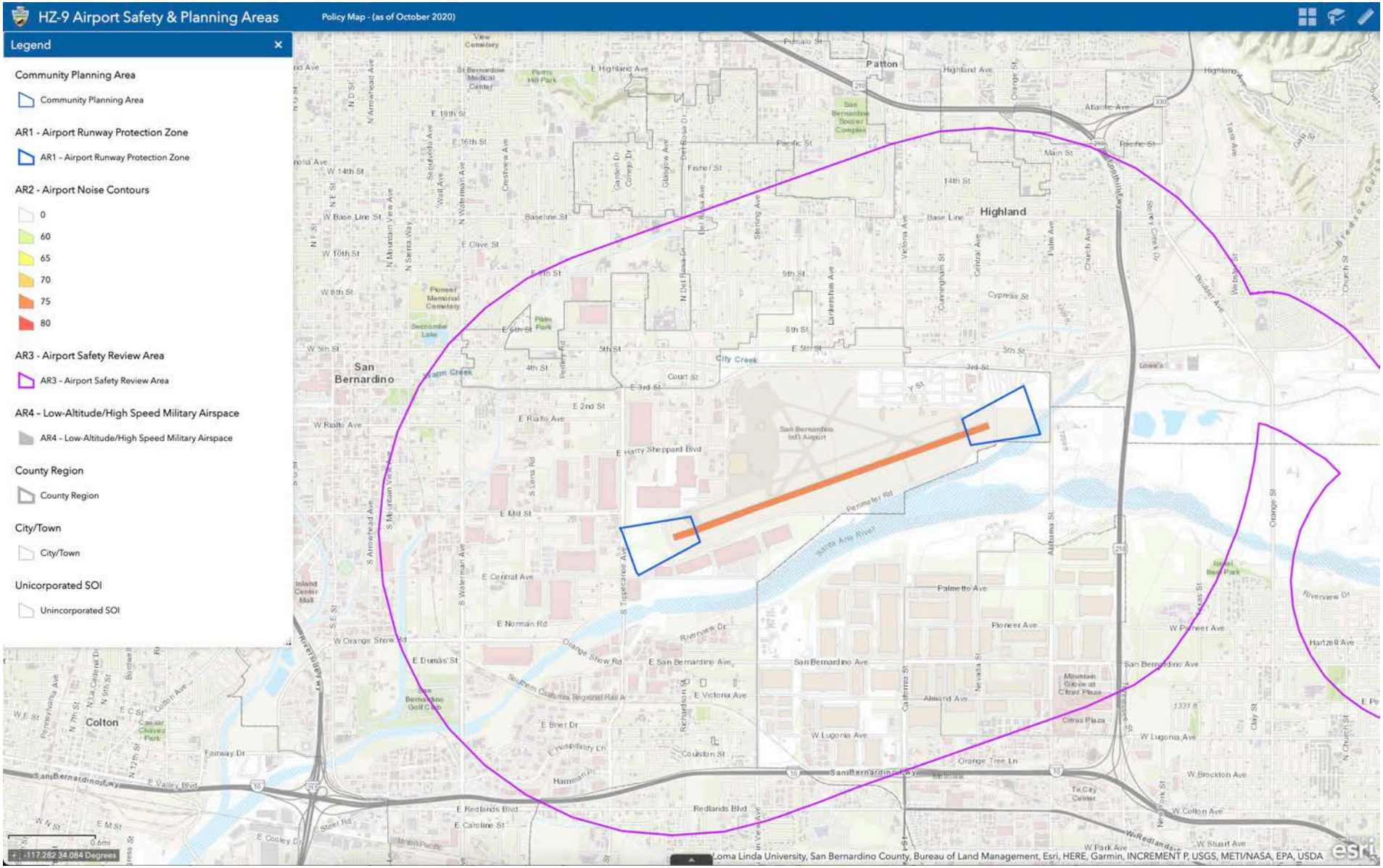


FIGURE 4.10-4

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Airport Safety and Planning Areas

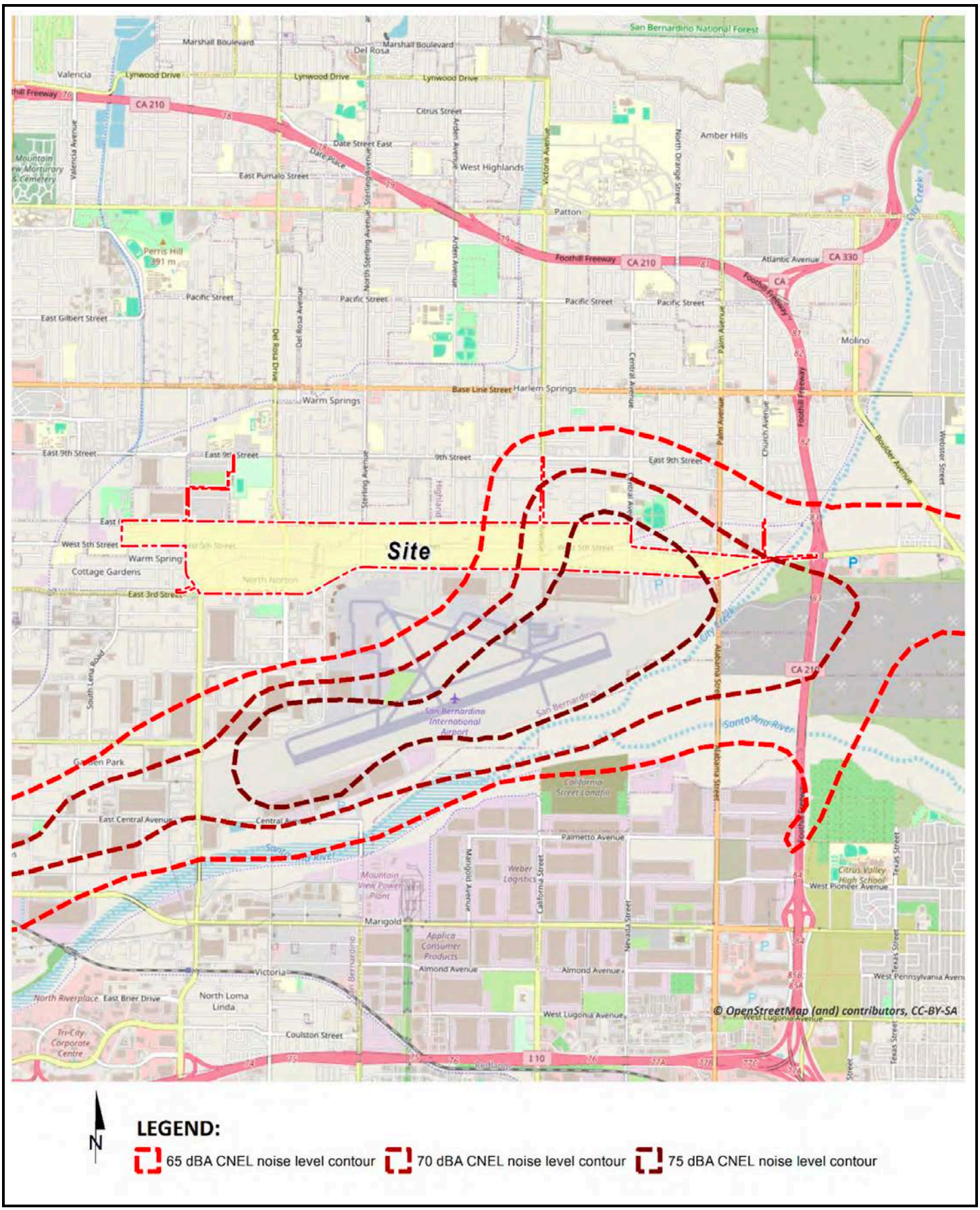


FIGURE 4.10-5

Tom Dodson & Associates
Environmental Consultants

SBIA Noise Contours

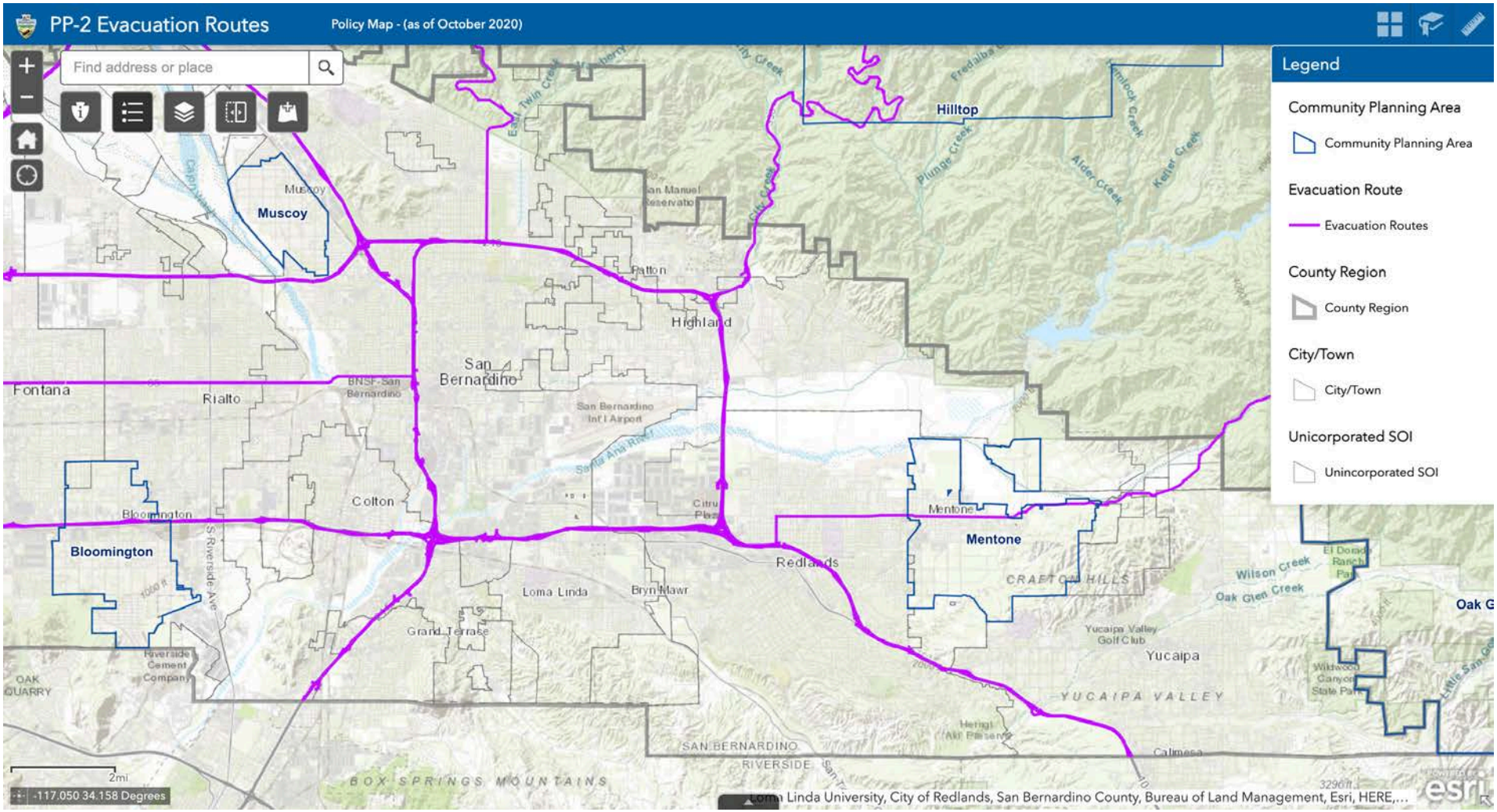


FIGURE 4.10-6

Tom Dodson & Associates
Environmental Consultants

Evacuation Routes

4.11 HYDROLOGY AND WATER QUALITY

4.11.1 Introduction

This subchapter evaluates the environmental impacts relating to hydrology and water quality from implementation of the proposed project, the Inland Valley Infrastructure Corridor (IVIC) Project. These issues will be discussed below as set in the following framework:

4.11.1 Introduction
4.11.2 Regulatory Setting
4.11.3 Existing Conditions
4.11.4 Thresholds of Significance
4.11.5 Methodology
4.11.6 Environmental Impacts
4.11.7 Mitigation Measures
4.11.8 Cumulative Impacts
4.11.9 Significant and Unavoidable Impact

References utilized for this section include:

- California Department of Water Resources (DWR), 2024. Sustainable Groundwater Management Act (SGMA) https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management (accessed 02/12/24)
- California Department of Water Resources (DWR), 2024. Sustainable Groundwater Management Act (SGMA) https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management (accessed 02/12/24)
- California Regional Water Quality Control Board, Santa Ana Region, 2008. Water Quality Control Plan Santa Ana River Basin (Region 8) 1995. Updated February 2008.
- EVWD, 2024. The Pipeline. https://www.eastvalley.org/DocumentCenter/View/3169/Consumer-Confidence-Report (accessed 08/06/24) (Appendix 9)
- FEMA, 2024. FEMA Flood Map Service Center: Search By Address. https://msc.fema.gov/portal/search?AddressQuery=san%20bernardino%20international%20airport (accessed 07/23/24)
- City of Highland, March 2006. *General Plan*
- JLC Engineering, 2020. "Preliminary Hydrology Study and Channel Design For City Creek By-Pass Channel" (Appendix 8)
- City of San Bernardino, November 1, 2005. *General Plan*.
- San Bernardino County, November 2, 2020. *San Bernardino Countywide Plan*.
- San Bernardino Valley Municipal Water District, 2021. 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan. https://www.sbvwcd.org/our-projects/upper-santa-ana-integrated-regional-water-management-plan/ (accessed 05/08/24)

The following comments regarding hydrology and water quality were received during the NOP comment period:

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter describes that the San Bernardino County Flood Control District (Flood Control District) possesses easement and fee-owned right-of-way within and surrounding the perimeter of the IVIC Planning Area, and notes that the IVIC Planning Area is within the Comprehensive Storm Drain Plan (CSDP) No. 6. The Comment Letter notes that, when planning for or altering existing or future storm drains, IVDA should be advised that the project is subject to the District's Comprehensive Storm Drain Plan No. 6, dated August 31, 2001. Construction of new or alterations to existing storm drains should be fully evaluated in the DEIR.

*Response: A discussion of the applicability of and compliance with the District's Comprehensive Storm Drain Plan No. 6 can be found in **Subchapter 4.11, Hydrology**. The proposed project intends to improve the City Creek Bypass Channel to ensure sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Warm Creek Channel. This is discussed in detail in **Subchapter 4.11, Hydrology.***

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter notes the flood zones within which the IVIC Planning Area lies:

- FEMA Flood Insurance Rate Map, Panels 06071C8682J; 8701J, dated September 2, 2016, and 06071C8702H, dated August 28, 2008, the Project lies within Zones A, AE, X-shaded (500-year floodplain; protected by a levee), X-unshaded, and the Regulatory Floodway.

*Response: The listed FIRM panels and flood zones are noted and fully analyzed in relationship to IVIC implementation under the analysis provided in **Subchapter 4.11, Hydrology**.*
NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter recommends that the Cities of Highland and San Bernardino enforce its most recent regulations for development within a Special Flood Hazard Area (SFHA) and floodplains.

*Response: The most recent regulations for development within SFHA and floodplains are analyzed in **Subchapter 4.11, Hydrology**; however, it should be noted that the improved capacity of the City Creek Bypass Channel would minimize the existing flood hazards throughout the IVIC Project area.*

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter notes that any encroachments including, but not limited to access for grading, side drain connections, utilities crossing, street improvements, and channel improvements on the District's right-of-way or facilities will require a permit from the District's prior to start of construction. Additionally, District's facilities built by the Army Corps of Engineers (ACOE) will require the District to obtain approval (408-Permit) from the ACOE. These impacts should be discussed in the DEIR.

*Response: The District permit requirements are discussed and analyzed in **Subchapter 4.11, Hydrology**. The need for a 408-Permit from the ACOE is discussed therein as well, but is analyzed in more detail under **Subchapter 4.5, Biological Resources**. **MMs BIO-13 and BIO-14** will be implemented if and when the City Creek Bypass Channel is disturbed.*

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter requires that a Water Quality Management Plan (WQMP) should be prepared for the Project, and mitigation proposed therein should be outlined in the DEIR. The Comment Letter notes that the project should be developed in conformance with the Construction General Permit (CGP).

*Response: The development of project-specific WQMPs and compliance with the CGP is discussed under **Subchapter 4.11, Hydrology**, but is also analyzed under **Subchapter 4.10, Hazards and Hazardous Materials**. **MMs BIO-13 and BIO-14** will be implemented if and when the City Creek Bypass Channel is disturbed.*

4.11.2 Regulatory Setting

State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Federal

Federal Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), United States Army Corps of Engineers (USACOE) regulates discharges of dredged and/or fill material into. "Waters of the United States" are defined in USACOE regulations at 33 CFR Part 328.3(a). Navigable waters of the U.S. are those waters of the United States that are navigable in the traditional sense. Waters of the U.S. is a broader term than navigable waters of the U.S. and includes adjacent wetlands and tributaries to navigable waters of the U.S. and other waters where the degradation or destruction of which could affect interstate or foreign commerce.

CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

CWA and the Porter-Cologne Act, require basin-wide planning. Additionally, the National Pollutant Discharge Elimination System (NPDES) empowers regional boards to set discharge standards, and encourages the development of new approaches to water quality management. As part of the NPDES program, a Stormwater Pollution Prevention Plan (SWPPP) must be prepared for construction activities affecting greater than one acre because the discharge of stormwater during construction is considered a non-point source of water pollution.

In 1972, the CWA was amended to prohibit the discharge of pollutants to Waters of the United States unless the discharge complies with a NPDES permit. The CWA focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial storm water discharges. In November 1990, the EPA published final regulations that establish requirements for specific categories of industries, including construction projects that encompass certain acreage, currently projects of one acre or larger.

National Pollutant Discharge Elimination System (NPDES) Program

As stated above, the NPDES permit program is administered in the State of California by the State Water Resources control Board (SWRCB) and Regional Water Quality Control Board (RWQCBs) under the authority of the EPA to control water pollution by regulating point sources that discharge pollutants into Waters of the U.S. (WOTUS). A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit.

General Dewatering Permit

The SWRCB has issued General WDRs under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General Waste Discharge Rrequirements (WDRs) authorize such construction-related discharges so long as all conditions of the permit are fulfilled.

Construction General Permit

The Construction General Permit (CGP) NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities regulates discharges of pollutants in stormwater associated with construction activity to Waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The CGP requires the development and implementation of a SWPPP that includes specific (BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit

The Industrial General Permit became effective July 1, 2015 (Order No. 2014-0057-DWQ). The Industrial General Permit covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 CFR Part 403.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from MS4s. MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP).

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the Federal government will make flood insurance available within the community as a financial protection against flood losses.

In support of the NFIP, FEMA identifies flood hazard areas throughout the U.S. and its territories by producing Flood Hazard Boundary Maps (FHBMs), FIRMs, and Flood Boundary & Floodway Maps (FBFMs). Several areas of flood hazards are commonly identified on these maps. One of these areas is the SFHA or high-risk area defined as any land that would be inundated by the

100year flood — the flood having a 1-percent chance of occurring in any given year (also referred to as the base flood).

The high-risk area standard constitutes a reasonable compromise between the need for building restrictions to minimize potential loss of life and property and the economic benefits to be derived from floodplain development. Development may take place within the SFHAs, provided that development complies with local floodplain management ordinances, which must meet the minimum Federal requirements.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. Under this Act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs) carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan or "Basin Plan" that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems.

National Pollutant Discharge Elimination System

The State Water Resources Control Board administers the NPDES permit program regulating stormwater from construction activities for projects greater than one acre in size. This is known as the General Permit for Storm Water Discharges Associated with Construction Activities, Order No. 99-08-DWQ, NPDES No. CAS000002. The main compliance requirement of the construction NPDES permits is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The purpose of a SWPPP is to identify potential on-site pollutants and identify and implement appropriate stormwater pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges during construction. Stormwater best management practices (BMPs) to be implemented during construction and grading, as well as post-construction BMPs, will be outlined in the SWPPP prepared for a proposed specific development project when construction is actually initiated in the future. Examples of BMPs include: detention or bioretention basins for capture and containment of sediments, use of silt fencing, sandbags, or straw bales to control runoff and identification of emergency procedures in case of hazardous materials spills. The future site-specific project proponent will be required to obtain a construction NPDES permit prior to initiating ground disturbing activities at a project site of greater than one acre.

Local

City of Highland General Plan

The following General Plan policies addressing hydrology and water quality are applicable to the project:

Public Services and Facilities Element: *Highland has a drainage system of improved, semi-improved, and unimproved flood control channels and creeks that are intended to prevent flooding and convey stormwater from the City to the Santa Ana River and then out to sea…..To address flood control issues, Highland has adopted a Master Storm Drain Plan derived from studies*

conducted by the San Bernardino County Flood Control District on drainage and flow patterns in the area.

Public Services and Facilities Element: Goal 4.4
Maintain an effective drainage system the protects people and property from overflows and flood disasters.

Conservation and Open Space Element: *The Conservation and Open Space Element contains discussions of Water Supply, Water Quality, Watershed Protection, Groundwater Protection, Limiting Urban Runoff and Water Conservation. "Protecting Water quality involves managing watershed and groundwater resources and limiting discharges and urban-runoff. For Highland maintaining and preserving water quality is important not only for domestic consumption but also for the regional impacts caused through runoff…..One of the most important steps that cities can take towards improving water quality is limiting urban runoff…..To implement its obligations under the Area Wide Urban Storm Water Permit, the City has adopted a Municipal Storm Water Management Plan (MSWMP), which consists of a variety of measures, including prohibition or regulation of specific types of discharges, inspections, avoidance of sewage spills, public education, controls on new development and redevelopment, site maintenance practices and construction site management practices."*

Open Space and Conservation Element: Goal 5.4
Continue to preserve and enhance the water quality and natural habitat of its waterways.

Open Space and Conservation Element: Goal 5.5
Continue to reduce urban runoff.

Open Space and Conservation Element: Goal 5.6
Monitor and strengthen Highland's water conservation practices.

Public Health, Safety, and Environmental Justice Element: *"Flooding in Highland generally occurs in the winter months when the region receives the most rain, but climate change may extend the flood hazard season.28 Climate change is also predicted to increase the number of annual extreme rain events, when large amounts of rain falls over a short period of time. These events often do not allow the rain to soak into the ground and they overwhelm stormwater infrastructure… flood risk is dispersed across Highland but is most centralized in the southern portion of east Highlands, just south of Greenspot Road. This area has a 1% chance of flooding annually, which is also known as a 100-year flood zone. Much of the area south of Greenspot Road has been left as open space. This aids in allowing for natural drainage during extreme rain events."*

Public Health, Safety, and Environmental Justice Element: Goal 3
Minimize risks, such as loss of life, injury, property damage, and natural resource destruction from natural and human-caused hazards.

Public Health, Safety, and Environmental Justice Element: Policy 3.4
Ensure that public facilities and infrastructure have adequate capacity to respond to wildfires and other relevant hazard events.

Action 3.4a: Performance Standards. Apply fire unit deployment performance measures with future planning of fire stations.

Action 3.4b: Emergency Equipment. Consider the long-term maintenance needs of emergency equipment and facilities when developing the annual budget.

Action 3.4c: Storm Drain Capacity. Continue to ensure that existing and new storm drain and street capacities are adequate to manage a 100-year flood event.

Action 3.4d: New Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the VHFHSZ shall be retrofitted to be consistent with the current standards.

Public Health, Safety, and Environmental Justice Element: Goal 4
Maintain adequate emergency preparedness and response capabilities.

Public Health, Safety, and Environmental Justice Element: Policy 4.3
Prepare residential areas for flooding and wildfire.

Action 4.3a: Elevate and Anchor. Educate and encourage property owners in flood zones to elevate and anchor critical utilities, including electrical panels, propane tanks, sockets, wiring, appliances, and heating systems.

Action 4.3b: Sandbags. Implement a sandbag program available for residents in flood zones prior to heavy storms.

Action 4.3c: Fire Safe Communications. Prior to fire season, use outreach events and City communication resources to educate the public on how they can create a defensible space around their place of residence and evacuate in case of fire.

Action 4.3d: Require evacuation assessments on residential projects requiring an Environmental Impact Report in designated wildfire hazard severity zones.

No specific goals address hydrology and water quality in any other Chapter of the City's General Plan.

City of San Bernardino General Plan
The following General Plan policies addressing hydrology and water quality are applicable to the project:

Land Use Element: Goal 2.8
Protect the life and property of residents, businesses, and visitors to the City of San Bernardino from crime and the hazards of flood, fire, seismic risk, and liquefaction.

Housing Element: *Regarding Flood Control issues, the City states: Additional storm drain and flood control facilities… will be needed to convey the increased surface runoff, to protect residential properties not currently protected from 100-year storm flows and surrounding properties. Such will be the individual or joint responsibilities of subdivision developers…. Several watercourses go through the City, including the Santa Ana River, Cajon Creek, Lytle Creek, and numerous canyon drainage courses… However, the City estimates that less than 7% of the total vacant residential land area is affected by environmental constraints.*

Utilities Element: *San Bernardino's planning area encompasses 70 square miles, much of which is paved and impervious to stormwater… Water pollution is of national importance and the federal Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit program to address the problem. The Clean Water Act requires that cities "effectively prohibit non-stormwater discharges into the storm sewers" and "require controls to reduce the discharge of pollutants to the maximum extent practicable." …Flooding is also a very real issue in San Bernardino. We need to be aware of the potential for floods from our mountain canyons and streams and from urban runoff. To prevent flooding of the City, the capacity of the storm drain system must consistently be evaluated and improved as needed."*

Utilities Element: Goal 9.4
Provide appropriate storm drain and flood control facilities where necessary.

Safety Element: Goal 10.4
Minimize the threat of surface and subsurface water contamination and promote restoration of healthful groundwater resources.

Safety Element: Goal 10.5
Reduce urban run-off from new and existing development.

Safety Element: Goal 10.6
Protect the lives and properties of residents and visitors of the City from flood hazards.

Energy and Water Conservation Element: *"It is also important that we control discharges into our waterways to protect our water quality and the integrity of our groundwater. As detailed in the Utilities Element, any new construction and development in the City must comply with several regulations aimed at reducing discharges or runoff into our waterways… New projects must incorporate appropriate Best Management Practices (BMPs) to control the discharge of point source (these are readily identifiable inputs where waste is discharged to the receiving waters from a pipe or drain) and non-point source (discharges that occur over a wide area and are associated with particular land uses, such as urban and agricultural uses) pollutants both during construction and for the life of the project.*

Energy and Water Conservation Element: Goal 13.2
Manage and protect the quality of the City's surface waters and ground water basins.

No specific goals address hydrology and water quality in any other Chapter of the City's General Plan.

4.11.3 Environmental Setting: Hydrology and Water Quality

As an overview of drainage conditions within the project area, there are three major stream or drainage channels within or immediately adjacent to the IVIC Project area. Refer to **Figure 4.11-1**, which shows the major streams and tributaries that discharge to the Santa Ana River. Please note that there are no stream channels that flow through the project area, i.e., from City Creek on the east to Twin Creek/Warm Creek on the west. The most consequential existing channel is the City Creek Bypass channel which flows from City Creek (located just west of Interstate 210 within the project area) across the whole project area to where it exits the project area just north of 3rd Street, west of Tippecanoe Avenue. It then flows west approximately a mile until it intersects with Twin Creek, which flows south to its confluence with the Santa Ana River. The natural City Creek channel forms the eastern boundary of the IVIC Project. It flows southwest approximately 1.5 miles where it also has its confluence with the Santa Ana River. The watershed that contributes surface flows into the City Creek Bypass channel is also shown on **Figure 4.11-2**. North-South streets from Tippecanoe east to Church Avenue in the area convey watershed flows into the Bypass channel, with a small area of the IVIC Project contributing direct flows into City Creek.

4.11.3.1 Surface Runoff and Flooding

The following information regarding drainage and flood hazards that affect the project area is abstracted from a report prepared by JLC Engineering & Consulting, Inc. (JLC Engineering). The

report is titled "Preliminary Hydrology and Channel Design for City Creek By-Pass Channel." A copy of this report is provided in Volume 2, Appendix 8, of this DEIR.

The City Creek By-Pass Channel has been identified by San Bernardino County Flood Control District as a regional channel system that is part of Comprehensive Storm Drain Plan Number 6 (CSDP #6) that was prepared by Exponent Analysis dated August 2001. The purpose of the study is to determine the peak flow rates for the City Creek By-Pass Channel based on the updated land use that has been proposed for the project area.

The channel system was proposed as a trapezoidal concrete-lined channel that had a base width of 40 feet and a depth of 5 feet. CSDP #6 established flow rates that ranged from 878 cubic feet per second at Palm Avenue to 1,618 cubic feet per second at Warm Creek (Twin Creek) Channel which is a soft bottom channel with wire-revetment to control lateral erosion. The existing By-Pass Channel does not have the capacity to convey runoff from the tributary area due to the undersized culverts that exist along the existing channel alignment. The existing runoff from the area drains in the east to west direction. The major streets that are located in the north to south direction behave like interceptor channels for surface runoff generated within the watershed. These streets convey runoff towards the City Creek By-Pass Channel. The overall tributary area (watershed) encompasses approximately 1,750 acres and has been illustrated in **Figure 4.11-2** along with the City Creek By-Pass Channel. The City Creek Bypass channel design encompasses both the City of San Bernardino and the City of Highland.

JLC Engineering examined the existing and planned land uses for the overall area that is tributary to City Creek By-Pass Channel. JLC Engineering performed hydrology analyses that evaluated the land uses in the 1,750-acre watershed area. The hydrology analyses focused on developing flow rates at four nodal points at the following locations:

1. Victoria Avenue and City Creek By-Pass Channel (Node 108)
2. Sterling Avenue and City Creek By-Pass Channel (Node 109)
3. Tippecanoe Avenue and City Creek By-Pass Channel (Node 110)
4. Warm Creek Channel and City Creek By-Pass Channel (Node 111)

These nodal points were used to perform comparison analyses with the flow rate values used in CDSP #6.

Using the most current rainfall and other project area hydrology data available (please refer to pages 2, 3 and 4 of the Preliminary Hydrology study), the stormwater runoff was modeled for the City Creek By-Pass Channel. The Hydrology Map in Exhibit A of the Preliminary Hydrology Study summarizes the parameters used in the hydrology model (**Figure 4.11-3**). Table 4.11-1 shows the peak flow rate and time of concentration based on the rational method hydrology. The Preliminary Hydrology study provides a separate table (Table 4.11-2) comparing the current flow rates developed as part of the study to the flow rates identified in the CSDP #6 Hydrology Map.

Table 4.11-1
PEAK FLOW RATE AND TIME OF CONCENTRATION

Location	100-Year Flow Rate (ft^3/s)	Time of Concentration (min)
Node 108	1,277	35.34
Node 109	1,277	46.08
Node 110	1,478	54.95
Node 111	1,477	63.61

Table 4.11-2
COMPARATIVE ANALYSIS BETWEEN FLOW RATES

Location	100-Year Flow Rate (ft^3/s)	CSDP #6 100-Year Flow Rate (ft^3/s)
Node 108	1,363	1,338
Node 109	1,363(1)	1,351
Node 110	1,637	1,591
Node 111	1,637(2)	1,618

Notes:
(1) The hydrology model flow rate at Node 109 is 1271 ft^3/s. Use upstream flow rate since the value is greater than the downstream flow rate.
(2) The hydrology model flow rate at Node 111 is 1615 ft^3/s. Use upstream flow rate since the value is greater than the downstream flow rate.

Based on the hydrology analyses performed for the watershed area tributary to City Creek By-Pass Channel, the flow rates developed for the study are within 2% to 3% of the flow rates developed for the CSDP #6 Study. JLC Engineering concluded that the CSDP #6 Study used land use assumptions that are similar to the land use assumptions that were part of the City of San Bernardino General Plan, City of Highland General Plan, and the IVDA Proposed Land Use Plan at buildout.

The current drainage infrastructure within the project area has not yet been modified to accommodate future runoff. The existing 100- and 500- year flood hazard zones are shown in **Figures 4.11-4 and 4.11-5.** The only flood hazard zone within the IVIC area is the immediate City Creek Bypass channel. In most cases surface runoff flows travel along north-south roadway shoulders in the IVIC and enter into the City Creek By-Pass Channel through culverts with insufficient capacity. To meet future flow demand, new drainage infrastructure will need to be installed.

4.11.3.2 Groundwater Resources

The following information is abstracted from the 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan (RUWMP) Final report.[1] This document evaluates the various water supply resources for the general area, with a focus on the San Bernardino Basin Area (SBBA). The SBBA traditionally refers to two groundwater basins: the Bunker Hill and Lytle Creek basins. The following information focuses on the groundwater resources of the east San Bernardino Valley. Refer to **Figure 4.11-12**, which shows the groundwater basins in the San Bernardino area.

The SBBA was defined by and adjudicated in gross by the Western Judgment in 1969. The SBBA has a surface area of approximately 140.6 square miles and lies between the San Andreas and San Jacinto faults. The basin is bordered on the northwest by the San Gabriel Mountains and Cucamonga fault zone; on the northeast by the San Bernardino Mountains and San Andreas fault zone; on the east by the Banning fault and Crafton Hills; and on the south by a low, east facing escarpment of the San Jacinto fault and the San Timoteo Badlands. Alluvial fans extend from the base of the mountains and hills that surround the valley and coalesce to form a broad, sloping alluvial deposit lain in the central part of the valley. The SBBA encompasses the Bunker Hill

[1] Valley District, 2021. 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan. https://www.sbvwcd.org/~documents/route%3A/download/3811/ (accessed 05/09/24)

subbasin (8-02.07 defined by DWR and also includes a small portion of the Yucaipa Basin (8-02.08) and Rialto-Colton Basin (8-02.04) as defined by DWR. The SBBA also encompasses surface water.

The SBB was adjudicated under the Western Judgment, which generally provides for the following:

- A determination of safe yield of the San Bernardino Basin Area (SBBA),
- Establishment 64,872 acre-feet rights that can be extracted from the SBBA by plaintiff parties. This is equal to 27.95 percent of safe yield,
- An obligation of San Bernardino Valley Municipal Water District (Valley District) to replenish any extractions from SBBA by non-plaintiffs in aggregate in excess of 167,228 acre-feet(equal to 72.05 percent of safe yield),
- An obligation of Western to replenish the Colton and Riverside Basins if extractions for use in Riverside County in aggregate exceed certain specific amounts, and
- An obligation of Valley District to replenish the Colton and Riverside basins if water levels are lower than certain specific water level elevations in specified wells.

The SBBA is primarily recharged from infiltration of surface runoff from the San Bernardino and San Gabriel Mountains. The Santa Ana River, Mill Creek and Lytle Creek deliver approximately 60% of annual recharge to the Basin. Lesser contributions are supplied by Cajon Creek, San Timoteo Creek, and the intervening creeks flowing southward from the San Bernardino Mountains (such as City Creek). In addition, the Basin is also replenished by deep percolation of water from direct precipitation, percolation from imported water, and surface runoff percolated at spreading grounds.

Total groundwater storage capacity of the Bunker Hill Basin is estimated to be 5,976,000 acre-feet. Groundwater depth varies from greater than 100 feet downstream of the Seven Oaks Dam to rising groundwater at the San Jacinto Fault. This fault runs perpendicular (north to south) to the groundwater flow direction in the Bunker Hill Basin which is generally southwest. It functions as a partial groundwater barrier that causes the groundwater to rise on the east side of the fault. Recent borings (2018 by Southern California Geotechnical for the Eastgate facility at the Airport) determined groundwater levels to be below 50 feet (“Geotechnical Investigation Proposed Eastgate Building 1”) based on four boring logs at this site. This sets a minimum depth to groundwater for the IVIC Project area in general.

4.11.3.3 Water Quality

There is no specific data regarding groundwater quality beneath the project site since there are no known groundwater wells functioning within the project area. Although not directly indicative of actual groundwater quality beneath the project area, the East Valley Water District obtains the majority of its water supply from wells within the SBBA. Appendix 9 of Volume 2 to this DEIR indicates that the overall water quality (which includes treatment at certain locations) from SBBA groundwater wells meets the current federal and state drinking water quality standards (“2022 Consumer Confidence Report”). There are known locations within the SBBA (including the SBIA, former Norton Air Force Base) that contain contaminated plumes of groundwater. Most of these are from volatile organic compounds, such as TCE and PCE, but there is also some residual pollution from historic farming practices in the SBBA. No contaminated plumes are known to underlie the project area.

Information regarding the Santa Ana Regional Board’s water quality designations for the general project area are provided below. The Santa Ana River is divided into “reaches” which begin where

the River discharges into the Pacific Ocean. The project area is located in Reach 5 which extends from Seven Oaks Dam to the City of San Bernardino to the San Jacinto fault (Bunker Hill Dike), which marks the downstream edge of the Bunker Hill groundwater basin. With the exception of periods of precipitation or snowmelt, Reach 5 of the Santa Ana River channel is dry. The Regional Board has designated the following Beneficial Uses (Refer to Tables 4.11-3 and 4.11-4) for Reach 5: MUN, AGR, GWR, REC1, REC2, WARM, WILD and RARE. Similar information is provided for Twin (Warm) Creek (valley floor). The City Creek Bypass channel is not identified in the list of surface water bodies assigned Beneficial Uses. The Beneficial Uses identified for the Bunker Hill Basins are: MUN, AGR, IND, and PROC. Table 4.11-5 lists the Water Quality Objectives for Reach 5.

Table 4.11-3
IDENTIFICATION OF RECEIVING WATERS

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Warm Creek	No data	REC1, REC2, WARM, WILD	Santa Ana River RARE designation is closest
Santa Ana River, Reach 5	None Listed	MUN, AGR, GWR, REC1, REC2, WARM, WILD, and RARE	Occurs within Reach 5

Table 4.11-4
ABBREVIATION DEFINITIONS FOR BENEFICIAL USES

Abbreviation	Definition and Use
MUN	Municipal and Domestic Supply waters are used for community, military, municipal or individual water supply system. These uses may include, but are not limited to, drinking water supply.
IND	Industrial Service Supply waters are used for industrial activities that do not depend primarily on water quality. These uses may include, but are not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well pressurization.
PROC	Industrial Process Supply waters are used for industrial activities that depend primarily on water quality. These uses may include, but are not limited to, process water supply and all uses of water related to produce manufacture or food preparation.
AGR	Agricultural Supply waters are used for farming, horticulture or ranching. These uses may include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.
GWR	Groundwater Recharge waters are used for natural or artificial recharge of groundwater for purposes that may include, but are not limited to, future extractions, maintaining water quality, or halting saltwater intrusion into freshwater aquifers.
REC1	Water Contact Recreation waters are used for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfacing, whitewater activities, fishing, and use of natural hot springs.
REC2	Non-Contact Water Recreation waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
WARM	Warm Freshwater Habitat waters support warm water ecosystems that may include, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.
COLD	Cold Freshwater Habitat waters support cold water ecosystems that may include, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

Abbreviation	Definition and Use
WILD	Wildlife Habitat waters that support terrestrial ecosystems including, but not limited to, preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.
RARE	Rate, Threatened or Endangered Species waters that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under State or Federal law as rare, threatened or endangered.
SPWN	Spawning, Reproduction and/or Early Development waters that support high quality aquatic habitats suitable for reproduction and early development of fish and wildlife.

Source: Basin Plan, Chapter 3

Table 4.11-5 lists the Water Quality Objectives for Reach 5 of the River. Numeric objectives have not been established for Warm Creek; Basin Plan narrative objectives apply. Numeric objectives have not been established for City Creek Bypass; therefore, it is assumed that the narrative objectives apply for this stream channel. The Water Quality Objectives for the Bunker Hill "A" Ground Water Management Zone are as follows: TDS = 310 milligrams per liter (mg/L) and Nitrate as Nitrogen = 2.7 mg/L. Twin (Warm) Creek is not identified in the list of impaired surface water bodies and the Santa Ana River, Reach 5 has no known listed water quality impairment.

Table 4.11-5
WATER QUALITY OBJECTIVES FOR WATER BODIES WITHIN OR DOWNSTREAM OF THE IVIC PROJECT AREA

Watershed / Stream Reach	Total Dissolved Solids (mg/L)	Hardness (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Total Inorganic Nitrogen (mg/L)	Sulfate (mg/L)	Chemical Oxygen Demand (mg/L)
Santa Ana Reach 5	300	190	30	20	5	60	25

4.11.4 Thresholds Of Significance

According to Appendix G of the CEQA Guidelines and the Initial Study Checklist, a project would normally have a significant effect on the environment if the project would:

HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or rive or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation onsite or offsite.
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,
(iv) Impede or redirect flood flows?

HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

4.11.5 Methodology

Technical reports were prepared to analyze drainage impacts of the proposed project within the project area and surrounding environment. The analyses were prepared in accordance with the San Bernardino County Flood Control District Hydrology Manual. Hydraulic analyses were performed for the pre-project and post-project channel to determine the pre-project and post-project flooding limits. The County's Hydrology Manual was used to develop the hydrological parameters for the unit hydrograph analyses, and the calculations were performed using the computer program developed by Civil CADD/Civil Design. Broader scope hydrology issues (such as flood hazards and existing water quality) were evaluated based on review of the two City General Plans and the Regional Board's Santa Ana River Basin Water Quality Control Plan.

4.11.6 Environmental Impacts

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

City Creek Bypass Channel Design

The City Creek By-Pass Channel is a proposed regional storm drain system that has been identified by County of San Bernardino Comprehensive Storm Drain Plan Number 6 (CSPD #6). The channel system is a proposed trapezoidal channel. CSPD #6 established flow rates that ranged from 878 ft^3/s at Palm Avenue to 1,618 ft^3/s at Warm Creek Channel. The proposed channel is located along the existing City Creek By-Pass Channel which is a soft bottom channel with wire-revetment to control lateral erosion. The existing channel does not have the capacity to convey the runoff from the tributary area due to the undersized culverts that existing along the existing channel alignment. The existing runoff from the area drains in the east to west direction. The major streets that are located in the north to south direction behave like interceptor channels. These major streets convey the runoff towards City Creek By-Pass Channel. The overall tributary area is approximately 1,750 acres and has been illustrated in **Figure 4.11-4** along with the City

Creek By-Pass Channel. The City Creek By-Pass Channel project is located in the City of San Bernardino and the City of Highland.

A preliminary design for the City Creek By-Pass Channel has been developed and is discussed as par to the "Preliminary Hydrology & Channel Design for City Creek By-Pass Channel" prepared by JLC Engineering & Consulting, dated April 2020 (Appendix 8, Volume 2). The proposed solution will implement a trapezoidal channel with a soft bottom with a base width of 36 feet. There are two alternatives that are proposed two line the channel side slopes with Concrete or Rip-Rap, see sections below.

Exhibit 4.11-1
SECTION A-A: CONCRETED LINED SIDE SLOPES AND EARTHEN BOTTOM

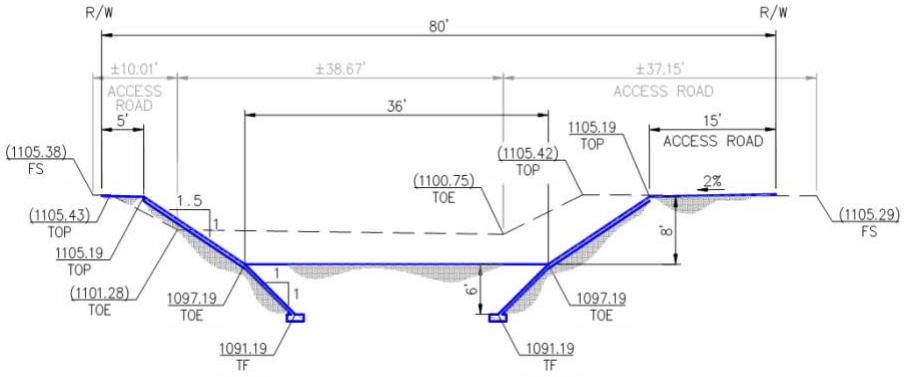
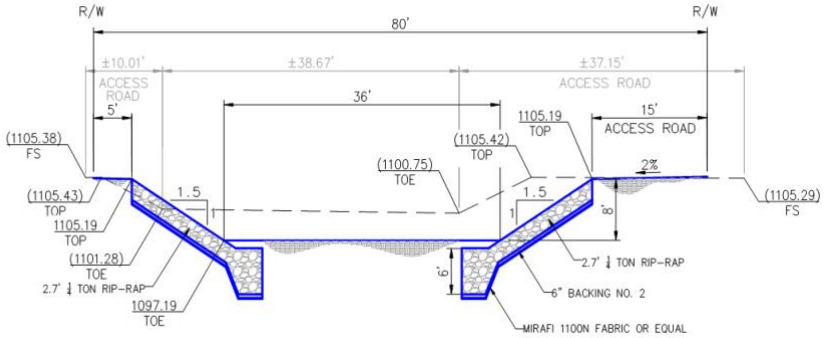


Exhibit 4.11-2
SECTION B-B: RIP-RAP LINED SIDE SLOPES AND EARTHEN BOTTOM



The City Creek By-Pass Channel has a total length of approximately 14,500 from the existing Warm Creek Concrete Channel to Victoria Avenue. The proposed project is recommended to phase the improvements into 3 phases of work. The construction of the channel must commence at the downstream end, at Warm Creek Concrete Channel, and continue upstream towards Victoria Avenue. The progression of work is important since the facility along the downstream reaches must have capacity to accept the flow rates identified by the CSPD #6. The phases of work are shown in **Figure 4.11-5**. The following is a description of each phase:

City Creek By-Pass Phase 1 (Warm Creek Channel to Tippecanoe)
City Creek By-Pass Phase 1 will include 3 culvert crossings and 4,000 feet of channel improvements. The Phase 1 project must be the first stage of construction work to ensure the

system has the capacity to intercept the 100 year flows. At this time the existing culverts do not have capacity.

City Creek By-Pass Phase 2 (Tippecanoe to Sterling)
City Creek By-Pass Phase 2 will include 3 culvert crossings and 5,000 feet of channel improvements. The Phase 2 project will be a secondary stage of work after Phase 2 is completed. The major construction challenge is the culvert crossing 3rd Street , just west of Sterling Avenue.

City Creek By-Pass Phase 3 (Sterling to Victoria)
City Creek By-Pass Phase 3 will 5,400 feet of channel improvements. Within Phase 3, a future bridge is proposed to space the City Creek By-Pass Channel at the intersection of 3rd Street and Sterling Avenue. The Phase 3 project will be the final stage of work after Phase 2.

Once the 3 Phases of City Creek By-Pass Channel are completed, the channel will be in compliance with County of San Bernardino Comprehensive Storm Drain Plan Number 6 which is the master drainage plan for the regional area.

Topic Organization

The following Topic categorizes the proposed Project activities into two groups in some cases, and in others categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed. For issues HYD-2 and HYD-3(i-iv), the proposed Project activities are analyzed as two groups. The first category, the **City Creek Bypass Channel, Roadway Improvements & Sewer Installation**, includes facilities proposed under the IVIC Project that occur within existing rights-of-way. In this case, the rights-of-way (ROW) include the channel ROW and the road ROW within and adjacent to which the roadway improvements would occur, and within which the sewer improvements would occur. The second category is the **EVWD Well Development and Reservoir**, which would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones. Thus, these two categories are analyzed separately as the impacts from the facilities therein can be characterized as similar and comparable based on the types of facilities proposed.

4.11.6.1 Impact Analysis

HYD-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The only three sources of potential water quality degradation from the project area are: stormwater runoff that will transport non-point source pollutants from future development within the IVIC Project area; random accidental discharges of pollutants that reach the channels that carry surface runoff; and the discharge of domestic wastewater from future development within the IVIC Project area. The IVIC Project is not planned to generate substantial wastewater, as no land use projects that would generate wastewater are proposed. In the area, domestic wastewater and will be delivered to a wastewater treatment plant for treatment. Any point source industrial wastewater will be evaluated and pretreatment may be required prior to discharge to the sewer collection system. Wastewater is presently delivered to the San Bernardino Municipal Water Department's (Department) Water Reclamation Plant (WRP) and polished in the Department's RIX facility located in Colton. The WRP/RIX discharges currently meet the current waste discharge requirements imposed by the Santa Regional Water Quality Control Board. Thus, if any wastewater is generated by IVIC Project area discharges, it will not result in substantial

degradation of surface or groundwater quality or violate any standards or waste discharge requirements. For a more detailed discussion of this issue refer to Section XVIII of this document.

The East Valley Water District's Sterling Natural Resource Center wastewater treatment plant is also operational. This WRP captures most, if not all, of the municipal wastewater discharges from the City of Highland portion of the IVIC Project in the future. It is assumed that this WRP will meet waste discharge requirements that will be imposed by the Regional Board once it is in operation. Thus, no violation of water quality standards or waste discharge requirements is forecast to result from the future discharge of domestic wastewater to the SNRC. This assumption is based on the fact that the Regional Board will enforce discharge requirements and prevent and correct any violations at either treatment facility.

Accidental discharges are random events that require immediate attention to minimize the damage to the environment, including water quality downstream of an accidental spill. Most spills are small and local and can be remediated (removed from the environment to a level that meets regulatory standards) with local means. Since the IVIC Project area has so few streams and streams rarely carry surface water in the non-winter months (particularly Reach 5 of the Santa Ana River), the potential for transport of accidentally released surface pollution is considered low. This does not mean that a rare event cannot cause widespread contamination, but the potential for this to occur is generally low within the project area with existing modern rules and regulations regarding reporting and addressing accidental spills as quickly as possible. No mitigation is proposed or required to address this issue due to the existing response capabilities within the two cities and the County within the IVIC Project area.

As described above, stormwater runoff from individual property is considered non-point source runoff and reducing pollution in this source of water pollution has been the focus of water quality management agencies since 1991. Pollutants of concern that are expected to be incorporated into the stormwater runoff include sediment/turbidity, nutrients (fertilizers); organic compounds (especially herbicides and pesticides), oxygen demanding substances, trash, and bacteria and viruses (often generated from animal fecal matter). The discharges of stormwater runoff from the onsite stormwater management facilities and treatment units will be directed south to the City Creek Bypass channel; then west to the Twin (Warm) Creek channel; and finally, to the Santa Ana River. The future stormwater discharges to the watershed have a potential to degrade water quality or to contribute to violations of water quality standards in the downstream surface water bodies and watershed.

The proposed IVIC Project would be required to implement the water quality standards and Best Management Practice (BMP) design guidelines as outlined in the Technical Guidance Manual (TGM) for Water Quality Management Plans for San Bernardino County. Meeting this mandatory requirement will address the current Water Quality Management Plan (WQMP) requirements established by the Santa Ana Regional Water Quality Control Board's Order No. R8-210-0036. It should be noted that the Project will implement updated technical permits that are approved during final engineering. The TGM requires projects to treat runoff emanating from future proposed developments in order to treat constituents and contaminants that may cause water quality degradation downstream at receiving waters identified by the Regional Board. The BMPs that will be implemented by future IVIC infrastructure projects will minimize or eliminate the degradation of surface and groundwater by implementing infiltration or biofiltration basin based BMPs as outlined in the TGM.

In order to meet the current and future Municipal Separate Stormwater Sewer (MS4) stormwater quality discharge requirements, the future developers will be required to install treatment systems

(Best Management Practices) as identified in the preceding evaluation. **MM HYD-1** is provided to ensure that during construction the Storm Water Pollution Prevention Plan (SWPPP) will be implemented to control any discharges from the site to minimize potential water quality degradation during this stage of development. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed. The structural and operational BMPs identified in the TGM are incorporated by reference as mandated in the TGM. The future construction and occupancy activities will require permits (SWPPP and WQMP) to meet water quality requirements (State and County, as outlined above). The proposed IVIC Projects may result in some soil erosion during drilling, demolition, and other such construction activities. There may be individual infrastructure projects that would disturb only a small area (less than one acre) wherein a Storm Water Pollution Prevention Plan (SWPPP) is not required. However, the in this case, the Implementing Agency would implement Best Management Practices (BMPs) during construction, which will be enforced by **MM HYD-3.** As each specific development proposal is submitted for approval in the future in accordance with IVIC Project, it must implement the components of the project-specific WQMP that applies.

During construction a variety of BMPs are available to control generation of sediment and control of any pollutant discharges (trash and petroleum substances) from a site under construction greater than one acre. These prospective BMPs include: silt fencing, sand bags, fiber rolls, spray-on hydroseed cover, mulch, housekeeping measures to control trash and any accidental spills during construction, and small sediment basins that can contain runoff from areas under active construction. **MM HYD-1** will ensure implementation of adequate BMPs during construction through implementation of a project specific SWPPP, ensuring that stormwater discharges from the project site during construction activities will be controlled to a level that do not violate any water quality standards or substantially degrade water quality at the time in the future when the proposed project is implemented.

Based on implementing the short- and long-term BMPs in a manner that will minimize or eliminate potential cumulative contributions of pollutants to future surface water discharges, the proposed IVIC Project can be implemented without causing substantial degradation of surface or groundwater quality downstream of the project site. This includes implementation of the long-term BMPs that can control discharges of pollutants that could cumulatively contribute to the identified impairments in downstream receiving waters, including nutrients, pathogens, and pesticides.

During periods when water is being stored in the infiltration basins or bioretention basins, it is essential that these surface water bodies be managed in a manner to sustain both water quality objectives. This can be achieved through the preparation of an Infiltration Basin / Bioretention Basin Management Plan that shall establish ongoing management actions required to achieve these applicable water quality standards. Typical management actions can include oxygenation of the water body; control of sediment accumulation; and control of nutrients flowing into the basin to minimize the potential for a basin to support vectors. With implementation of the mitigation identified above, it will be feasible to meet water quality standards at the time each proposed site-specific project is implemented in the future and this can be accomplished without causing substantial degradation of onsite or downstream water quality or violation of any water quality or public health standards. Therefore, the potential impact under this issue is considered **less than significant with mitigation**.

Mitigation Measures:

HYD-1 ***The Implementing Agency shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for individual Projects over one acre in size, which specifies Best Management Practices that will be implemented to prevent construction pollutants from contacting stormwater and with the performance standard of keeping all products of erosion from moving offsite. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction to control urban runoff to the maximum extent practicable based on available, feasible best management practices. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit and NPDES No. CAS618033, Order No. R8-210-0036 for projects within San Bernardino County or the permit in place at the time of construction.***

HYD-2 ***The Project-Specific Water Quality Management Plan (WQMP) which defines infiltration basins (open space basins or subsurface), bioretention basins and treatment units as permanent Best Management Practices shall be implemented for individual Projects to prevent long-term surface runoff from discharging pollutants from site on which construction has been completed. The WQMP shall be implemented with the goal of achieving a reduction in pollutants following construction to control urban runoff pollution to the maximum extent practicable based on available, feasible best management practices at the time of construction. The stormwater discharge from the project site shall be treated to control pollutant concentrations for all pollutants, but especially for those identified pollutants that impair downstream surface water quality (Santa Ana River) at the time construction occurs. Source Control BMPs reduce the potential for urban runoff and pollutants from coming into contact with one another. Source Control BMPs that may be incorporated into the project are described in County's TGM.***

HYD-3 ***The Implementing Agency shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the Implementing Agency include the following:***

- ***The use of silt fences or coir rolls;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

Level of Significance After Mitigation: Less than Significant

MM HYD-1 is provided to ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential water quality degradation during this stage of development, thereby minimizing construction related potential for water quality violations

to a level of less than significant. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational water quality violation potential to a level of less than significant. Further, where individual projects are less than one acre, **MM HYD-3** would require implementation of BMPs during construction that would minimize the potential for water quality violations to a level of less than significant. Thus, impacts would be less than significant through the implementation of mitigation.

HYD-2 Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

The IVIC Project would develop more pervious surface than exists at present through construction of expanded roadway capacity, though the improvements proposed to City Creek Bypass Channel and sewer installation would not substantially contribute pervious surface area beyond that which exists at present. The Project is located within the SBB. The groundwater depth is around 50 feet below the ground surface and is not anticipated to be encountered during construction of the Project. Because the proposed project would mostly be located within existing roadways and adjacent to roadways within the IVIC Project boundaries, or within the existing footprints of area infrastructure, as would be the case for the City Creek Bypass Channel, it is not anticipated that the modifications to pervious surface area within the IVIC Project area would substantially interfere with groundwater recharge. As these components do not propose to extract groundwater from the underlying groundwater basin, it is not anticipated that the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would decrease groundwater supplies. Therefore, the City Creek Bypass Channel, Roadway Improvements & Sewer Installation are not anticipated not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Therefore, impacts under this issue are considered less than significant and no mitigation is required.

EVWD Well Development and Reservoir

The proposed EVWD Well Development and Reservoir Projects would not deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). The proposed well would extract water from the San Bernardino Basin (SBB) portion of the Upper Santa Ana Valley Basin. The San Bernardino Basin (SBB), labeled the “San Bernardino Basin Area” in the Judgment, was adjudicated in gross, by the Western-San Bernardino Judgment (Western Judgment) in 1969. The Western Judgment calculated the natural safe yield of the SBB to be 232,100 AF per year (AFY) for all extractions, including surface water diversions and groundwater pumping. Surface water is diverted from Mill Creek, Lytle Creek, and the Santa Ana River.

EVWD’s water supply consists primarily of groundwater from wells in the western portion of the service area. These wells, in the SBB, supply approximately 80% of the total water supply. In addition to groundwater, EVWD provides treated surface water from the Santa Ana River and the State Water Project. EVWD produced 15,169 acre feet (AF) of groundwater from the SBB in 2020, and estimates that groundwater will make up 10,257 AF of its supply in 2025, and up to 12,035 AF in 2045, with alternative sources of supply making the difference to meet the District’s demand. Refer to the 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water

Management Plan.[2] Between 2013 and 2022, EVWD utilized 15-16 wells for its groundwater production with the annual production ranging from 12,702 to 18,289 AFY during this period. To ensure its annual pumping rights and water demands continue to be met, EVWD proposes to install the proposed Well No. 129. As the proposed well would enable pumping within EVWD's pumping rights, it is not anticipated that the proposed well would substantially decrease groundwater supplies in the SBB. Further, the proposed Reservoir would provide storage for water within EVWD's pumping rights, and would not require direct groundwater extraction.

The well is not designed to interfere with any private wells located within the same aquifer. However, since pumping tests will not be conducted until the proposed well is completed, the following mitigation measure shall be implemented by the District to ensure that other wells within this local aquifer do not incur a significant adverse impact from pumping the proposed well.

Ultimately, through implementation of **MM HYD-4**, the potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin would be reduced to less than significant.

Mitigation Measures:

HYD-4 ***The District shall conduct a pump test of the new well and determine whether any other wells are located within the cone of depression once the well reaches equilibrium. If any private wells are adversely impacted by future groundwater extractions from the proposed well, the District shall offset this impact through provision of water service; or adjusting the flow rates or hours of operation to mitigate adverse impacts.***

Level of Significance After Mitigation: Less than Significant

MM HYD-4 would require a pump test on the new well to ensure that a cone of depression does not occur as a result of pumping the new well that could impact nearby wells. Through the implementation of this mitigation, the potential for substantially decrease groundwater supplies or interfering substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin would be reduced to less than significant.

HYD-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or rive or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation onsite or offsite?

The IVIC Project area is not within a 100-year flood hazard area (refer to **Figures 4.11-6 and 4.11-7**) and within the local watershed the stormwater runoff flows from the north to the south, ultimately discharging into the City Creek Bypass Channel or directly into the Twin Creek/Warm Creek channel. As shown on **Figures 4.11-8 and 4.11-10**, the City Creek Bypass channel is identified as being within the 100-year flood hazard area. Although the future infrastructure required to convey flows to the channel have not yet been installed, the IVIC Project will implement the requisite build-out of the drainage system to accommodate existing and future flows. The future storm drain system within the IVIC Project area is identified in the Comprehensive Storm

[2] San Bernardino Valley Municipal Water District, 2021. 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan. https://www.sbvwcd.org/our-projects/upper-santa-ana-integrated-regional-water-management-plan/ (accessed 05/08/24)

Drain Plan (CSDP) No. 6. The CSDP No. 6 is a master drainage plan design concept that was prepared by the San Bernardino County Public Works-Flood Control Planning Division. **Figures 4.11-8 through 4.11-10** contain annotations describing the future drain facilities as developed by Mr. Castaneda, and illustrate the proposed channel design. The purpose of the master drainage plan is to provide a storm drain infrastructure solution to resolve potential flooding issues for the regional area based on a built-out land use condition as shown within the General Plans approved by the cities of Highland and San Bernardino. The storm drain infrastructure identified in CSDP No. 6 have been designed to do the following:

- Perpetuate flow patterns similar to the existing condition.
- Recommend storm drain systems to provide local flood protection for a 100-year storm event.
- Collect runoff through the use of the recommended storm drain facilities and deliver runoff to downstream flood control regional channel systems that have been designed to convey runoff for a 100-year storm event.
- The CSDP No. 6 provides the required storm drain system to collect and direct flows to adequately sized flood control channels.

The "Preliminary Hydrology and Channel Design for City Creek By-Pass Channel" study prepared by JLC Engineering & Consulting, Inc. ("JLC", see Appendix 8 of Volume 2 to this DEIR) documents the volume of storm water runoff from full development of the IVIC Project area is essentially the same as originally forecast. Thus, in addition to installation of onsite drainage management systems and adjacent offsite drainage system conveyance facilities (**MM HYD-2)**, the IVIC Project will require that the City Creek Bypass Channel be completed over the planning horizon of the IVIC Project. The IVIC Project will require the implementation of the 6-C1-00 identified in the CSDP#6 to provide flood protection for the IVIC area. Refer to **Figures 4.11-11 and 4.11-12** which identify the City Creek Bypass channel as 6-C1-00. It should be noted that the City of Highland has commenced the Plan, Specification and Estimate (PS&E) process for the Victoria Storm Drain Improvement plans which ties into the City Creek Bypass channel. The Victoria Storm Drain is equivalent to 6-C1-06 identified in CSDP#6. The Victoria Storm Drain is located along Victoria Avenue and commences at 3rd Street on the south and terminates at 9th Street. The storm drain varies in size from a 4'x8' reinforced concrete box (RCB) to a 48" diameter storm drain. This system will resolve flooding for the regional area that will benefit the IVIC area by intercepting flows that emanate from a drainage area east of Victoria Avenue.

To ensure the City Creek Bypass Channel can be constructed in a timely manner, the IVDA will coordinate with the cities and County Flood Control District to complete the channel based on the JLC design or a comparable design contained in the "Preliminary Hydrology" report. As this is part of the IVIC Project's purpose, no mitigation is necessary to ensure that the City Creek Bypass Channel improvements are implemented. Through implementation of **MMs HYD-1** through **HYD-3**, combined with the flat topography of the IVIC and permeable soils, the impacts relating to soils and erosion onsite or downstream of future development will be less than significant with mitigation.

Mitigation Measures: ***MMs HYD-1 through HYD-3*** *are required to minimize impacts under this issue to a level of less than significant.*

Level of Significance After Mitigation: Less than Significant

MM HYD-1 is provided to ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential alteration of the existing drainage

pattern of the site or area in a manner that would result in substantial erosion or siltation onsite or offsite, thereby minimizing construction related potential for erosion or siltation impacts to a level of less than significant. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational alteration of the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation onsite or offsite potential to a level of less than significant. Further, where individual projects are less than one acre, **MM HYD-3** would require implementation of BMPs during construction that would minimize the potential for alteration of the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation onsite or offsite to a level of less than significant. Thus, impacts would be less than significant through the implementation of mitigation.

HYD-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?

EVWD Well Development and Reservoir

The proposed EVWD Well Development and Reservoir could alter the existing drainage patterns at each project site. It is not known whether the well and reservoir will be installed within developed sites or within sites that are vacant and undeveloped. However, given the small area (less than one half acre for the well, and less than 1-2 acres for the reservoir) within which the proposed EVWD Well Development and Reservoir will be installed, it is not anticipated that substantial changes in drainage would occur. The construction of proposed facilities would require activities such as pavement breaking, ditching, drilling, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns, and could ultimately provide flooding on- or off-site without preventative measures in place. Compliance with the construction general permit (CGP), Stormwater Pollution Prevention Plan (SWPPP), or San Bernardino and Riverside Counties MS4 Permits (Water Quality Management Plan, WQMP) where applicable would be required; these plans would ensure that drainage and stormwater will not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

However, as stated under question c(i) above, given the small size of the site in which the well would be developed, mitigation to enforce best management practices (BMPs) is provided below to minimize impacts at sites that are less than an acre and are therefore not subject to the CGP or SWPPP. Each of these permits and plans would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets. With implementation of such BMPs, compliance with conditions of required permits governing storm water runoff from construction sites, and retention of runoff on site where feasible, the potential for on- or off-site flooding would be reduced to less than significant levels and discharges from construction sites would not exceed the capacity of existing storm water drainage systems. Impacts would be less than significant with mitigation incorporated.

During operation of the proposed EVWD Well Development and Reservoir, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Implementation of drainage improvements within future IVIC Project infrastructure sites and as a part of the overall IVIC Project during construction will ensure that, during operation, on- and off-

site flooding is minimized to a less than significant level. Mitigation is required to minimize the potential for significant changes to the drainage patterns on- and off-site.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Impacts would be the same as those identified under Project Category 1. However, development of roadway improvements and sewer installation within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for flooding on- or off-site. Further, development of the City Creek Bypass Channel improvements would contribute to a positive update in the drainage system that, once installed, would contribute to enhancing the area drainage capacities and overall drainage management. Refer to the Preliminary Hydrology Report prepared by JLC Engineering (Appendix 8), which substantiates this finding. As a result of these drainage improvements, operational impacts would be less than significant. Implementation of drainage improvements within future IVIC Project infrastructure sites and as a part of the overall IVIC Project during construction will ensure that, during operation, on- and off-site flooding is minimized to a less than significant level. However, mitigation is required to minimize the potential for significant changes to the drainage patterns on- and off-site.

Mitigation Measures: ***MMs HYD-1 through HYD-3*** *are required to minimize impacts under this issue to a level of less than significant.*

Level of Significance After Mitigation: Less than Significant

MM HYD-1 is provided to ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential alteration of the existing drainage pattern of the site or area in a manner that would result in substantially increasing the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite, thereby minimizing construction related potential for substantially increasing the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite to a level of less than significant. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational alteration of the existing drainage pattern of the site or area in a manner that would result in substantially increasing the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite to a level of less than significant. Further, where individual projects are less than one acre, **MM HYD-3** would require implementation of BMPs during construction that would minimize the potential for alteration of the existing drainage pattern of the site or area in a manner that would substantially increasing the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite to a level of less than significant. Thus, impacts would be less than significant through the implementation of mitigation.

HYD-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or rive or through the addition of impervious surfaces, in a manner which would:

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,

EVWD Well Development and Reservoir

Impacts would be the same as those discussed under questions c(i) and c(ii) above. Mitigation is required to address the potential for IVIC Project infrastructure facilities to create or contribute

runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation
Impacts would be the same as those discussed under questions c(i) and c(ii) above. Mitigation is required to address the potential for IVIC Project infrastructure to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Development of Roadway Improvements & Sewer Installation would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for exceeding the capacity of local stormwater drainage systems.

Mitigation Measures: ***MMs HYD-1 through HYD-3*** *are required to minimize impacts under this issue to a level of less than significant.*

Level of Significance After Mitigation: Less than Significant

MM HYD-1 is provided to ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential alteration of the existing drainage pattern of the site or area in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, thereby minimizing construction related potential for creation or contribution of runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff to a level of less than significant. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational alteration of the existing drainage pattern of the site or area in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff to a level of less than significant. Further, where individual projects are less than one acre, **MM HYD-3** would require implementation of BMPs during construction that would minimize the potential for alteration of the existing drainage pattern of the site or area in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff to a level of less than significant. Thus, impacts would be less than significant through the implementation of mitigation.

HYD-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or rive or through the addition of impervious surfaces, in a manner which would:

(iv) Impede or redirect flood flows?

EVWD Well Development and Reservoir
Impacts would be the mostly the same as those discussed under questions c(i), c(ii), and c(iii) above.

Mitigation is required to address the potential for IVIC Project infrastructure facilities to ensure that adequate drainage is developed within future IVIC Project infrastructure sites, which would minimize the potential for the project to impede or redirect flows as drainage within a new site will be managed efficiently.

IVIC Project infrastructure, including the EVWD Well Development and Reservoir, may have the potential to impact flows if placed above ground within 100-year floodplains, of which only minimal areas in which these facilities would be installed have been classified as such. Because the site specific locations of the EVWD Well Development and Reservoir are not presently known, it is not possible to evaluate all of the potential impacts related to EVWD Well Development and Reservoir implementation to impede or redirect flows, particularly within known flood hazard areas. Direct impacts to related to flood flows will be assessed through site review and evaluation on a project-by-project basis, after project specifics are known. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) maps for the area (will facilitate evaluation of future projects proposed under IVIC Project as they are considered. With this in mind, to reduce potential impacts to a less than significant level, mitigation is outlined, with specific performance standards, that can be implemented to offset or compensate for both the temporal and permanent impacts that might impede or redirect flood flows as a result of future projects associated with the IVIC Project.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

The construction activities associated with subsurface facilities, such as sewer installation, as well as the installation of roadway improvements and the installation of the City Creek Bypass Channel improvements, could temporarily impact flows and would require coordination with County Flood Control and other applicable regulatory agencies before implementation if proposed facilities cross or are within jurisdictional waters or adjacent to flood control channels and easements. Further, development of the City Creek Bypass Channel improvements would contribute to a positive update in the drainage system that, once installed, would contribute to enhancing the area drainage capacities and overall drainage management. The City Creek Bypass Channel conveys flows within the 100 year flood zone, but improvements thereof would not impede or redirect flows such that flooding potential would be exacerbated. Refer to the Preliminary Hydrology Report prepared by JLC Engineering (Appendix 8), which substantiates this finding. As a result of these drainage improvements, operational impacts would be less than significant. Implementation of drainage improvements within future IVIC Project infrastructure sites and as a part of the overall IVIC Project during construction will ensure that, during operation, the potential for flood flows to be impeded or adversely redirected is minimized to a less than significant level.

All other impacts would be the same as those discussed under questions c(i), c(ii), and c(iii) and as those discussed above under **EVWD Well Development and Reservoir**. Given development of Roadway Improvements & Sewer Installation would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, the potential for a given project to impede or redirect flows would be minimized to a level of insignificance.

*Mitigation Measures: **MM HYD-2** is required to minimize the potential for IVIC Project infrastructure facilities to impede or redirect flows in addition to **MM HYD-5** provided below.*

HYD-5 ***The EVWD shall verify that the Well Development and Reservoir are located outside of the 100-year floodplain by utilizing the FEMA FIRM panels for the selected area prior to project implementation. If the well and/or reservoir are located outside of the 100-year floodplain, then no subsequent CEQA documentation specific to floodplains are required. However, if the well and/or reservoir are located within the 100-year floodplain either (1) a new location outside of the 100-year floodplain shall be selected, or (2) a second tier CEQA evaluation shall be completed that would address the given project's location within the 100-year floodplain.***

Level of Significance After Mitigation: Less Than Significant

During project design, overland flows and drainage at each IVIC infrastructure facility would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the San Bernardino County MS4 Permits, as required by **MM HYD-2**. This would ensure no increase in offsite discharges would occur and no substantial increased potential for impeding or redirecting flood flows would occur. Impacts would be less than significant with mitigation.

There are only a few locations within the 100-year floodplain that could be impacted by an above ground IVIC Project (refer to **Figures 4.11-6 and 4.11-7**). However, as the locations for the EVWD Well Development and Reservoir have not yet been selected, **MM HYD-5** would ensure that future IVIC infrastructure projects located within a floodplain would be further evaluated to determine their potential to impede or redirect flood flows.

HYD-4 Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

IVIC Project infrastructure, including the EVWD Well Development and Reservoir, may have the potential to impact flows if placed above ground within 100-year floodplains, of which only minimal areas in which these facilities would be installed have been classified as such. Because the site specific locations of the EVWD Well Development and Reservoir are not presently known, it is not possible to evaluate all of the potential impacts related to an individual IVIC Project infrastructure facility's potential to impede or redirect flows, though there are relatively few flood hazard zones in the project area. Direct impacts to related to flood flows will be assessed through site review and evaluation on a project-by-project basis, after project specifics are known. The FEMA FIRM maps (06071C8682J, 06071C8701J, 06071C8702H)[3] will facilitate evaluation of the EVWD Well Development and Reservoir as they are considered. With this in mind, to reduce potential impacts to a less than significant level, mitigation is outlined, with specific performance standards, that can be implemented to offset or compensate for both the temporal and permanent impacts that might impede or redirect flood flows as a result of future projects associated with the IVIC Project.

Regarding flood risk, the City Creek Bypass Channel is located within a delineated 100-year flood zone, as it conveys area stormwater runoff. The improvements to the City Creek Bypass Channel would improve overall drainage and minimize flood hazards in the IVIC Project area, and beyond, such that risk of release of pollutants would be minimized to a level of less than significant. The roadway and sewer improvements would not significantly alter the drainage or flood hazards of the project area, and therefore would not be anticipated to increase the risk of release of pollutants due to project inundation.

Based on the Safety elements of both City General Plans, the IVIC Project area is not subject to either tsunami or seiche risks because there is no large body of water in the vicinity of the project area to generate either type of event. The IVIC Project area could be subject to flood hazards associated with the failure of the Seven Oaks Dam. The area subject to such failure is identified on **Figure 4.11-11** (Figure S-2) of the San Bernardino General Plan and it encompasses the IVIC Project area. According to the both General Plans, the dam was designed to resist an earthquake

[3] FEMA, 2024. FEMA Flood Map Service Center: Search By Address. https://msc.fema.gov/portal/search?AddressQuery=san%20bernardino%20international%20airport (accessed 07/23/24)

measuring 8.0 on the Richter scale. This fact, combined with the further assumption that the water stored would be at a maximum makes the potential for dam inundation an extremely low probability event. Finally, most pollutants, including hazardous materials, would be stored inside of structures and the potential for pollutants or contaminants to be incorporated and transported due to inundation is considered to be a less than significant impact.

*Mitigation Measures: **MM HYD-5** is required to minimize the potential for IVIC Project infrastructure facilities to risk release of pollutants as a result of inundation.*

Level of Significance After Mitigation: Less Than Significant

There are only a few locations within the 100-year floodplain that could be impacted by an above ground IVIC Project (refer to **Figures 4.11-6 and 4.11-7**). However, as the locations for the EVWD Well Development and Reservoir have not yet been selected, **MM HYD-5** would ensure that future IVIC infrastructure projects located within a floodplain would be further evaluated to determine their potential to increase the risk of release of pollutants due to project inundation.

HYD-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project site is located in the Upper Santa Ana Valley Basin, SBB, which has been designated very low priority by the Sustainable Groundwater Management Act (SGMA). The project is located in the Upper Santa Ana River Watershed. The SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins and requires GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California. The SGMA "requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline."[4] The SBB was adjudicated under the Western Judgment, which generally provides for the following:

- A determination of safe yield of the San Bernardino Basin Area (SBBA),
- Establishment 64,872 acre-feet rights that can be extracted from the SBBA by plaintiff parties. This is equal to 27.95 percent of safe yield,
- An obligation of San Bernardino Valley Municipal Water District (Valley District) to replenish any extractions from SBBA by non-plaintiffs in aggregate in excess of 167,228 acre-feet(equal to 72.05 percent of safe yield),
- An obligation of Western to replenish the Colton and Riverside Basins if extractions for use in Riverside County in aggregate exceed certain specific amounts, and
- An obligation of Valley District to replenish the Colton and Riverside basins if water levels are lower than certain specific water level elevations in specified wells. [5]

As previously stated, between 2013 and 2022, EVWD utilized 15-16 wells for its groundwater production with the annual production ranging from 12,702 to 18,289 AFY during this period. To ensure its annual pumping rights and water demands continue to be met, EVWD proposes to install the proposed Well No. 129. As the proposed well has been identified as necessary to meet future demand in EVWD's planning documents and would enable pumping within EVWD's

[4] California Department of Water Resources (DWR), 2024. Sustainable Groundwater Management Act (SGMA) https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management (accessed 02/12/24)
[5] Valley District, 2021. 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan. https://www.sbvwcd.org/~documents/route%3A/download/3811/ (accessed 05/09/24)

pumping rights, and given that EVWD must comply with the Western Judgment, the proposed installation of an extraction well within the SBB would not result in a conflict with the SGMA. The storage of water in the reservoir would require an initial fill of up to 1.5 MG, and this too would fall within EVWD's existing water rights. Thus, it is not anticipated that the proposed EVWD and Well Developmen under the IVIC Project would have a significant potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Furthermore, by controlling water quality during construction and operations through implementation of both short- and long-term best management practices through the implementation of mitigation, no violations of water quality control plans would occur as a result of implementation of any of the IVIC Project infrastructure.

Mitigation Measures: ***MMs HYD-1 through HYD-3*** *are necessary to reduce impacts under this issue to a level of less than significant.*

Level of Significance After Mitigation: Less than Significant

MM HYD-1 is provided to ensure that during construction the SWPPP will be implemented to control any discharges from the site to minimize potential water quality degradation during this stage of development, thereby minimizing construction related conflicts with water quality control plans to a level of less than significant. **MM HYD-2** is also identified to ensure that the project-specific WQMP will be implemented in a manner comparable to that identified for the watershed, which would minimize operational conflicts with water quality control plans to a level of less than significant. Further, where individual projects are less than one acre, **MM HYD-3** would require implementation of BMPs during construction that would minimize the potential for conflicts with water quality control plans to a level of less than significant. Thus, impacts would be less than significant through the implementation of mitigation.

4.11.7 Mitigation Measures

The following mitigation measures shall be implemented in conjunction with future IVIC Projects.

HYD-1 ***The Implementing Agency shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for individual Projects over one acre in size, which specifies Best Management Practices that will be implemented to prevent construction pollutants from contacting stormwater and with the performance standard of keeping all products of erosion from moving offsite. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction to control urban runoff to the maximum extent practicable based on available, feasible best management practices. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit and NPDES No. CAS618033, Order No. R8-210-0036 for projects within San Bernardino County or the permit in place at the time of construction.***

HYD-2 ***The Project-Specific Water Quality Management Plan (WQMP) which defines infiltration basins (open space basins or subsurface), bioretention basins and treatment units as permanent Best Management Practices shall be implemented for individual Projects to prevent long-term surface runoff from discharging pollutants from site on which construction has been completed. The WQMP shall be implemented with the goal of achieving a reduction in pollutants following construction to control urban runoff pollution to the maximum extent practicable based on available, feasible best management practices at the time of construction. The stormwater discharge from the project site shall be treated to control pollutant concentrations for all pollutants, but***

especially for those identified pollutants that impair downstream surface water quality (Santa Ana River) at the time construction occurs. Source Control BMPs reduce the potential for urban runoff and pollutants from coming into contact with one another. Source Control BMPs that may be incorporated into the project are described in County's TGM.

HYD-3 ***The Implementing Agency shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the Implementing Agency include the following:***

- ***The use of silt fences or coir rolls;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

HYD-4 ***The District shall conduct a pump test of the new well and determine whether any other wells are located within the cone of depression once the well reaches equilibrium. If any private wells are adversely impacted by future groundwater extractions from the proposed well, the District shall offset this impact through provision of water service; or adjusting the flow rates or hours of operation to mitigate adverse impacts.***

HYD-5 ***The EVWD shall verify that the Well Development and Reservoir are located outside of the 100-year floodplain by utilizing the FEMA FIRM panels for the selected area prior to project implementation. If the well and/or reservoir are located outside of the 100-year floodplain, then no subsequent CEQA documentation specific to floodplains are required. However, if the well and/or reservoir are located within the 100-year floodplain either (1) a new location outside of the 100-year floodplain shall be selected, or (2) a second tier CEQA evaluation shall be completed that would address the given project's location within the 100-year floodplain.***

4.11.8 Cumulative Impacts

The proposed Project has been evaluated as having a less than significant potential to cause significant flood hazards and a less than significant potential to substantially degrade water quality onsite and downstream with implementation of the preceding mitigation measures. Due to the small size of the watershed that contributes to the City Creek Bypass Channel, the fact that all other new projects in the watershed will have to comply with SWPPP and WQMP requirements or otherwise implement BMPs to minimize violations of water quality, the potential for significant hydrology or water quality impacts would be less than significant with implementation of the proposed stormwater management design, as outlined in the Preliminary Hydrology Study. The City Creek Bypass Channel improvements, when combined with the above mitigation measures, would ensure that future stormwater runoff after development of the project site is not forecast to

make a cumulatively considerable contribution to downstream flood hazards and/or water quality degradation in the Santa Ana River Watershed. This conclusion is based on the findings that the proposed mitigation and design measures will not substantially increase runoff from the IVIC Project area and will provide adequate attenuation of water pollutants in runoff from this Project area so as not to make a cumulatively considerable contribution to the runoff volume or water pollution within the local watershed and more broadly within the downstream Santa Ana River and watershed as a whole. Thus, cumulative hydrology and water quality impacts are less than significant.

4.11.9 Significant and Unavoidable Impacts

As determined above, through the implementation of mitigation, no significant and unavoidable impacts relating to hydrology or water quality will occur as a result of implementing the IVIC.

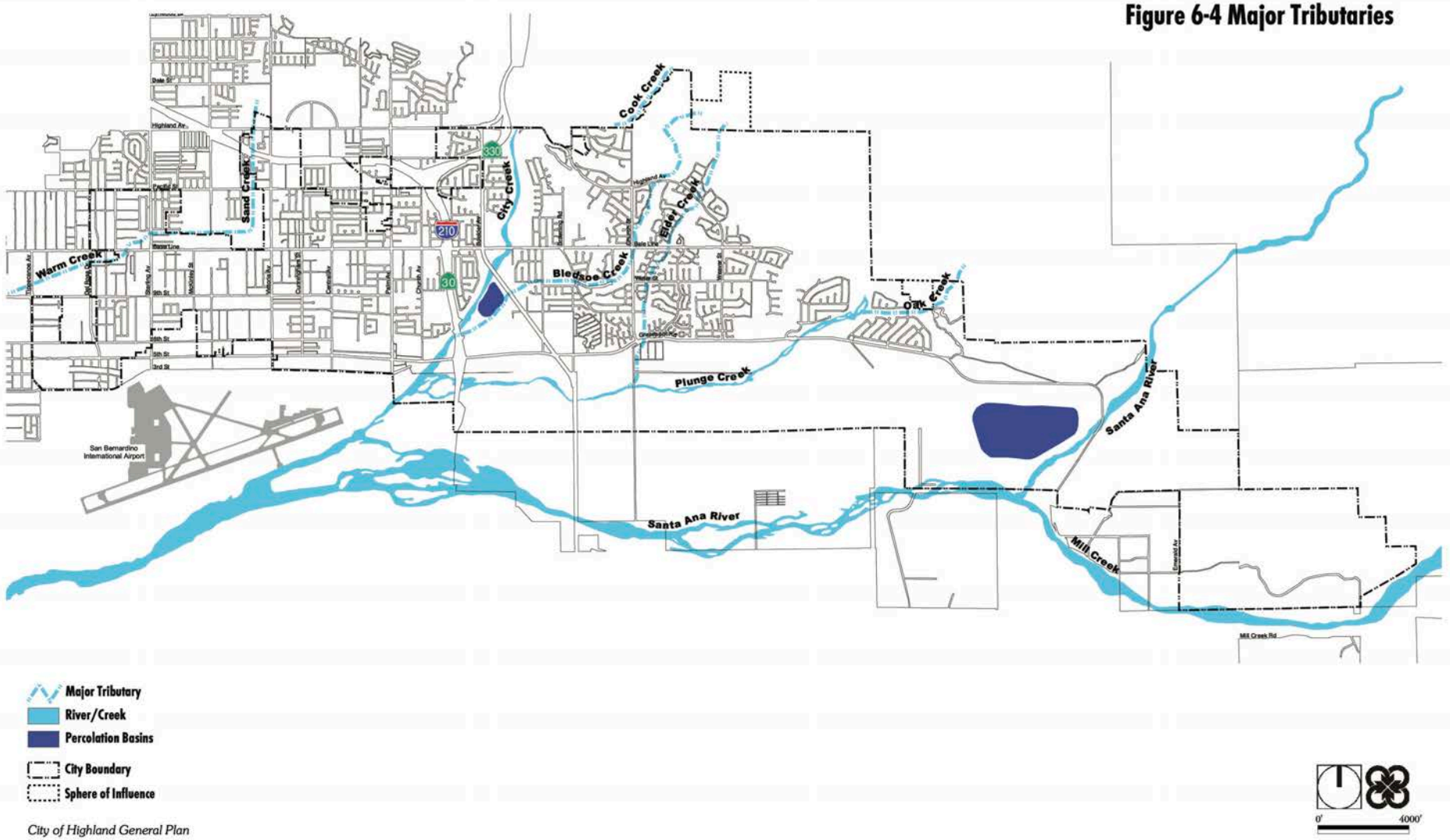


FIGURE 4.11-1

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Environmental Consultants

Major Tributaries

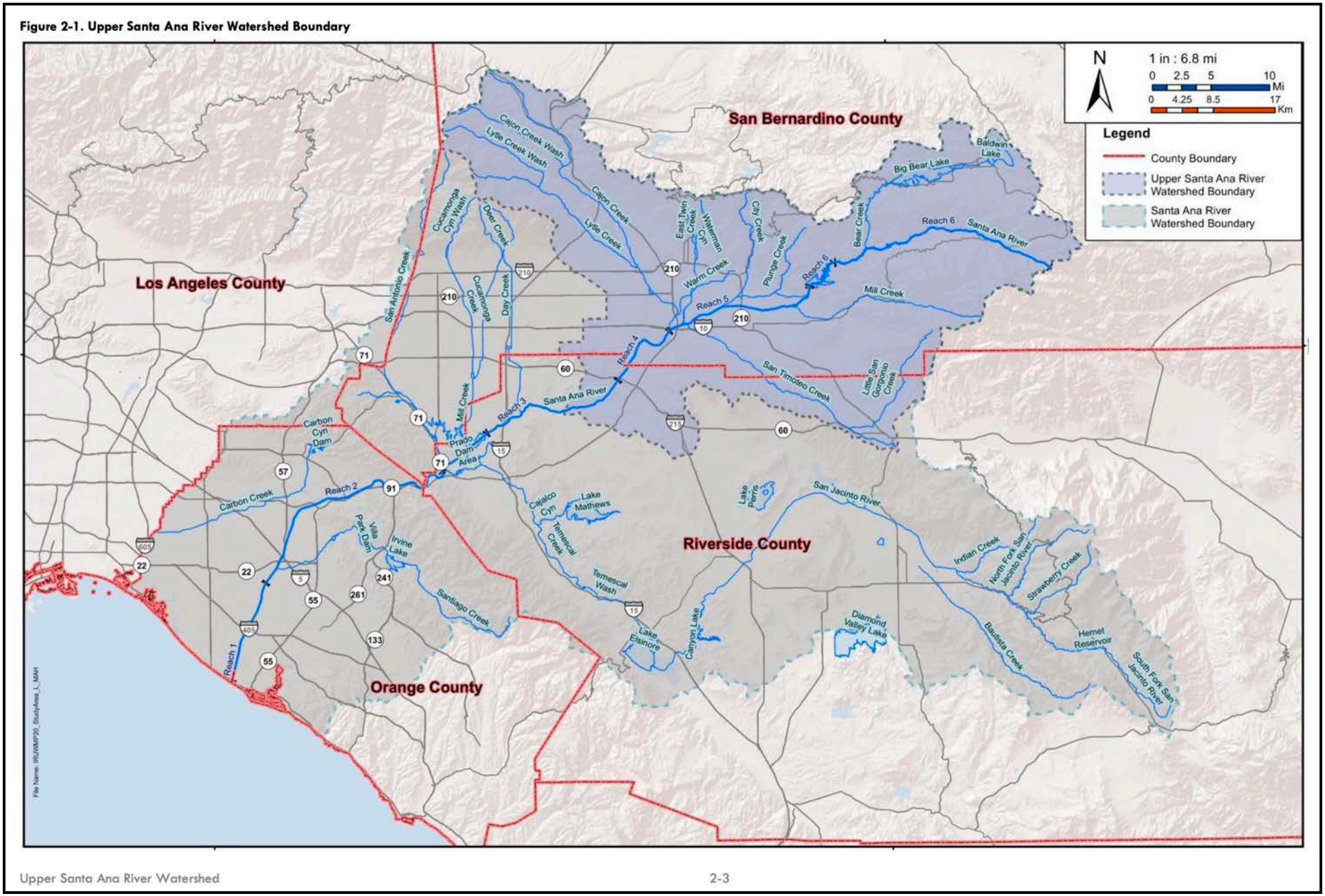

FIGURE 4.11-2

Tom Dodson & Associates
Environmental Consultants

Upper Santa Ana River Watershed Boundary

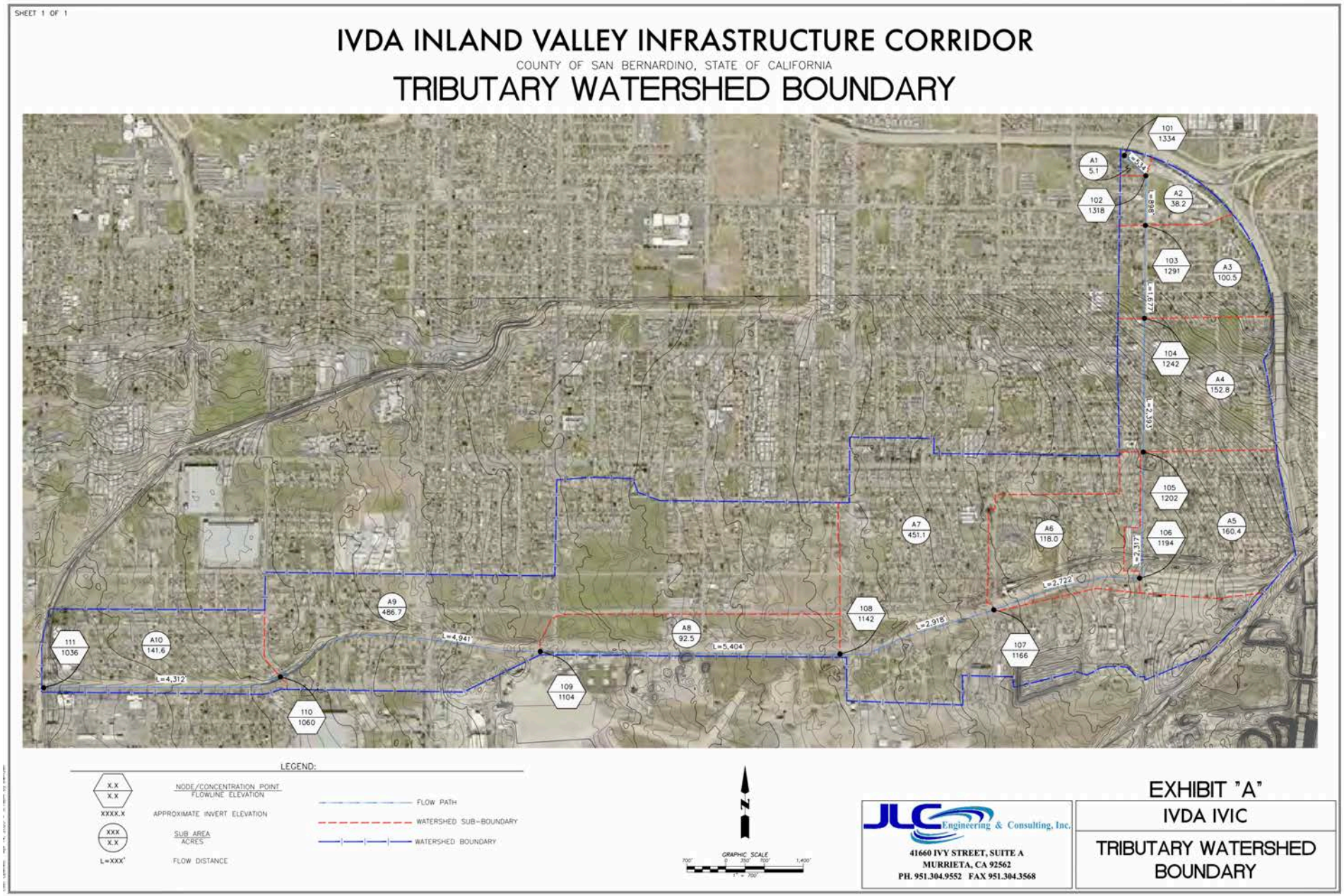

FIGURE 4.11-3

Tom Dodson & Associates
Environmental Consultants

IVIC Tributary Watershed Boundary for City Creek Bypass Channel

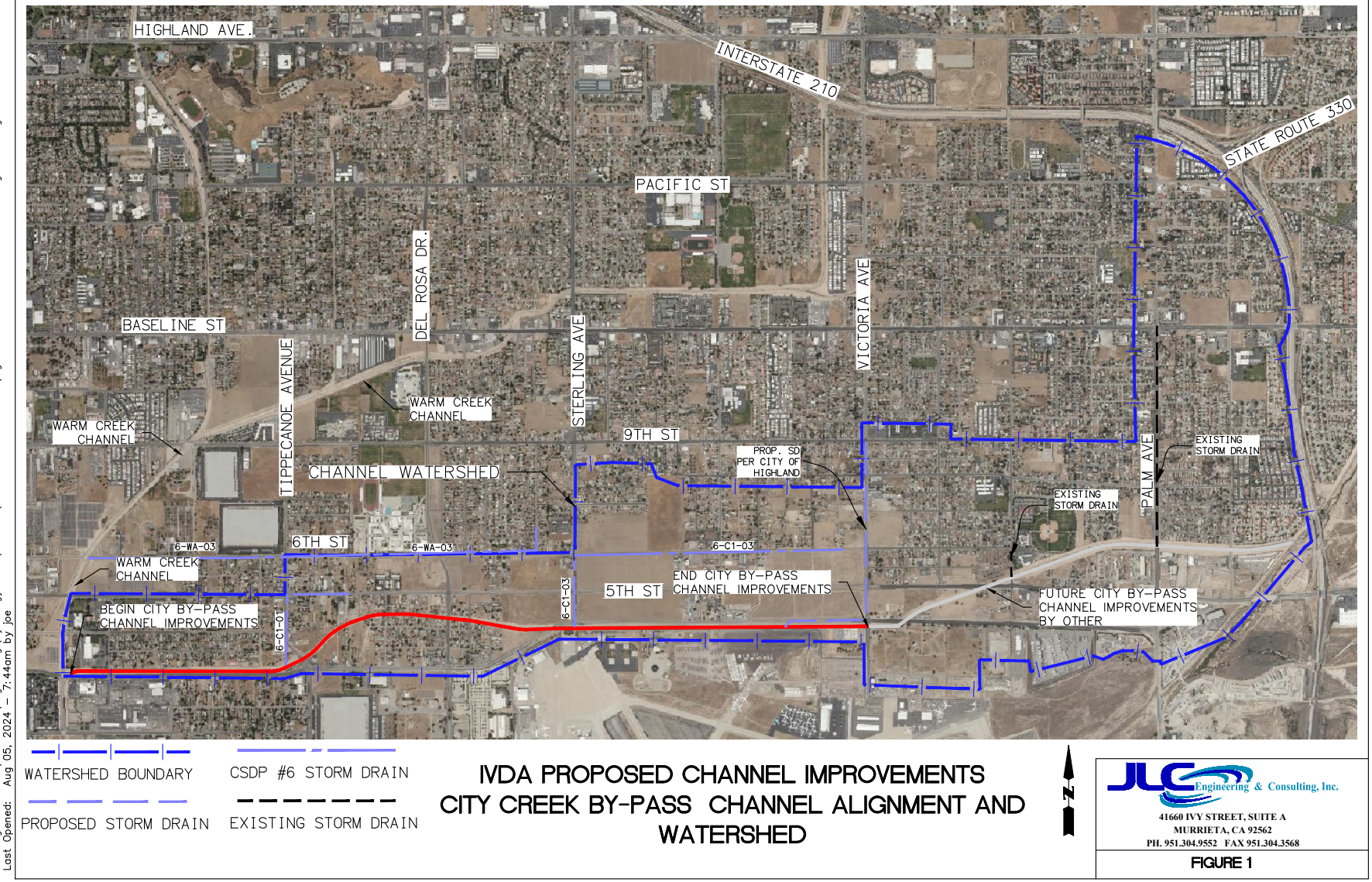

FIGURE 4.11-4

Tom Dodson & Associates
Environmental Consultants

Proposed Channel Improvements

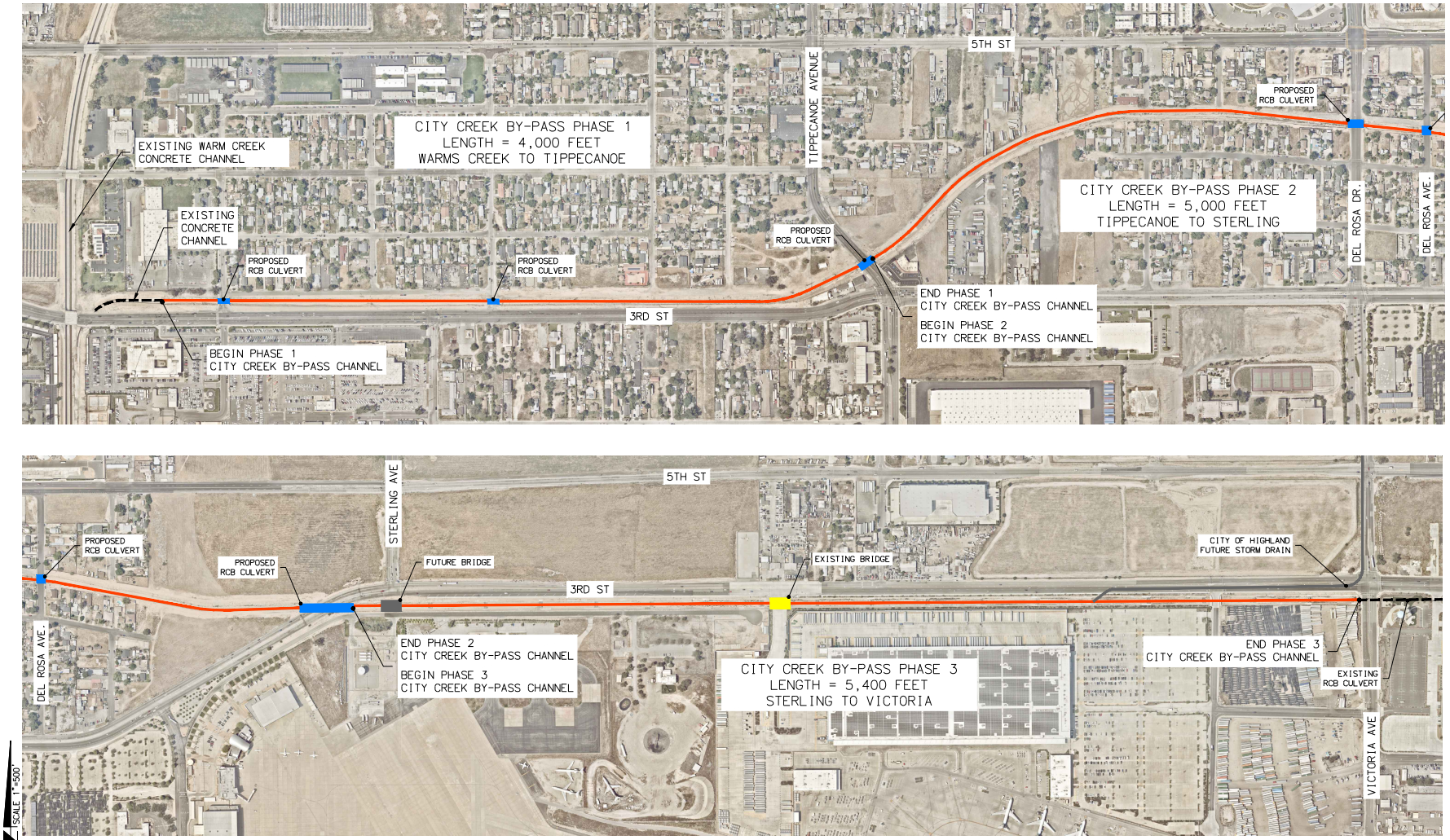

FIGURE 2 - CITY BY-PASS CHANNEL PHASING PLAN

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

FIGURE 4.11-5

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Phasing Plan

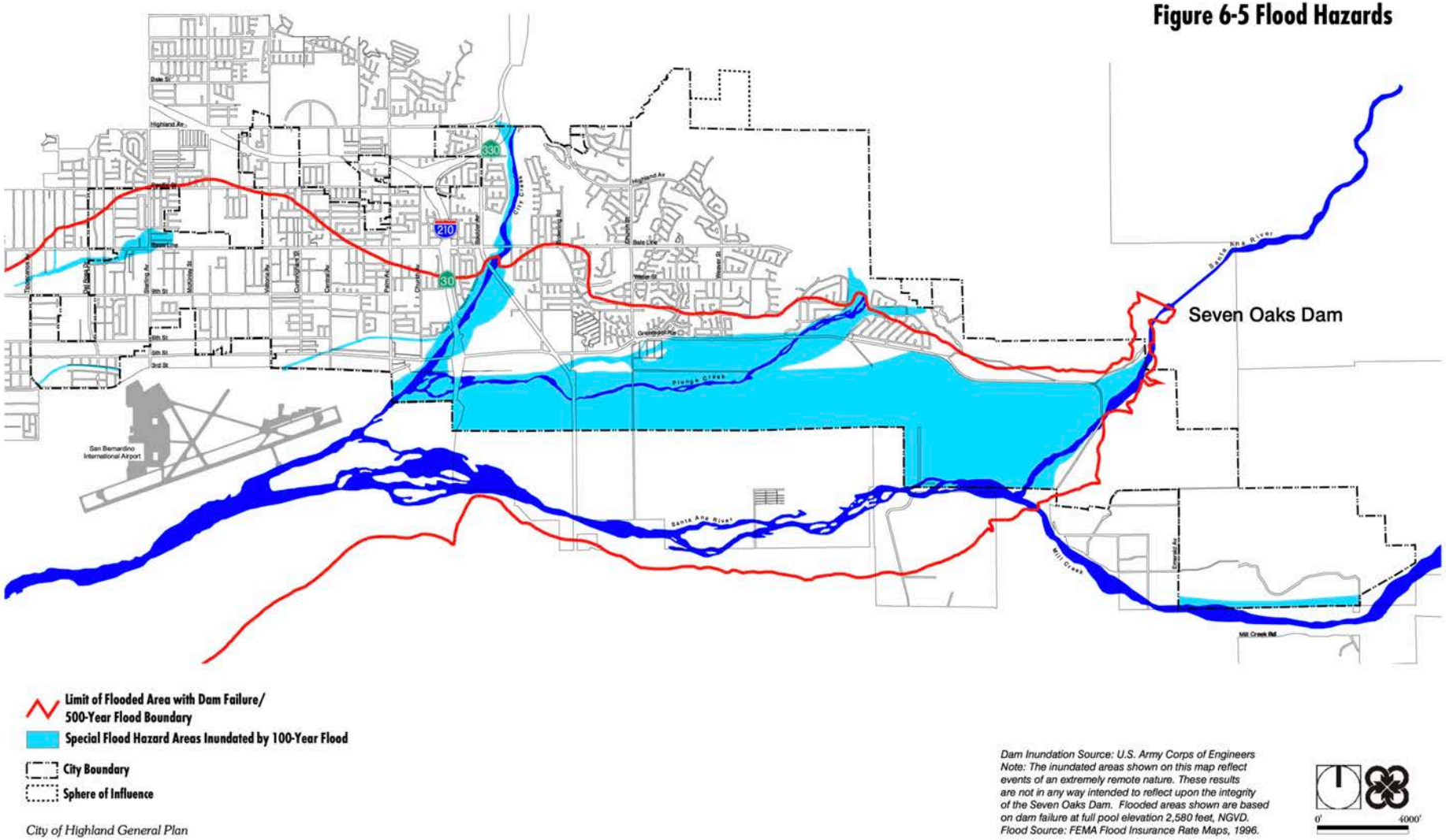

FIGURE 4.11-6

Tom Dodson & Associates
Environmental Consultants

City of Highland Flood Hazards Map

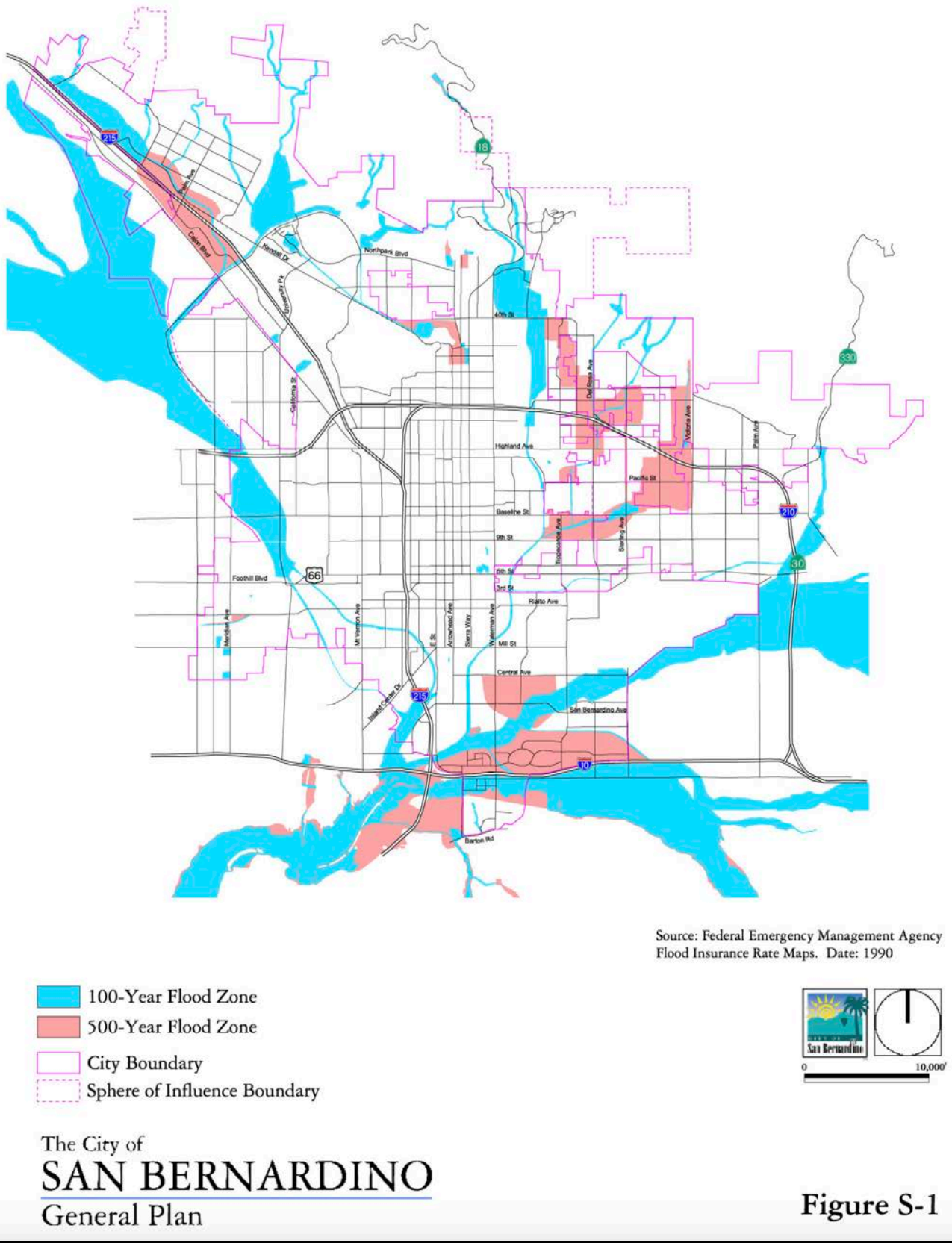

FIGURE 4.11-7

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Environmental Consultants

San Bernardino Flood Plain Map

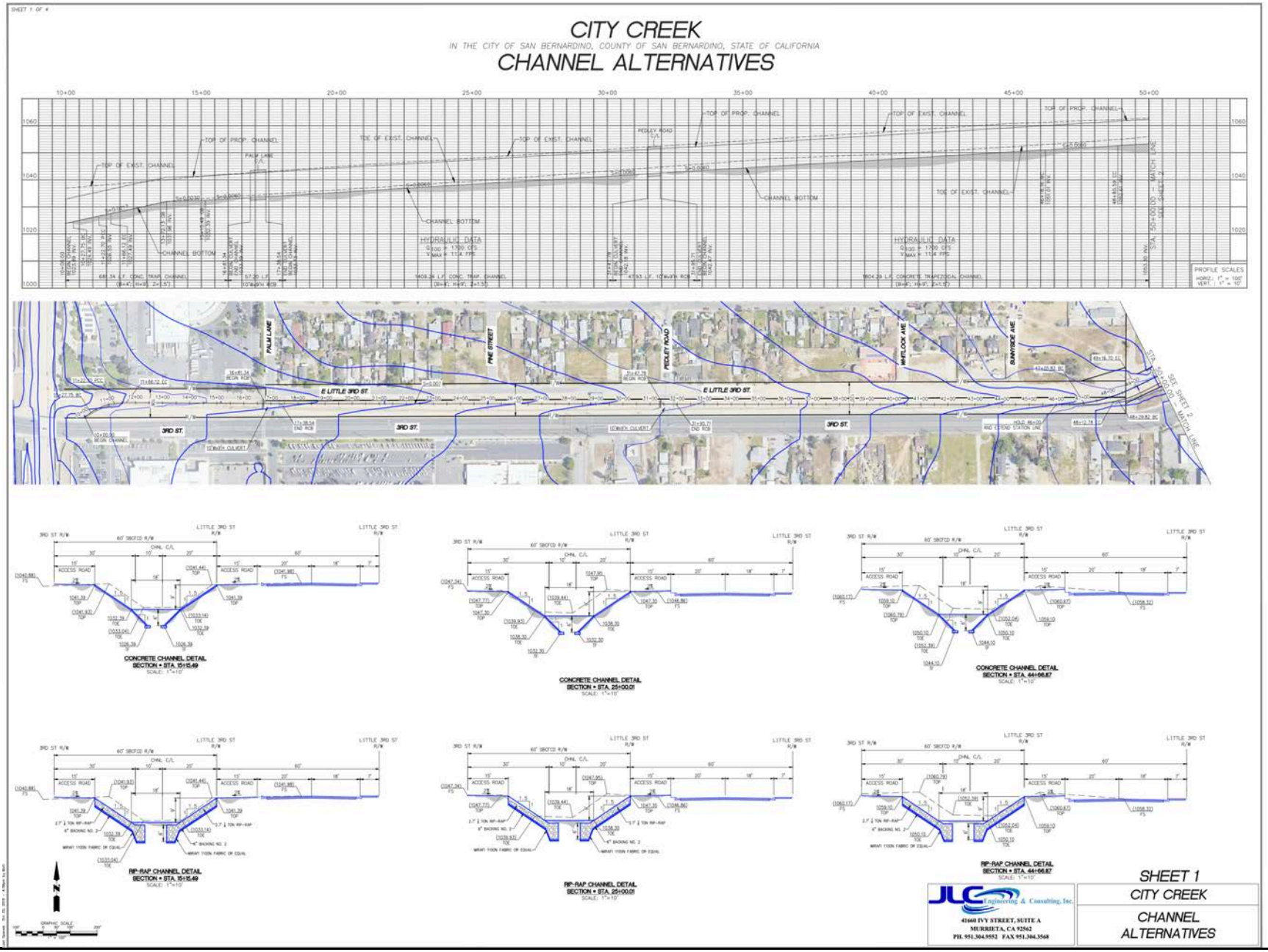


FIGURE 4.11-8

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternatives

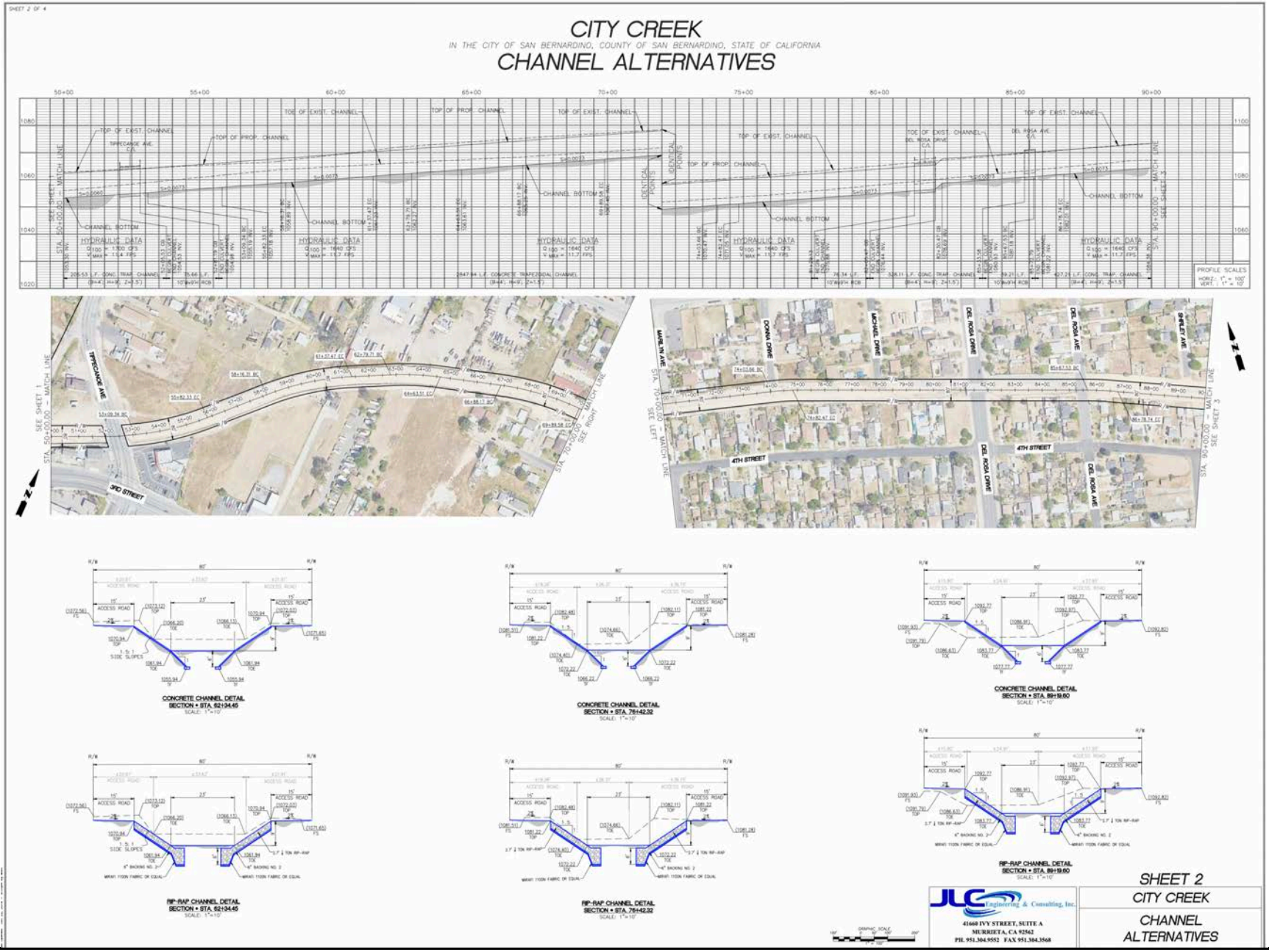


FIGURE 4.11-9

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternatives

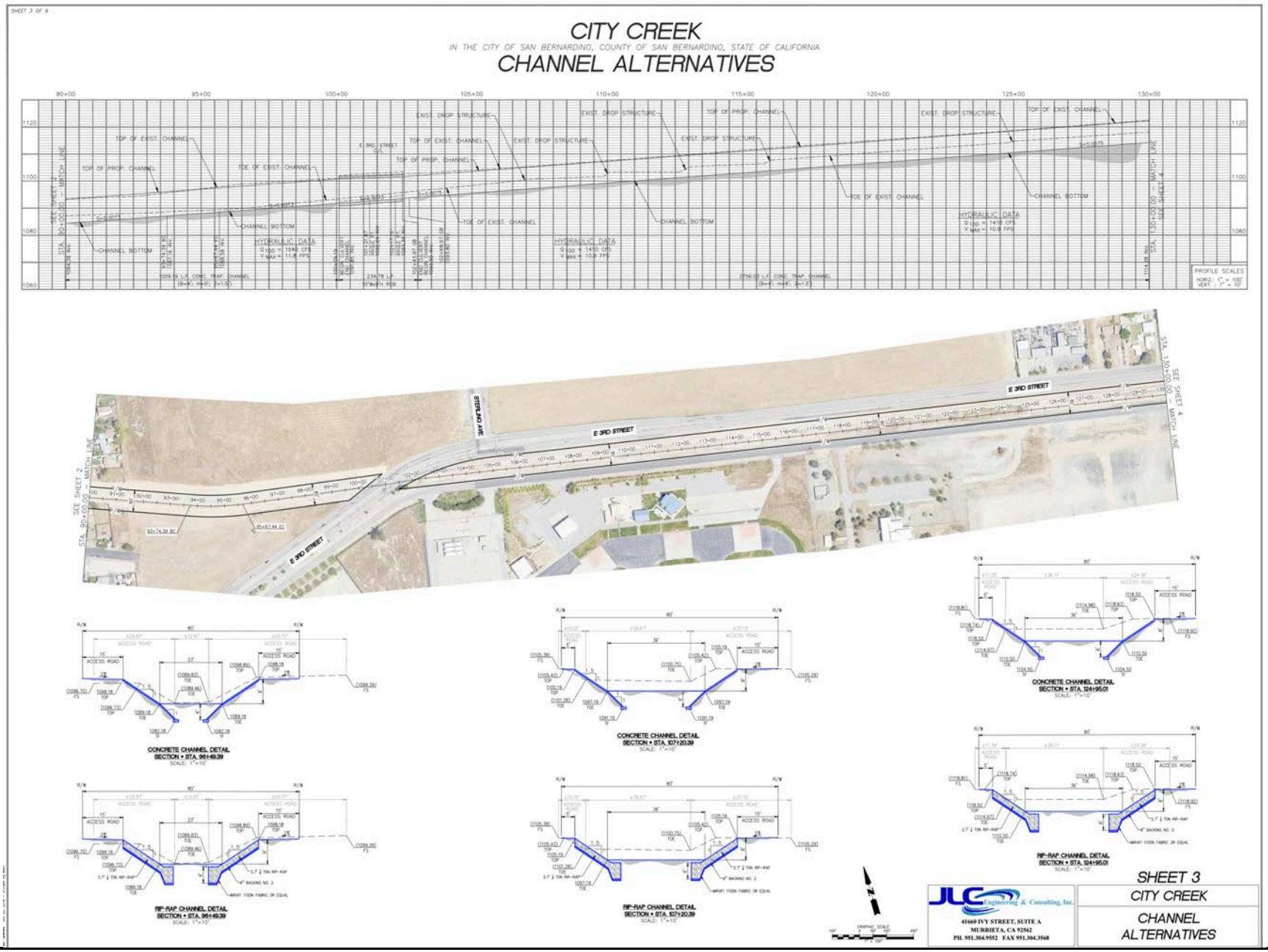


FIGURE 4.11-10

Tom Dodson & Associates
Environmental Consultants

City Creek Bypass Channel Alternatives

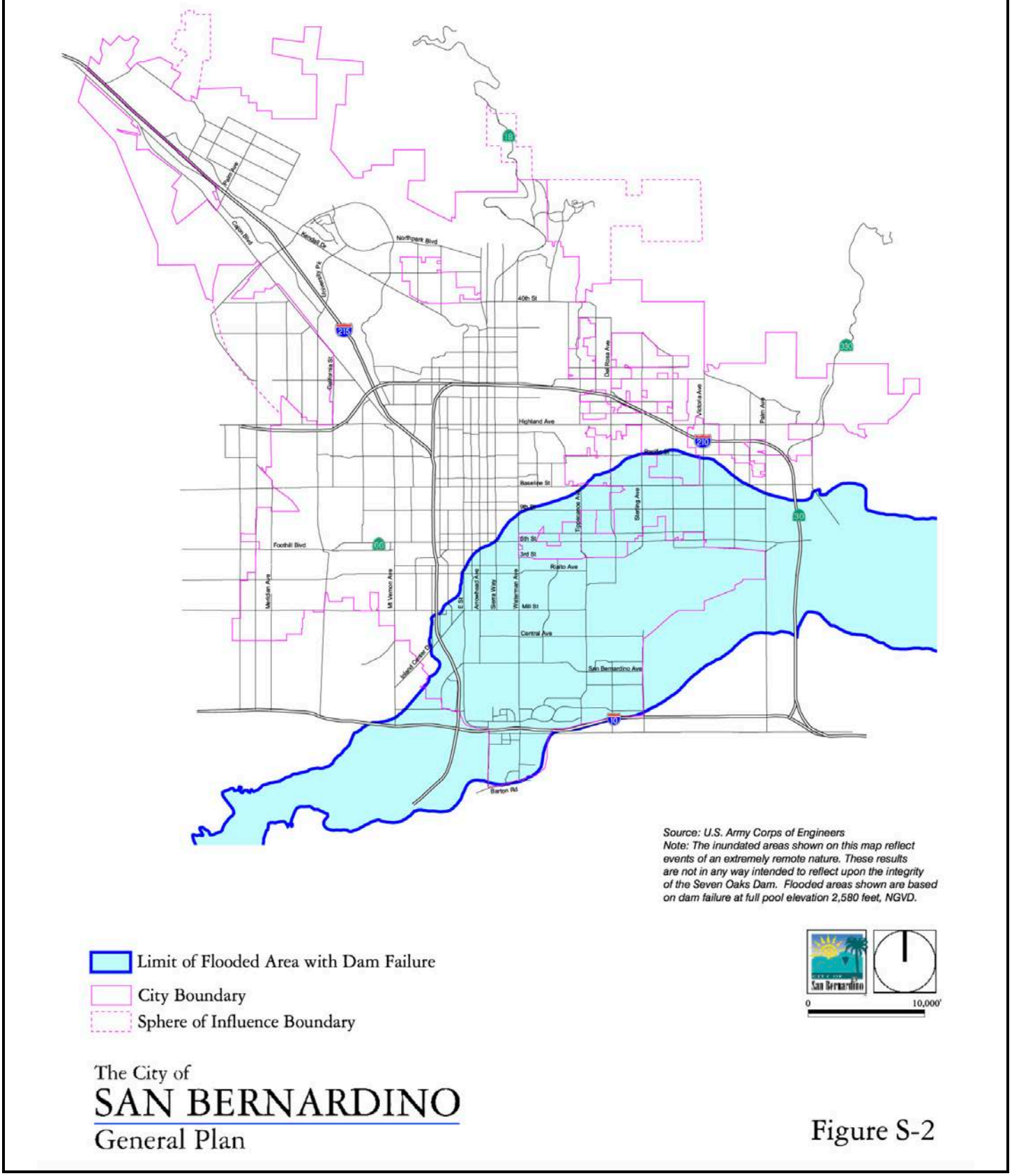


FIGURE 4.11-11

Tom Dodson & Associates
Environmental Consultants

Dam Inundation Map

Figure 3-4. Groundwater Basins of the Region

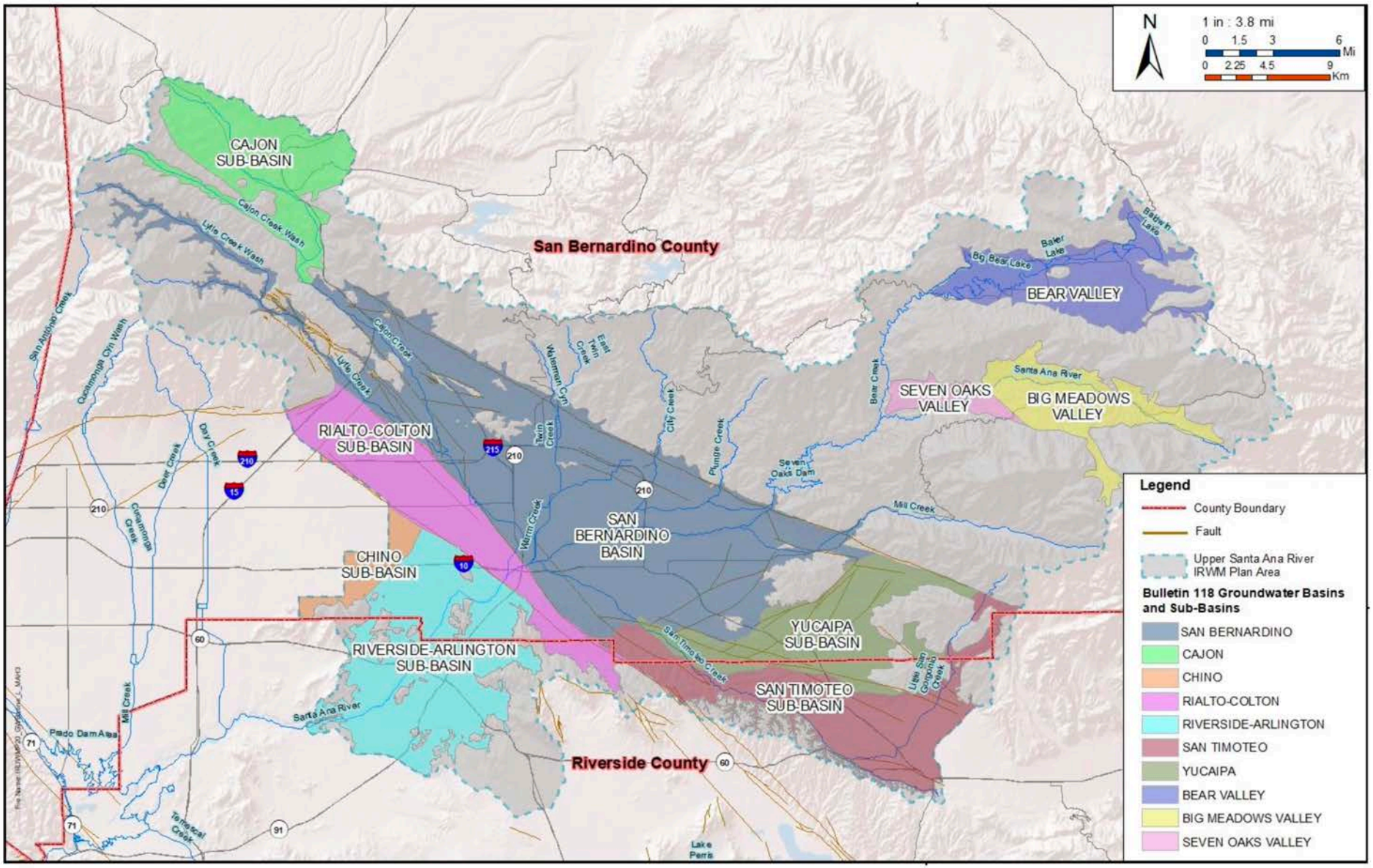


FIGURE 4.11-12

Tom Dodson & Associates
Environmental Consultants

Groundwater Basins of the Region

4.12 LAND USE AND PLANNING

4.12.1 Introduction

This subchapter evaluates the environmental impacts relating to land use and planning from implementation of the proposed Project. These issues will be discussed below as set in the following framework:

4.12.1 Introduction
4.12.2 Regulatory Setting
4.12.3 Environmental Setting
4.12.4 Thresholds of Significance
4.12.5 Methodology
4.12.6 Environmental Impacts
4.12.7 Mitigation Measures
4.12.8 Cumulative Impacts
4.12.9 Significant and Unavoidable Impacts

References utilized for this section include:

- City of Highland, March 2006. *General Plan*
- City of San Bernardino, November 1, 2005. *General Plan*.
- San Bernardino County, November 2, 2020. *San Bernardino Countywide Plan*.
- Urban Crossroads, 2024. *Inland Valley Infrastructure Corridor Noise Impact Analysis. (NIA)*

The City of Highland General Plan, City of San Bernardino General Plan and Municipal Development Codes of both cities were used in the evaluation presented in this subchapter. When addressing specific topical land use or planning goals or policies (such as biology or cultural resources), information from the pertinent technical studies contained in Volume 2 of this document were used to support land use and planning findings in this section of the DEIR.

No comments were received by the IVDA during the NOP comment period held for the proposed Project.

4.12.2 Regulatory Setting

State and local laws, regulations, plans, or guidelines that are applicable to the proposed Project are summarized below.

4.12.2.1 State

California Planning and Zoning Law

The framework within which California cities and counties manage land use and planning oversight is set forth in State Planning and Zoning Law. Under State planning and zoning law, each city and County must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. This requirement extends to the inclusion of seven mandatory elements described in the Government Code, including a land use element. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies and goals; and diagrams and maps that incorporate data and analysis for the affected jurisdiction.

Office of Planning and Research General Plan Guidelines

To guide local jurisdictions in preparing their general plan, The Governor's Office of Planning and Research (OPR) is required to adopt and periodically revise guidelines for the preparation and content of local general plans pursuant to Government Code para/ 65040.2. The General Plan Guidelines are advisory, not mandatory. Regardless, the Guidelines are the State's only official document explaining California's legal requirements for general plans. Local jurisdictions and the public depend upon the Guidelines for support when preparing local general plans. The courts have periodically referred to the General Plan Guidelines in determining compliance with State planning law. For this reason, the Guidelines closely adhere to statutes and case law.

4.12.2.2 Regional

Southern California Association of Governments

Southern California Association of Governments ("SCAG") is a regional council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, which encompass over 38,000 square miles. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Agency (MPO). As a result, SCAG is the federally recognized MPO for this region and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's metropolitan planning organization, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents. SCAG has developed long range regional transportation plans, including sustainable communities strategies (SCS) and regional housing needs allocation (RHNA) and other plans for the region to achieve specific regional objectives, as discussed below.

The proposed IVIC Project does not meet the CEQA definition of having statewide, regional, or area-wide significance. Thus, the proposed Project is not subject to an individual consistency evaluation with regional plans, such as those published by SCAG. SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), now identified as *Connect SoCal.* This document was adopted by SCAG in September 2020.

4.12.2.3 Local

The Inland Valley Infrastructure Corridor Project is being proposed to implement those infrastructure facilities that will be required to support the land uses identified in the two city General Plans. This proposed Project does not propose to modify any of the existing land uses under either jurisdiction. For example, the roadway improvements over the implementation period will be guided by the roadway sections identified in the two City General Plan Transportation/ Circulation Chapters. The unusual jurisdictional boundaries in the IVIC Project area reflect a complex history of development and expansion of city jurisdictions in the Project area. The City of San Bernardino was incorporated in the 1880s and the City of Highland incorporated about 100 years later, in 1987. In most instances the complex boundary between the two cities reflects the land within the IVIC Project area that had not been incorporated into the City of San Bernardino when the City of Highland was formed. The actual boundary between the two cities is shown on **Figure 3.4** in Chapter 3 of this DEIR. Both City General Plans were adopted approximately 15 years ago, the City of San Bernardino in 2005 and the City of Highland in 2006.

Highland General Plan

The City of Highland General Plan Land Use map is provided as **Figure 4.12-1** of this document. With the exception of land north of 5th Street between Victoria and Central, the existing land use designations for the Project area mostly consist of Industrial, Business Park and Commercial. In the exception area mentioned above the land use designations consist of Low Density Residential and Planned Development (a multi-family residential designation). The existing land use aerial photo in **Figure 4.12-2** clearly shows the existing land uses in the City of Highland which are quantified in Table 3-1 of this DEIR. From the City of Highland's General Plan, the following segments of text have been selected to characterize the City's general development concept for the IVIC Project area. Detailed evaluation of goals and policies is provided in the Environmental Impact section of this Subchapter.

The first mention of the IVIC Project area in the Highland General Plan (GP) occurs on Page 1-2 under the heading "Invigorating Key Activity Centers." The 5th Street Corridor "paralleling the San Bernardino International Airport is one of the locations in Highland that have been "biding their time," in other words apparently ready for development under the Industrial (I) and Business Park (BP) land use designation assigned in 2006. However, development has not progressed as anticipated primarily due to lack of funding for supporting infrastructure. The City of Highland BP designation includes the following language (P. 2-15, Highland GP): "*The Business Park designation allows for a variety of light industrial, research and development, and office uses that provide pleasant and attractive working environments. The designation also allows business support services, anchor retail developments, and individual commercial uses that support the employees and clientele of the area….appropriate uses include light manufacturing, wholesaling and warehousing conducted within an enclosed building; administrative and professional uses; business support uses; eating and drinking establishments; personal services; and retail sales of durable goods, along with general retail sales in areas designated to be retail anchors of a larger Business Park designated area."*

The City of Highland Industrial (I) designation includes the following language (P. 2-16, Highland GP): *The primary purpose of areas designated Industrial is to provide for light industrial, research and development, and office uses for firms seeking an attractive and pleasant working environment and an advantageous location with proximity to the San Bernardino International Airport and freeway access…. Typical uses include light manufacturing and assembly, small scale warehousing and distribution, and research and development. In addition, administrative offices supporting the primary industrial use of the property may be permitted.*

San Bernardino General Plan

In contrast to the City of Highland, the City of San Bernardino is a larger community with more varied land uses due to length of historic development. Whereas, the IVIC Project area comprises a substantial portion of Highland's light industrial development area, this area functions as a small percentage of the City of San Bernardino's overall designated industrial land use. San Bernardino's General Plan contains two maps that illustrate land use, one called the Foundation Component Plan presents a "high level" view of land uses (see **Figure 4.12-3**) and a second map presents the detailed land uses authorized throughout the City (see **Figure 4.12-4**). The land use designations within the San Bernardino IVIC Project area consist of Commercial General, Industrial Light, and Residential Multi-Family. Commercial designation on the west transitions to light industrial and finally to Multi-Family on the east.

The existing land use aerial photo in **Figure 4.12-2** clearly shows the existing land uses in the City of San Bernardino which are quantified on Table 3-1 of this DEIR. From the City of San Bernardino's General Plan, the following segments of text have been selected to characterize its general development concept for the IVIC Project area. The first mention of the historic development pattern in San Bernardino IVIC Project area in the San Bernardino General Plan (GP) occurs on Page 2-1 under the heading "Introduction." *"The way in which our land is used provides the most vivid impression of San Bernardino. Our pattern of land uses transitions from predominantly industrial near the Santa Ana River and the San Bernardino International Airport and Trade Center to predominantly residential toward the mountains, with a substantial commercial and industrial core at the center.*

The San Bernardino General Plan assigns a "Strategic Area" designation to the San Bernardino International Airport and Trade Center. Strategic areas are locations where the City anticipates future development to occur and identifies pertinent strategies to guide this development. The following text is abstracted from the General Plan (Pp. 2-64 and 2-65): *"The San Bernardino International Airport and Trade Center (SBIA) Strategic Area is located on the southeastern edge of the City. The Strategic area is bounded on the north by 3rd and 5th Streets, on the south by Mill Street, on the west by Lena Road, and on the east by the Cities of Redlands and Highland…..The SBIA can accommodate large warehousing and manufacturing companies, and more importantly, it serves as a transportation hub, providing access to air transportation and close proximity to major rail lines and roadways….There is an opportunity for the properties surrounding the SBIA to develop with uses that are related to or can benefit from proximity to the airport. For instance, business oriented and general aviation related uses, manufacturing, warehousing, office and travel related business such as hotels, could be attracted by the presence of the Airport.*

Thus, even though the two cities have approached the IVIC Project area from different perspectives, both cities envision that the area will be developed with job generating uses consistent with SBIA activities. The next section discusses how this transition is currently evolving without the IVIC.

4.12.3 Environmental Setting: Land Use and Planning

The IVIC Project area consists of a narrow band of land mostly north of 3rd Street, extending east-west from Tippecanoe Avenue to the SR-210 freeway and north- south from 3rd Street to the center of 6th Street. One parcel of land is located south of 3rd Street at the corner of 3rd and Palm/Alabama Street. The width of this area (north-south) varies from about 1,200 feet at Sterling Avenue to about 2,400 feet at Tippecanoe Avenue. The IVIC Project area boundaries encompass about 678.93 acres, with 484.56 acres in the City of Highland and 194.37 acres in the City of San Bernardino. This does not include the extension of the City Creek Bypass Channel west of Tippecanoe Avenue, nor the acreage along Victoria Avenue from 6th Street to 9th Street.

As **Figure 4.12-2** shows, the western edge of the IVIC Project area is almost fully developed with a complex mix of land uses. This mix includes neighborhood commercial uses (primarily at intersections), residential uses (both single- and multi-family), some light industrial uses, and the Sterling Natural Resources Center (a wastewater treatment plant and education center) being developed by East Valley Water District. East of Del Rosa Drive extending to Sterling is a similar mix of uses, plus some open space just west of Sterling. The next segment moving east within the IVIC consists of open space to just west of Lankershim Avenue, with a mix of commercial and light industrial uses just west of Lankershim and another area of undeveloped land just west of Victoria.

Between Victoria Avenue and Central Avenue, the area north of 5th Street is a mix of single- and multi-family residential uses. Between 3rd and 5th in the same area is a complex mix of residential, neighborhood commercial and industrial uses. From Central Avenue east to the freeway, with one exception, the uses are primarily industrial, with a few scattered residences. At Palm Avenue and 5th is a small node of commercial uses. Finally, just west of SR-210 is the City Creek natural channel which is bridged at 5th Street. The proposed IVIC does not propose to modify the natural channel portion of City Creek.

Surrounding the Project area are the following uses: to the south is the San Bernardino International Airport and associated IVDA property which extends east-west from Tippecanoe Avenue to Palm/Alabama on the south side of 3rd Street; to the west is a mix of commercial, residential and light industrial uses; to the north is primarily residential uses, with some schools (institutional/public uses) and undeveloped property; and to the east is SR-210 and east of the SR-210 are undeveloped property and commercial uses. Note that two drainage features are located within the IVIC Project area, the City Creek natural channel, which is located just within the IVIC's eastern boundary, and City Creek Bypass Channel, which extends east to west from City Creek to Warm/Twin Creek through the southern portion of the IVIC.

Finally, the IVIC Project area is already experiencing the transition to light industrial uses as three modest-sized light industrial warehouses (appx. 100,000 SF) are being occupied from Victoria Avenue east; and immediately south of the Project area the Amazon Air Regional Air Hub (Amazon) has initiated operations, and the City of San Bernardino has approved a new 1.15 million square foot light industrial warehouse (currently initiating operations), immediately east of the Amazon Air facility, south of Third Street, but north of the Airport boundary.

4.12.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

LU-1 Physically divide an established community?

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

4.12.5 Methodology

The following evaluation analyzes the proposed Project's consistency with regional and local plans, policies and regulations for the purposes of avoiding or mitigating an environmental effect. Specifically, the proposed Project was analyzed with respect to applicable local plans, including the General Plans of the cities of Highland and San Bernardino.

4.12.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone

- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.12.6.1 Impact Analysis

LU-1 Would the project physically divide an established community?

The IVIC Project does not propose any action that could physically divide an established community. The physical division of an established community generally refers to the construction of features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge, that would impact mobility within an existing community or between a community and outlying area.

The IVIC Project area occupies about ½ mile of territory north of the SBIA, from about Tippecanoe Avenue on the west to the SR-210 Freeway on the east. Land to the south of the Project area consists of the San Bernardino International Airport or land adjacent to the west side of the Airport managed by the IVDA. Land to the north of the IVIC corridor consists of primarily residential uses located north of 6th Street which continues to Baseline where the next commercial corridor occurs.

The proposed IVIC Project would install infrastructure in five categories: Road improvements; City Creek Bypass Channel; EVWD Well; EVWD Reservoir; and sewer installation. None of these facilities or their physical arrangement or character will function as a physical division within the existing IVIC Project area community. The only infrastructure facilities with any potential to divide a community are the proposed roadways and the Channel. These are both linear features that can result in dividing a community. However, in this case the roadway alignments and Channel are existing infrastructure features within the local community. Improving their ability to function by improving the roads to handle traffic and the Channel to handle stormwater runoff better will not cause any new physical divisions within the community. Both the roadways and the Channel that will be enhanced under IVIC Project already exist within the IVIC Project area and will simply be improved to their ultimate configuration. The proposed IVIC Project infrastructure is being implemented to be consistent with each City's ultimate land use designations, and impacts would be less than significant. No mitigation measures are required to address potential impact issues under this impact category.

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact

LU-2 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The IVIC Project does not propose to modify any existing land uses. Based on an analysis of the current infrastructure deficiencies within the Project area, the IVIC Project proposes to upgrade existing infrastructure in five categories (road improvements; City Creek Bypass Channel; groundwater extraction well; storage reservoir; and sewer installation). Each of these infrastructure systems needs to be upgraded in order to adequately support the gradual build-out of the two cities' General Plans over the next 20 years. Thus, the IVIC Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The five proposed infrastructure systems are passive components of the man-made environment with the purpose of supporting uses that have already been established in each City's General Plan for implementation. Impacts would be less than significant. No mitigation measures are required to address potential impact issues under this impact category.

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact

4.12.7 Mitigation Measures

No mitigation measures are required because no significant adverse land use impacts have been identified.

4.12.8 Cumulative Impacts

Development of the proposed Project will result in substantial change of the land use within the IVIC Project area, but the changes will be required to be consistent with the land use and planning designations of the existing General Plans which establish the cumulative land use framework for the cities of Highland and San Bernardino. Approval of the proposed Project will not contribute to this future change, but will provide adequate infrastructure to the ultimate build-out of the IVIC Project area. The proposed IVIC Project would contribute to implementation of each City's General Plan vision for the Project area. No significant adverse impacts related to land use and planning resources and issues have been identified, and no cumulatively considerable and unavoidable impact is forecast to occur if the proposed Project is implemented as proposed.

4.12.9 Significant and Unavoidable Impacts

As determined above, no significant and unavoidable impacts relating to land use and planning will occur as a result of the proposed Project.

4.13 MINERAL RESOURCES

4.13.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of mineral resources from implementation of the Inland Valley Infrastructure Corridor (IVIC). The following topics address whether the proposed Project would reduce or create a loss of important mineral resources within the potential impact area. The purpose of the mineral resources component of this Draft Environmental Impact Report (DEIR) is to provide an analysis of, and assess the potential for, mineral resources to be encountered within the IVIC Project area. In this way, the sensitivity for such resources to be encountered within a future specific Project footprint can be incorporated into the planning process for future infrastructure and entitlement compliance considerations.

These issues will be discussed below as set in the following framework:

4.13.1 Introduction
4.13.2 Regulatory Setting
4.13.3 Environmental Setting
4.13.4 Thresholds of Significance
4.13.5 Methodology
4.13.6 Environmental Impacts
4.13.7 Mitigation Measures
4.13.8 Cumulative Impacts
4.13.9 Unavoidable Adverse Impacts

References utilized for this section include:

- California Department of Conservation, California Geological Survey, 2006. *Aggregate Availability in California.*
- California Geologic Survey, 2018. Map Sheet 52 Companion Report. https://www.conservation.ca.gov/cgs/Documents/Publications/Map-Sheets/MS_052_California_Aggregates_Report_201807.pdf (accessed 04/16/24)
- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*
- Lilburn Corporation, March 2006. *Upper Santa Ana River Wash and Land Management and Habitat Conservation Plan, Mine Reclamation Plan for the Upper Santa Ana River Wash Aggregate Lands to be Operated by Robertson's Ready Mix, Plunge Creek Quarry, Silt Pond Quarry, East Quarry South*, prepared by Lilburn Corporation, March 2006.

No comments regarding mineral resources issues were raised at the public scoping meeting or as part of the Notice of Preparation.

4.13.2 Regulatory Setting

The mineral resources component of this DEIR is prepared to address implementation of the IVIC Project if and when it is approved in the future. The location of potential projects range between well-defined to more general. The Project proposes the following:

- Up to 20 miles of roadway (assumes one-lane width) within the IVIC area (refer to **Figure 3-3**)
- City Creek Bypass Channel improvements (specific to the City Creek Bypass Channel extending from Victoria Avenue to the City Creek confluence with Twin Creek)

- 3.5 MG storage reservoir located in the Lower Zone (refer to **Figure 4.3-2**, which depicts EVWD's Lower Zone)
- New Well 01 in the Intermediate Zone (refer to **Figure 4.3-**2, which depicts EVWD's Lower Zone)
- Up to 5,000 feet of sewer within the IVIC area (refer to **Figure 3-3**)

The impact assessment presented below focuses on physical changes to the landscape within the IVIC Project area of p Project site and any potential adverse impacts these changes may have on any mineral resource values that exist within the IVIC Project area. For purposes of the impacts, it is assumed that over the next 20 years the whole IVIC Project planning area will be implemented as proposed and described in the Project Description in this document.

This section discusses the potential impacts on mineral resources or resource values that may be associated with the implementation of the IVIC Project. However, much of the IVIC Project area has been zoned commercial, business park and industrial through the existing General Plans of the City of Highland and City of San Bernardino. The General Plans for each of the cities have already evaluated the potential loss of mineral resources in the Plan area through previous environmental studies associated with the adoption of the General Plans.

Federal

Executive Order 13817, Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals

Executive Order No. 13817 instructed the Secretaries of the Interior and Defense to identify and publish a list of critical minerals, including rare earths, then develop a strategy to reduce U.S. reliance on other countries to supply these increasingly important ingredients to America's defensive and economic security. The United States Department of Commerce released *A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals*, an interagency report that outlines a government-wide action plan to ensure the U.S. has secure and reliable supplies of critical minerals. According to the Department of Commerce, the U.S. depends on imports for more than 50 percent of domestic demand for 29 of the 35 minerals named on the USGS critical list. In addition, the U.S. lacks any domestic production for 14 of the minerals on the critical list and does not have domestic access to processing and manufacturing capabilities for many. The Mountain Pass Mine in Nevada was once the world's leading supplier of rare earth minerals, but China began to dominate the market in the 1990s. Mountain Pass has focused on achieving greater autonomy with a $1.7 billion separations process system that would allow it to refine and make rare earth products available for customers outside of China.

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act ("SMARA") of 1975 (Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.) mandated the classification of mineral lands throughout the state to help identify and protect mineral resources in areas subject to urban expansion or other irreversible land uses that would preclude mineral extraction. SMARA is the primary regulatory framework for mining in California. It delegates specific regulatory authority to local jurisdictions. SMARA requires the State Geologist to identify important mineral deposits in the state threatened by land uses that would be incompatible with future extraction and classify them into Mineral Resource Zones (MRZs). Local jurisdictions are required to enact specific procedures to guide

mineral conservation and extraction at identified sites and to incorporate mineral resource management policies into their general plans.

California State Mining and Geology Board

The California State Mining and Geology Board (SMGB) provides professional expertise and serves as a regulatory, policy, and hearing body representing the State's interest in the development, utilization, and conservation of mineral resources, the reclamation of mined lands, and the development and dissemination of geologic and seismic hazard information. The nine-member SMGB operates within the DOC and is granted certain autonomous responsibilities and obligations under several statutes, including the Alquist-Priolo Act, the Seismic Hazards Mapping Act, and SMARA.

California Department of Conservation, Division of Mine Reclamation

The DOC, Division of Mine Reclamation (DMR) provides a measure of oversight for local governments as they administer SMARA within their respective jurisdictions. DMR may provide comments to lead agencies on a mining operation's reclamation plan and financial assurance and, jointly with SMGB, is charged with administering actions that encourage SMARA compliance. The primary focus is on existing mining operations and reclaiming mined lands to a usable and safe condition that is readily adaptable for alternative land uses. Issues related to abandoned legacy mines are addressed in the Abandoned Mine Lands Program.

California Geological Survey

The California Geologic Survey (CGS) provides objective geologic expertise and information about California's diverse nonfuel mineral resources, including their related hazards, through maps, reports, and other data products to assist governmental agencies, mining companies, consultants, and the public in recognizing, developing, and protecting important mineral resources.

Local

City of Highland General Plan

The following General Plan goals and policies addressing mineral resources are applicable to the Project:

Open Space and Conservation Element: Goal 5.9

Manage mineral resources and extraction policies for short- and long-term safety, economic and land use compatibility considerations.

Open Space and Conservation Element: Policy 1

Identify any significant mineral resources within the City and, as feasible, protect them from encroachment by residential or other incompatible development, for future use.

Open Space and Conservation Element: Policy 2

Adopt policies and procedures for mining and processing of mineral resources.

Open Space and Conservation Element: Policy 3

Develop criteria for location and operation of mineral processing to minimize adverse impacts to the environment, watersheds, wildlife, aesthetic resources, public health and safety, and adjacent land uses.

Open Space and Conservation Element: Policy 4

Establish and implement Mining Reclamation Plans for any proposed mining operations in compliance with existing local, state and federal policies and statutes. Review land development proposals near resource areas or mining operations for land use compatibility.

Open Space and Conservation Element: Policy 5
Require that mining plans include, but not be limited to the following:

- Effects on terrain, natural and man-made slopes, permeability of soil, groundwater quality;
- Protection of water quality through erosion, runoff and
- sedimentation control;
- Protection of wildlife;
- Control of noise, dust, vibration, smoke, odors and lighting;
- Plans for rehabilitation and reclamation of lands; and
- Proposed timing of extraction and reclamation activities
- Offsite routes of travel.

Open Space and Conservation Element: Policy 6
Investigate the adoption of a reclamation fee program designed to mitigate remaining scars from previous quarry operations.

Open Space and Conservation Element: Policy 7
Pursue and implement a joint-powers agreement with adjacent cities and involved agencies for the management of natural resources located in the Santa Ana River Wash.

Open Space and Conservation Element: Policy 8
Permit non-mining uses within the designated Open Space District only if a finding is made that no significant impacts on future regional mineral resources will result from Project approval.

City General Plan Figure 5-3, Mineral Resource Zones, identifies the City of Highland's mineral resources. This map is reproduced in this document as **Figure 4.13-1**.

City of San Bernardino General Plan

The following General Plan goals and policies addressing mineral resources are applicable to the Project:

Natural Resources and Conservation Element: Goal 12.4

Properly manage designated areas for mineral extraction to meet the needs of the area.

Natural Resources and Conservation Element: Policy 12.4.1
Continue to document current extraction sites, including sand and gravel quarries, including the status and duration of existing permits and approvals.

Natural Resources and Conservation Element: Policy 12.4.2
Impose conditions and enforce mitigation measures on mining operations to reduce dust, noise, and safety hazards associated with removal of construction aggregate and minimize impacts on adjacent properties and environmental resources.

Natural Resources and Conservation Element: Policy 12.4.3
Determine and designate approved access routes to and from mineral resource sectors to minimize the impacts to vehicular circulation on City streets.

Natural Resources and Conservation Element: Policy 12.4.4
Require that any applications to permit uses other than mineral extraction or the interim uses defined in areas designated IE, Industrial Extractive, include findings to be prepared by the Project proponent outlining the reasons why mining is not a feasible use and how the deletion of the area as a potential mineral resource supply impacts the regional supply of aggregate resources.

City General Plan Figure NRC-3, Mineral Resource Zones, identifies the City of San Bernardino's mineral resources. This map is reproduced in this document as **Figure 4.13-2**.

4.13.3 Environmental Setting: Mineral Resources

The earth materials underlaying the Project site are primarily comprised of topsoil, Quaternary very old alluvium, and bedrock. There has been no historic effort to mine any material within the IVIC Project Area. A field review determined that there are no active or historic mine sites in the immediate vicinity of the IVIC Project area. However, the City of Highland has indicated that the IVIC Project southern boundary between 3rd and 5th Streets east of Palm is the south side of these roadways to ensure that the IVIC Project does not extend or encroach on any existing mining operations/activities south of this these roads.

Both the City of Highland and the City of San Bernardino General Plan Mineral Resource Zones maps (see **Figures 4.13-1 and 4.13-2**) identify the aggregate mineral resource zones (MRZs) as mapped by the California Geological Survey in 2008. These resources have been mapped using the California Mineral Land Classification System, which includes the following MRZs:

- MRZ-1: Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined.
- MRZ-3b: Areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined. This class denotes areas where presence of the mineral is inferred and/or not visible from the surface geology.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

The Project area is located within the MRZ-2 zone, which is defined as a Mineral Resource Zone "where the significance of mineral deposits cannot be determined from the available data."

The closest known active mining activity (aggregate processing) to the Project area is immediately south of the intersection of 3rd Street and Palm Avenue and approximately one mile to the east and south (aggregate mining activity) within the Upper Santa Ana River wash and Plunge Creek, which has been an ongoing activity for nearly 80 years. The wash area is mined by Robertson's Ready Mix (RRM) and Cemex Construction Materials L.P (CEMEX). Based on the available data, the IVIC Project area does not support any mineral resource values and the current land use designations for commercial, business park and industrial within the cities would support mineral extraction, processing and sales activities.

More than half of the City of Highland is underlain by MRZ-2 rated mineral resources, with most of the remaining categorized as MRZ-3. Most of the MRZ zones exist in areas that have been developed for sand, gravel and aggregate mining activities that have been in operation for decades. According to the City of Highland, there are approximately 4,439 acres that have not been developed for mining activities as of the date of the City of Highland's General Plan.

The Department of Conservation estimates that in the next 50 years, the aggregate study areas with the greatest projected future demand for aggregate are the South San Francisco Bay and Temescal Valley-Orange County areas. Each is expected to require more than a billion tons of

aggregate by the end of 2066. Other areas with projected high demands are Western San Diego County, San Gabriel Valley, San Bernardino, Sacramento County, and Palmdale. Each of these areas is projected to need more than 500 million tons of aggregate in the next 50 years. Aggregate study areas having smaller demands generally are in rural, less populated areas. The aggregate study areas of El Dorado County, Glenn County, Nevada County, Shasta County, and Tehama County are all projected to require less than 100 million tons of aggregate over the next 50 years.[1]

Of the total statewide demand, the Department of Conservation estimated that San Bernardino would demand about 939 million tons of aggregate, with only 156 million tons of permitted aggregate reserves, or 17% compared to the 50 year demand.

4.13.4 Thresholds of Significance

The California Environmental Quality Act (CEQA) CEQA Guidelines, Appendix G, a project would normally have a significant effect on the environment if the Project would:

MIN-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

MIN-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.13.5 Methodology

The analysis herein is based upon a review of maps generated by the cities of Highland and San Bernardino depicting the location and quality of known mineral resources within their respective cities, as well as a field review of the Project area.

4.13.6 Environmental Impacts

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

[1] California Geologic Survey, 2018. Map Sheet 52 Companion Report. https://www.conservation.ca.gov/cgs/Documents/Publications/Map-Sheets/MS_052_California_Aggregates_Report_201807.pdf (accessed 04/16/24)

The following Topic categorizes the proposed Project activities into two groups. The first category, the **City Creek Bypass Channel, Roadway Improvements & Sewer Installation**, includes facilities proposed under the IVIC Project that occur within existing rights-of-way. In this case, the rights-of-way (ROW) include the channel ROW and the road ROW within and adjacent to which the roadway improvements would occur, and within which the sewer improvements would occur. The second category is the **EVWD Well Development and Reservoir**, which would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones. Thus, these two categories are analyzed separately as the impacts from the facilities therein can be characterized as similar and comparable based on the types of facilities proposed.

4.13.6.1 Impact Analysis

MIN-1 Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The proposed IVIC Project is an infrastructure project intended to improve the infrastructure within the Project area, and does not propose any specific land use projects, other than the development of a Reservoir and Well, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints. Based on a review of cities General Plans, mineral resource extraction is not a permitted activity within the IVIC Project area. Furthermore, as no mines are currently located within the IVIC Project footprint, even though mineral resource values are known or suspected to exist within the overall IVIC Project area (refer to **Figures 4.13-1 and 4.13-2**), the individual components of the proposed Project would not preclude future mining activities from being developed within the IVIC Project area, nor would the IVIC Project components be anticipated to be within a site that would be suitable for future mining activities as a result of existing uses and underlying land use designations. Therefore, there is no potential impact that would result in a loss of availability of a known mineral resource.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation
As previously stated, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would be located within and adjacent to existing rights-of-way that would not include areas actively being excavated for mineral extraction or prevent areas from being accessed for current or future extraction of mineral resources in the IVIC Project Area. Therefore, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

EVWD Well Development and Reservoir
The locations for the EVWD Reservoir and Well are not presently known, and may be located outside of the overall IVIC Project area shown on **Figure 4.3-2**, which depicts EVWD's pressure zones. Based on a review of the pressure zones within which the proposed well and proposed reservoir would be located (intermediate and lower zones, respectively) within areas designated as MRZ-1, MRZ-2, or MRZ-3. However, the proposed EVWD Well and Reservoir are not anticipated to require a large footprint, such that these individual projects would interfere with the exploitation of mineral resources. Therefore, implementation of the EVWD Reservoir and Well would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Mitigation Measures: None Required

Level of Significance: Less Than Significant

MIN-2 Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Neither the City of Highland or the City of San Bernardino General Plans designate the Project area as a locally-important mineral resource recovery site, nor does either General Plan designate EVWD's Intermediate or Lower zones as containing locally-important mineral resource recovery sites.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

As previously stated, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would be located within and adjacent to existing rights-of-way that would not include areas that are designated locally-important mineral resource recovery sites. Therefore, implementation of the proposed City Creek Bypass Channel, Roadway Improvements, and Sewer Installation would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Impacts would be less than significant.

EVWD Well Development and Reservoir

The locations for the EVWD Reservoir and Well are not presently known, and may be located outside of the overall IVIC Project area shown on **Figure 4.3-2**, which depicts EVWD's pressure zones. Based on a review of the pressure zones within which the proposed well and proposed reservoir would not be located (intermediate and lower zones, respectively) within areas that are designated locally-important mineral resource recovery sites. However, the proposed EVWD Well and Reservoir are not anticipated to require a large footprint, such that these individual projects would interfere with the exploitation of mineral resources, even though no locally-important mineral resource recovery sites have been designated within these areas. Therefore, implementation of the EVWD Reservoir and Well would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Impacts would be less than significant.

Mitigation Measures: None Required

Level of Significance: No Impact

4.13.7 Mitigation Measures

No mitigation is required to address potential mineral resource impacts of the proposed Project.

4.13.8 Cumulative Impacts

The Project area does not contain any existing mineral development nor any identified potential for mineral resource development. Development of the proposed infrastructure development Project—the IVIC—will not cause any adverse impacts to mineral resources or values. Given that the Program would not preclude future mining activities, and the overall lack of mineral resources designated for mining use under the respective cities' General Plans, implementation of the proposed Project will not contribute to cumulative loss of mineral resources or mineral resource values. As such, the Project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed Project's cumulative impact on mineral resources is less than significant.

4.13.9 Significant and Unavoidable Impacts

As determined in the preceding evaluation, no significant and unavoidable impacts to mineral resources will occur as a result of the proposed Project.

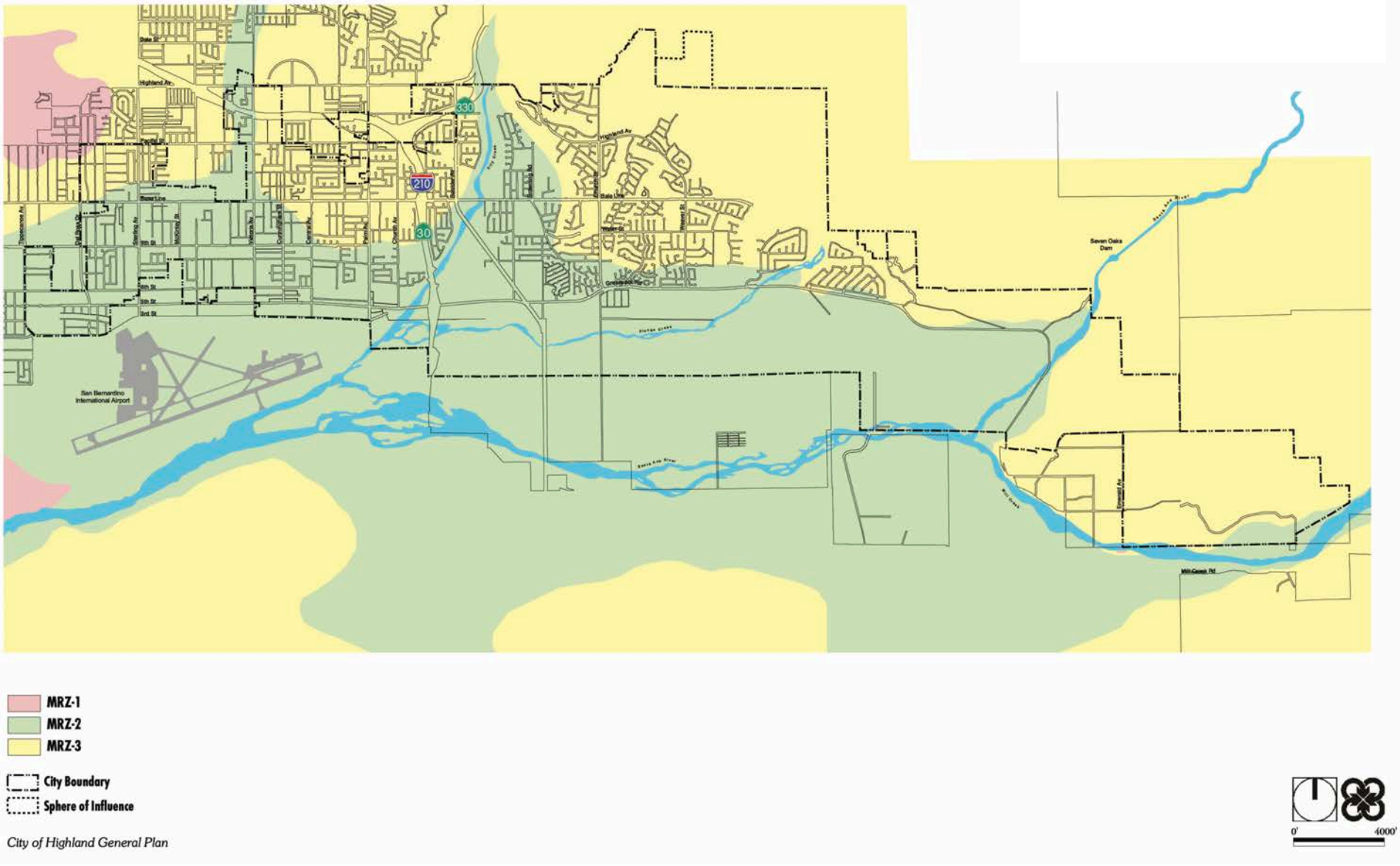


FIGURE 4.13-1

Tom Dodson & Associates
Environmental Consultants

City of Highland Mineral Resource Zones

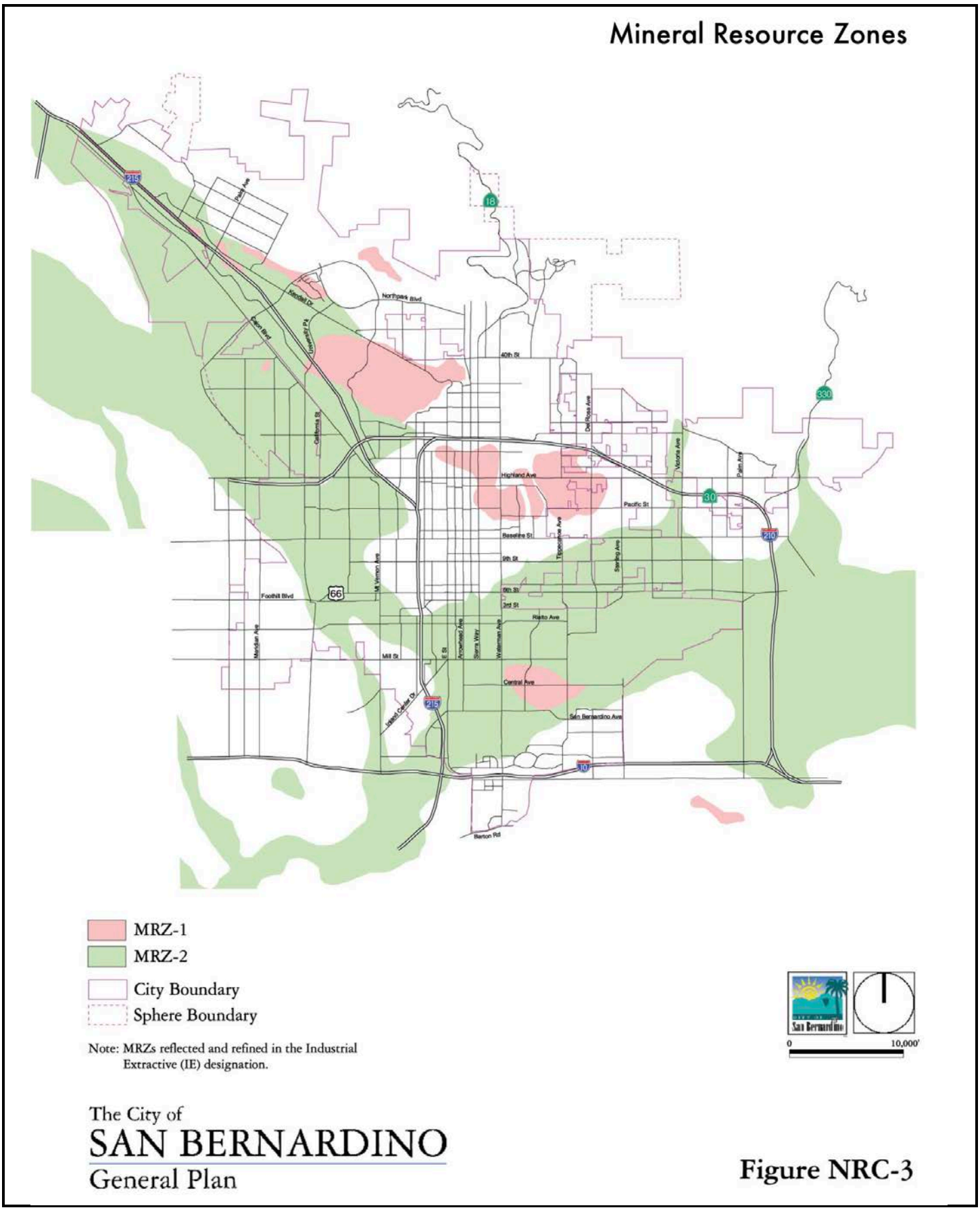


FIGURE 4.13-2

Tom Dodson & Associates
Environmental Consultants

San Bernardino Mineral Resource Zones

4.14 NOISE

4.14.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of noise from implementation of the proposed Inland Valley Infrastructure Corridor (IVIC). This document is a full-scope Draft Environmental Impact Report (DEIR) for the above-described project and all of the standard issues related to Noise identified in Appendix G of the CEQA Guidelines. As an existing developed area with a complete grid of existing roadways, the project area already experiences substantial background noise, primarily due to existing traffic. However, the project area includes older suburban areas that also generate typical residential neighborhood noise. There is also background noise from existing small commercial and industrial operational noise activities. And finally, the San Bernardino International Airport generates some background noise within the IVIC Project area. Regardless, the traffic adjacent to existing uses constitutes the primary source of noise within the existing project area.

These issues pertaining to noise will be discussed below as set in the following framework:

4.14.1 Introduction
4.14.2 Regulatory Setting
4.14.3 Environmental Setting
4.14.4 Thresholds of Significance
4.14.5 Environmental Impacts
4.14.6 Mitigation Measures
4.14.7 Cumulative Impacts
4.14.8 Significant and Unavoidable Impacts

The following reference documents were used in preparing this section of the DEIR.

- California Office of Planning and Research. 2017. *State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines*. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf (Accessed 08/05/24).
- City of Highland, March 2006. *General Plan*
- City of Highland. *Municipal Code, Title 8, Section 8.54 - Noise Control* City of San Bernardino, November 1, 2005. *General Plan*.
- City of San Bernardino. *Municipal Code, Title 19, Article III, Chapter 19.20 - Property Development Standards.*
- County of San Bernardino. *County of San*
- San Bernardino International Airport Authority, December 2019. *Final Environmental Assessment - Eastgate Air Cargo Facility.*
- Urban Crossroads, August 2, 2024. *Inland Valley Infrastructure Corridor Noise Impact Analysis. (NIA)*

No comments pertaining to noise were received in response to the NOP.

4.14.2 Regulatory Setting

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic,

and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally establish noise standards for mobile sources, such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

4.14.3.1 Federal

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the EPA established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the CFR that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the EPA issued guidance levels for the protection of public health and welfare in residential land use areas.[1] The guidance levels specified an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no Federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed IVIC Project.

4.14.3.2 State

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). OPR identifies suggested land use noise compatibility levels as part of its General Plan Guidelines. These suggested guidelines provide planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. The guidelines identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. In addition, the State through the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

California Green Building Code

The State of California's Green Building Standards Code (CALGreen) contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA Community Noise Equivalent Level (CNEL) noise level, such as within excessive noise of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level of 50 dBA Leq in occupied areas during any hour of operation.

[1] EPA, EPA Identifies Noise Levels Affecting Health and Welfare. April 12, 1974.

California Noise Act

The California Noise Control Act of 1973 gave cities and communities the power to set noise ordinances and enforce them as necessary. The goal of the state and local governments is to prohibit unnecessary, annoying, intrusive, or dangerous noise. California Government Code Section 65302 encourages each local government entity to implement a noise element as part of its general plan. In addition, the Governor's OPR has developed guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.[2]

4.14.2.3 Local

County of San Bernardino Countywide Plan

The County Of San Bernardino is committed to protecting life, property, and commerce from impacts associated with natural hazards, human-generated hazards, and increased risk due to climate change. The County also works to ensure that residents in unincorporated disadvantaged communities have a reduced risk of exposure to pollution and have equitable access to public facilities and services. Effectively reducing these risks requires the County and its partners to evaluate public safety threats, proactively plan and protect against potential hazards, and establish systems that will make the county and its people safer and more self-reliant. To address noise sources found in the area, the following policies have been identified in the Countywide Plan Hazards Element:

> **Hazards Element Policy HZ-2.6**: Coordination with transportation authorities. We collaborate with airport owners, FAA, Caltrans, SBCTA, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.
>
> **Hazards Element Policy HZ-2.7**: Truck delivery areas. We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.
>
> **Hazards Element Policy HZ-2.8**: Proximity to noise generating uses. We limit or restrict new noise sensitive land uses in proximity to existing conforming noise generating uses and planned industrial areas.
>
> **Hazards Element Policy HZ-2.9**: Control sound at the source. We prioritize noise mitigation measures that control sound at the source before buffers, sound walls, and other perimeter measures.
>
> **Hazards Element Policy HZ-2.10:** Agricultural operations. We require new development adjacent to existing conforming agricultural operations to provide adequate buffers to reduce the exposure of new development to operational noise, odor, and the storage or application of pesticides or other hazardous materials.
>
> **Hazards Element Policy HZ-3.19**: Community education. We make educational materials available to the public in unincorporated environmental justice focus areas so

[2] California Office of Planning and Research. 2017. *State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines*. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf (accessed September 2021).

that they clearly understand the potential for adverse pollution, noise, odor, vibration, and lighting and glare, and the effects of toxic materials to promote civil engagement. We require that such educational materials be developed in accordance with Plain Language Guidelines.

County of San Bernardino Development Code

While the County of San Bernardino Countywide Plan Hazards Element provides guidelines and criteria to assess transportation noise on sensitive land uses, the County Code, Title 8 Development Code contains the noise level limits for mobile, stationary, and construction-related noise sources.

Transportation Noise Standards

Section 83.01.080(d), Table 83-3, contains the County of San Bernardino's mobile noise source-related standards, shown on **Exhibit 4.14-1**. Exterior transportation (mobile) noise level standards for residential land uses in the IVIC Project study area are shown to be 60 dBA CNEL, while non-noise-sensitive land uses, such as office uses, require exterior noise levels of 65 dBA CNEL per the County's Table 83-3 mobile noise source standards.

Exhibit 4.14-1
COUNTY OF SAN BERNARDINO MOBILE NOISE LEVEL STANDARDS

Noise Standards for Adjacent Mobile Noise Sources			
Land Use		*Ldn (or CNEL) dB(A)*	
Categories	*Uses*	*Interior (1)*	*Exterior (2)*
Residential	Single and multi-family, duplex, mobile homes	45	60(3)
Commercial	Hotel, motel, transient housing	45	60(3)
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:

(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.

(2) The outdoor environment shall be limited to:

- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

CNEL = (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m.

Source: County of San Bernardino County Code, Title 8 Development Code, Table 83-3.

Operational Noise Standards
To analyze noise impacts originating from a designated fixed location such as the Inland Valley Infrastructure Corridor Project, stationary-source (operational) noise such as the expected Project's noise sources are evaluated against the County Code, Title 8 Development Code, Section 83.01.080(c) establishes the noise level standards for stationary noise sources. Since the Project will potentially impact adjacent noise-sensitive uses in the IVIC Project study area, this noise study relies on the more conservative residential noise level standards to describe potential operational noise impacts.

For residential properties, the exterior noise level shall not exceed 55 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.) for both the whole hour, and for not more than 30 minutes in any hour. The exterior noise level (11)standards shall apply for a cumulative period of 30 minutes in any hour, as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour, or the standard plus 20 dBA for any period of time. Further, Section 83.01.080(e) indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be adjusted to reflect the ambient conditions. The operational noise level standards are shown in Table 4.14-1 and included in Appendix 3.1 of the NIA.

Table 4.14-1
SAN BERNARDINO COUNTY OPERATIONAL NOISE LEVEL STANDARDS

Time Period	Exterior Noise Level Standards (dBA)[1]				
	L_{50} (30 mins)	L_{25} (15 mins)	L_{8} (5 mins)	L_{2} (1 min)	L_{max} (Anytime)
Daytime (7:00 a.m. to 10:00 p.m.)	55	60	65	70	75
Nighttime (10:00 p.m. to 7:00 a.m.)	45	50	55	60	65

[1] County of San Bernardino Development Code, Title 8, Section 83.01.080 (Appendix 3.1). The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{50} is the noise level exceeded 50% of the time.

Construction Noise Standards
Section 83.01.080(g)(3) of the County of San Bernardino Development Code, provided in Appendix 3.1, indicates that construction activity is considered exempt from the noise level standards between the hours of 7:00 a.m. to 7:00 p.m. except on Sundays and Federal holidays.

Construction Vibration Standards
The County of San Bernardino Development Code, Section 83.01.090(a) states that vibration shall be no *greater than or equal to two-tenths inches per second measured at or beyond the lot line*. Therefore, to determine if the vibration levels due to the operation and construction of the Project, the peak particle velocity (PPV) vibration level standard of 0.2 inches per second is used.

City of San Bernardino General Plan Noise Element
The City of San Bernardino General Plan Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community. The Noise Element provides policy guidance which addresses the generation, mitigation, avoidance, and the control of excessive noise. To protect the City of San Bernardino residents from excessive noise levels, the Noise Element contains the following three goals:

Noise Element: Goal 14.1
Ensure that residents are protected from excessive noise through careful land planning.

Noise Element: Goal 14.2
Encourage the reduction of noise from transportation-related noise sources, such as motor vehicles, aircraft operations, and railroad operations.

Noise Element: Goal 14.3
Protect residents from the negative effects of "spill over" or nuisance noise.

The noise policies specified in the Noise Element provide the guidelines necessary to satisfy these goals. To ensure that residents are not exposed to excessive noise levels (Goal 14.1), Policies 14.1.1 to 14.1.4 indicate that sensitive land uses such as housing, health care facilities, schools, libraries, and religious facilities should not experience exterior noise levels greater than 65 dBA Day-Night Noise Level (LDN) for exterior areas and 45 dBA LDN for interior areas. LDN is similar to the CNEL noise measurement methodology. As discussed in Section 2.2 the more conservative CNEL descriptor is used in this analysis, and therefore, the exterior noise level criteria of 65 dBA CNEL and interior noise level criteria of 45 dBA CNEL shall apply to sensitive land uses. City Noise Element Policies 14.2.1 to 14.2.19 outline the transportation-related guidelines and mitigation strategies the City uses to satisfy Goal 14.2. To protect residents from sources of operational and construction noise (Goal 14.3), the Noise Element includes Policies 14.3.1 to 14.3.8 to adopt a Noise Ordinance and ensure noise issues between land uses are reduced.

Land Use Compatibility
The noise criteria identified in the City of San Bernardino Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise sources. The compatibility criteria, shown on **Exhibit 4.14-2,** provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The Land Use Compatibility for Community Noise Exposure guidelines indicate that industrial land uses, such as the Project, are considered normally acceptable with noise levels below 75 dBA CNEL and conditionally acceptable with noise levels of less than 80 dBA CNEL.

Transportation Noise Standards
To encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations, and railroad movements (Goal 14.2), Table N-3 of the City of San Bernardino General Plan Noise Element, shown in **Exhibit 4.14-3**, identifies a maximum allowable exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments. While the City specifically identifies an exterior noise level limit for noise-sensitive residential land uses such as hotels, hospitals, schools, and parks, the City of San Bernardino does not maintain exterior noise standards for non-noise-sensitive land uses such as manufacturing, warehousing, wholesale, and utilities.

Exhibit 4.14-2
LAND USE COMPATIBILITY FOR COMMUNITY NOISE EXPOSURE

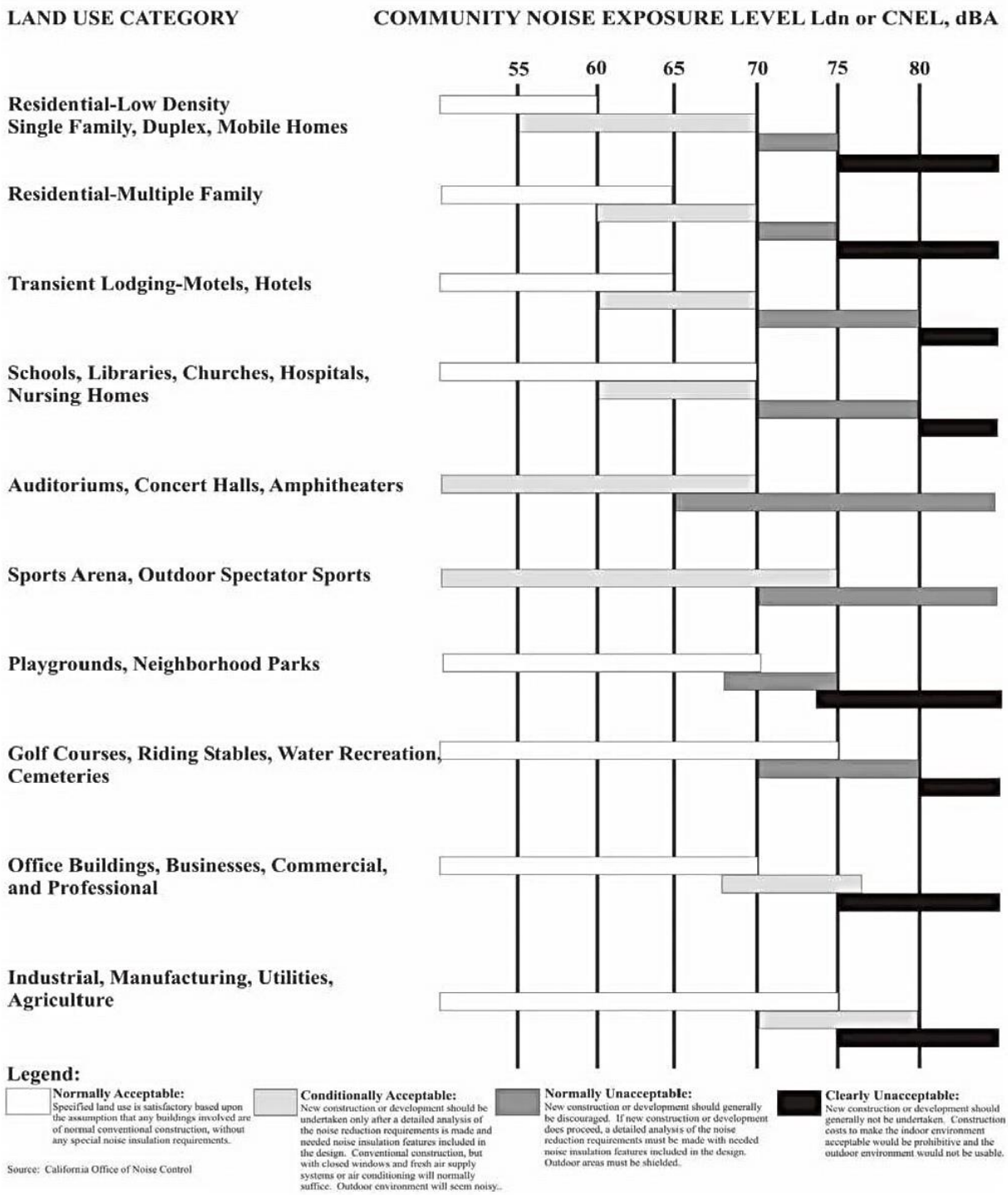


Exhibit 4.14-3
INTERIOR AND EXTERIOR NOISE STANDARDS

City of San Bernardino Municipal Code

Operational Noise Standards
To analyze noise impacts originating from a designated fixed location or private property such as the IVIC Project, operational source noise is typically evaluated against standards established under a City's Municipal Code. While the City maintains several policies in the Municipal Code Noise Control Ordinance to control the negative effects of nuisance noise, it does not identify specific exterior noise level limits. However, the policies in the Municipal Code Development Code, Chapter 19.20, *Property Development Standards* contain the exterior and interior noise level standards for residential land uses. Therefore, the stationary noise sources such as loading dock activity, roof-top air conditioning units, parking lot vehicle activities, trash enclosure activity,

and truck movements originating from a designated fixed location or private property, such as the commercial retail use within the IVIC Project area, are evaluated against the policies adopted in the City's Development Code.

The Project's operational noise impacts are governed by the City of San Bernardino Municipal Code, Section 8.54, included in Appendix 3.2 of the NIA. Section 8.54.060 states when such noises are an accompaniment and effect of a lawful business, commercial, *or industrial enterprise carried on in an area zoned for that purpose*…these activities shall be exempt (Section 8.54.060(B)). However, due to the Project's close proximity to residential land uses, located north of the IVIC Project area boundary, Development Code, Section 19.20.030.15(A), limits the operational stationary-source noise to an exterior noise level of 65 dBA for residential land uses. (14) The City of San Bernardino Development Code noise standards are shown in Table 4.14-2 and included in Appendix 3.2 of the NIA.

Table 4.14-2
CITY OF SAN BERNARDINO OPERATIONAL NOISE STANDARDS

Jurisdiction	Land Use	Exterior Noise Level Standard (dBA Leq)[1]
City of San Bernardino[1]	Residential	65

[1] Source: City of San Bernardino Development Code, Section 19.20.030.15(A) (Appendix 3.1 of the NIA).

Construction Noise Standards
To control noise impacts associated with the construction of the proposed IVIC Project, the City of San Bernardino Municipal Code has established limits to the hours of operation. Section 8.54.070 the City of San Bernardino Municipal Code, provided in Appendix 3.2 of the NIA, indicates that construction activity is restricted to the hours within 7:00 a.m. and 8:00 p.m.

City of Highland General Plan Noise Element
The City of Highland General Plan Noise Element (Chapter 7 of the General Plan) identifies several policies to minimize the impacts of excessive noise levels throughout the community. The Noise Element provides policy guidance which addresses the generation, mitigation, avoidance, and the control of excessive noise. To protect the City of Highland residents from excessive noise levels, the Noise Element contains the following three goals:

Noise Element: Goal 7.1
Protect sensitive land uses and the citizens of Highland from annoying and excessive noise through diligent planning and regulation.

Noise Element: Goal 7.2
Encourage the reduction of noise from transportation-related noise sources such as automobile and truck traffic.

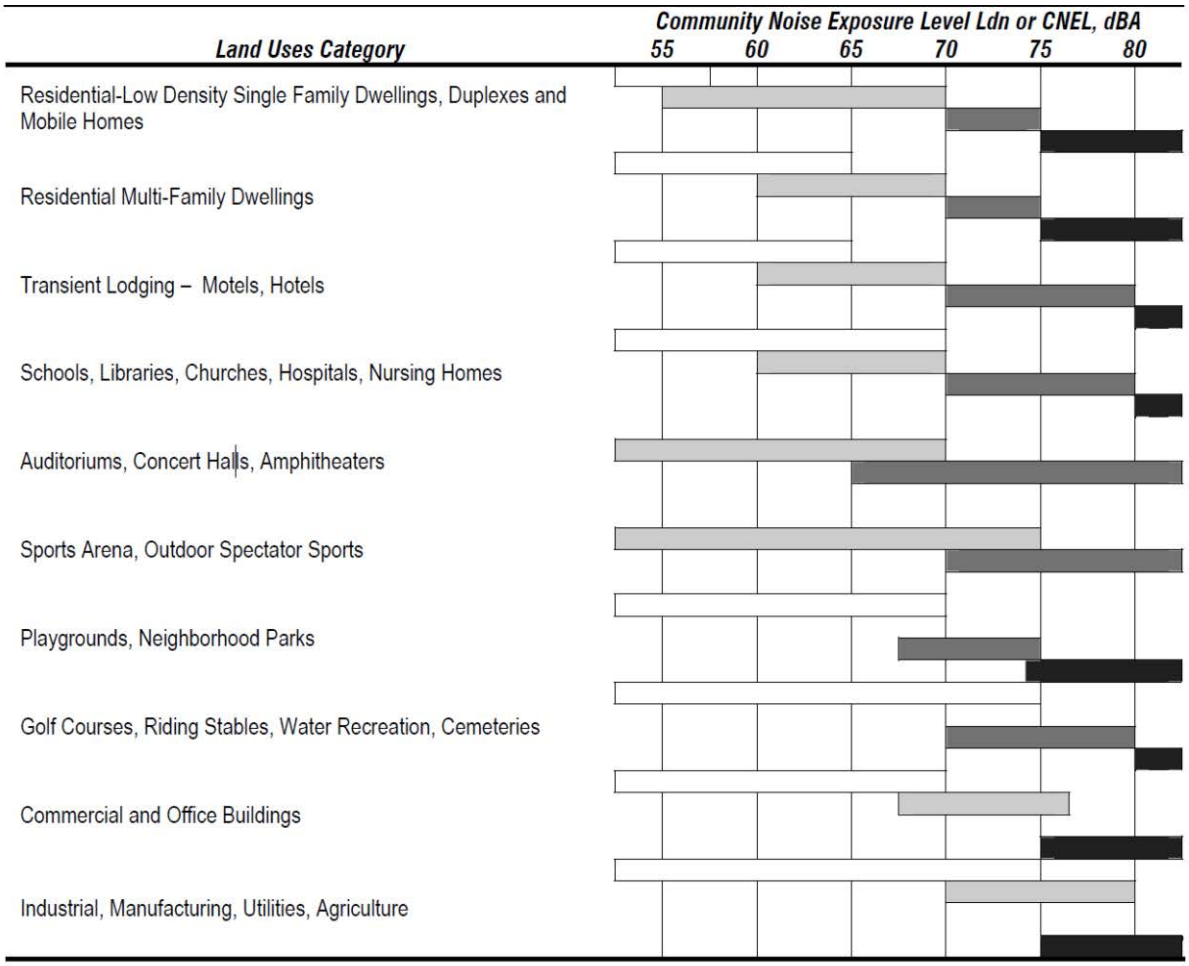
Noise Element: Goal 7.3
Protect residents from the effects of "spill over" or nuisance noise.

The Policies and Actions specified in the City of Highland Noise Element provide the guidelines necessary to satisfy these goals. For example, Goal 7.3, Action 1 indicates that construction, as a condition of approval, shall be limited to daytime hours between 7:00 a.m. to 6:00 p.m. on weekdays. The City of Highland Noise Element (Table 7.3) identifies noise and land use

guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown in **Exhibit 4.14-4**, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The *Community Noise and Land Use Compatibility* matrix describes categories of compatibility and not specific noise standards. Refer to **Exhibit 4.14-4**.

Exhibit 4.14-4
COMMUNITY NOISE AND LAND USE COMPATIBILITY



Explanatory Notes

Normally Acceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable:
New construction or development should generally not be undertaken. Construction cost to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

City of Highland Municipal Code

The City of Highland Municipal Code sets forth the City Standards, guidelines and procedures concerning the regulation of noise. The City categorizes land uses into designated noise zones assign appropriate interior and exterior noise standards. The appropriate interior and exterior noise standards are identified on Tables 7.1 and 7.2, of the General Plan. These tables are provided below as Table 4.14-3 and 4.14-4, interior and exterior noise standards, respectively.

Table 4.14-3
CITY OF HIGHLAND INTERIOR NOISE STANDARDS

Type of Land Use	CNEL (dBA)
Residential	45
Educational/churches, other institutional uses	45
General offices	50
Retail stores, restaurants	55
Manufacturing, warehousing	65
Agricultural	55
Sand and gravel operations	75

Source: Chapter 8.50, Noise Control, City of Highland Municipal Code

Table 4.14-4
CITY OF HIGHLAND EXTERIOR NOISE STANDARDS

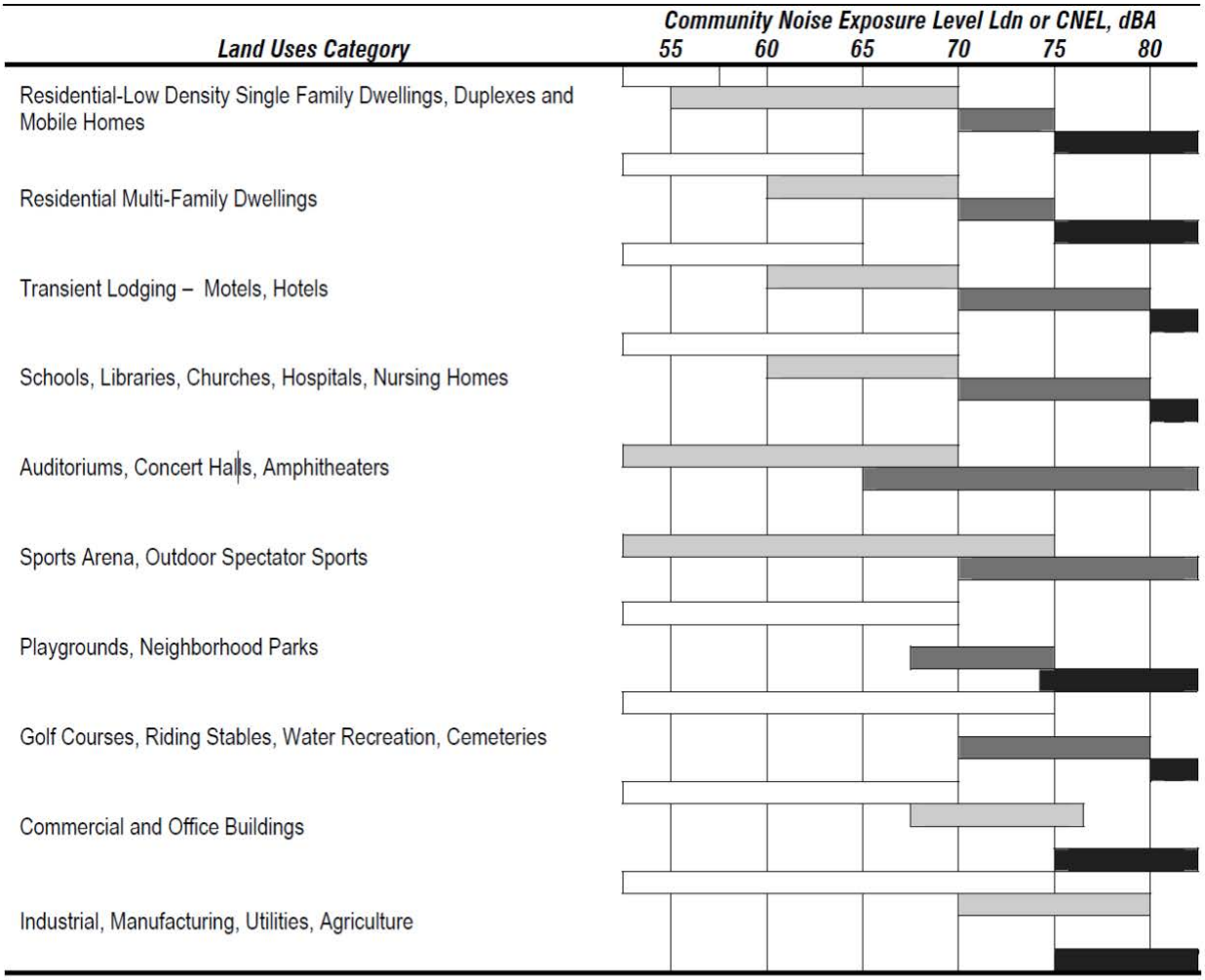
Type of Land Use	Time Interval	CNEL (dBA)
Residential	10 PM – 7 AM	55
	7 AM – 10 PM	60
Agricultural/Equestrian	10 PM – 7 AM	60
	7 AM – 10 PM	65
Commercial	10 PM – 7 AM	65
	7 AM – 10 PM	70
Manufacturing or warehousing	Any Time	75
Open Space	Any Time	75

Source: Chapter 8.50, Noise Control, City of Highland Municipal Code

Construction Noise Standards

The City of Highland General Plan Noise Element, Goal 7.3, Action 1 indicates that construction, as a condition of approval, shall be limited to daylight hours between 7:00 a.m. to 6:00 p.m. **Exhibit 4.14-5** indicates the noise levels are based on dBA CNEL, however, they are also provided based on the daytime and nighttime periods. Since CNEL levels are based on 24-hour noise levels, the noise level limits are assumed to be intended as hourly noise level limits, i.e., dBA L_{eq}.

Exhibit 4.14-5
COMMUNITY NOISE AND LAND USE COMPATIBILITY



Explanatory Notes

Normally Acceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable:
New construction or development should generally not be undertaken. Construction cost to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

4.14.3 Environmental Setting: Noise

4.14.3.1 Noise Terminology

Noise ca be simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on human health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring noise intensity is the “decibel” scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

4.14.2.2 Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The Cities and County rely on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

4.14.3.3 Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Shielding

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure.

4.14.3.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This

concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

4.14.3.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by up to 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source.

4.14.3.6 Land Use Compatibility with Noise

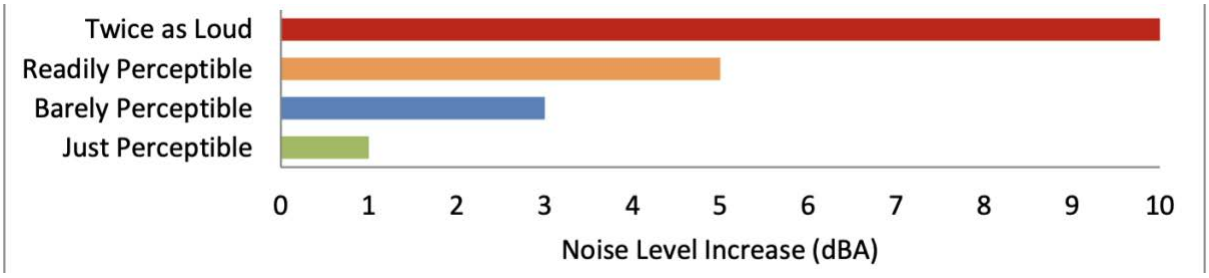
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized.

4.14.3.7 Community Response to Noise

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. According to research originally published in the Noise Effects Handbook, the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on **Exhibit 4.14-6**. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible.

Exhibit 4.14-6
NOISE LEVEL INCREASE PERCEPTION



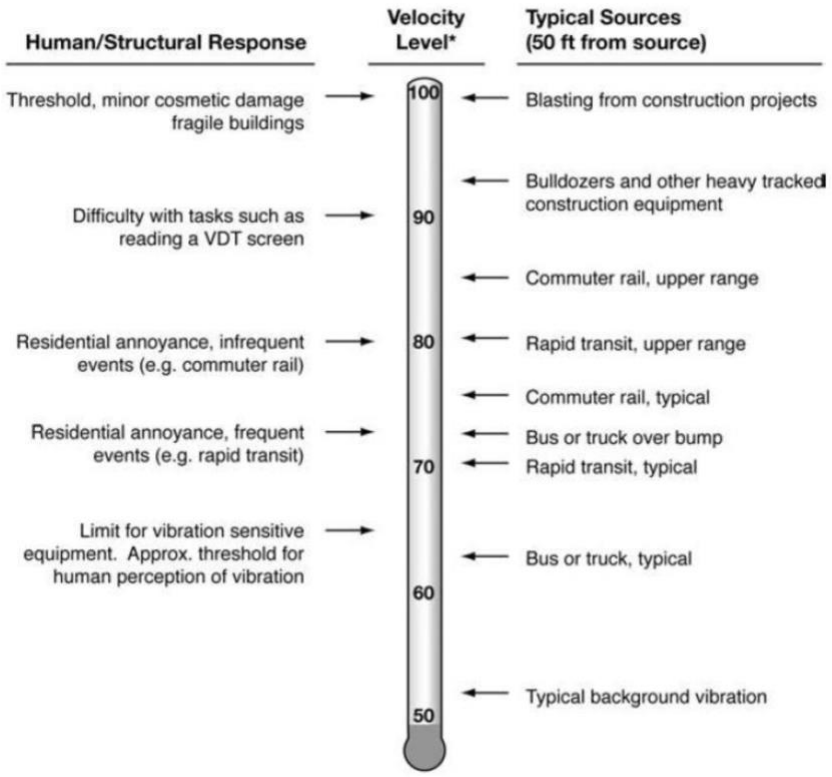
4.14.3.8 Vibration

Per the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground- borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon. Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration. In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structurers reduce vibration levels due to the coupling of the building to the soil. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV. Thus, either can be used in the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits. Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels. As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. **Exhibit 4.14-7** illustrates common vibration sources and the human and structural response to ground-borne vibration.

Exhibit 4.14-7
VIBRATION LEVEL INCREASE PERCEPTION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

4.14.3.9 Existing Noise Level Measurements

To assess the existing noise level environment, 24-hour noise level measurements were taken at seven locations in the IVIC Project study area. The receiver locations were selected to describe and document the existing noise environment within the IVIC Project study area. **Figure 4.14-1** provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, long-term noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, June 6, 2024. Appendix 5.1 of the NIA includes study area photos.

Measurement Procedure and Criteria

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013.

Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the IVIC Project area. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the IVIC Project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community.

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after IVIC Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels. This approach is necessary to calculate the temporary or permanent increase in *ambient* noise levels as required by the CEQA Guidelines Environmental Checklist.

Noise Measurement Results

The noise measurements presented below focus on the equivalent or the energy average hourly sound levels (L_{eq}) to describe the existing *ambient* conditions. The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 4.14-5 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

Table 4.14-5
24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located west of the site near the residence at 24974 5th St	66.0	61.1
L2	Located south of the site near the hotel at 25280 3rd St	73.4	70.6
L3	Located north of the site near the residence at 25416 6th St	62.9	60.4
L4	Located north of the site near the residence at 7888 Lankershim Ave	63.6	54.7
L5	Located east of the site near the residence at 26604 5th St	65.8	60.1
L6	Located north of the site near the residence at 7630 Victoria Ave	70.1	66.8
L7	Located east of the site near the commercial building at 7935 Central Ave	64.4	57.4
L1	Located west of the site near the residence at 24974 5th St	66.0	61.1

[1] See **Figure 4.14-1** for the noise level measurement locations.
[2] Energy (logarithmic) equivalent levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2 of the NIA. "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

Table 4.14-5 provides the equivalent noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 of NIA provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods.

Sensitive Receptor Locations

To assess the potential for short-term construction noise impacts, the following noise-sensitive receiver locations, as shown in **Figure 4.14-4**, were identified as representative locations for analysis. Noise-sensitive receivers were also included in all residential uses along the alignments and while a general assessment of the anticipated maximum noise levels is provided, the specific receiver locations are considered more representative of the actual noise impacts anticipated. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, seven receiver locations in the vicinity of the IVIC Project area were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA. Due to the additional attenuation from distance and the shielding of intervening structures, other sensitive land uses in the IVIC Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the IVIC Project boundary to each receiver location.

R1: Location R1 represents the existing noise-sensitive residence at 24992 E 5th St, approximately 65 feet north of 5th Street. Since there are no private outdoor living areas (backyards) facing the IVIC Project area, receiver R1 is placed at the building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing noise-sensitive residence at 25300 Third Street, approximately 65 feet north of Third Street. Receiver R2 is placed in the private outdoor living areas (backyard) facing the IVIC Project area. Since there are no private outdoor living areas (backyards) facing the IVIC Project area, receiver R3 is placed at the building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise-sensitive residence at 25416 6th St, approximately 50 feet north of Sixth Street. Since there are no private outdoor living areas (backyards) facing the IVIC Project area, receiver R3 is placed at the building façade. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing noise sensitive residence at 7888 Lankershim Avenue, approximately 60 feet north of Sixth Street and 50 feet Lankershim Avenue. Since there are no private outdoor living areas (backyards) facing the IVIC Project area, receiver R4 is placed at the building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment ambient noise environment.

R5: Location R5 represents the existing noise-sensitive residence at 26604 Fifth Street, approximately 60 feet north of Fifth Street. Since there are no private outdoor living areas (backyards) facing the street, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment ambient noise environment.

R6: Location R6 represents the existing noise-sensitive residence at 7630 Victoria Avenue, approximately 50 feet west of Victoria Avenue. Since there are no private outdoor living areas (backyards) facing the street, receiver R6 is placed at the building façade. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment ambient noise environment.

R7: Location R4 represents the existing noise-sensitive residence at 7888 Central Ave, approximately 30 feet west of Central Avenue. Since there are no private outdoor living areas (backyards) facing the street, receiver R7 is placed at the building façade. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment ambient noise environment.

For purposes of this analysis, and based on a survey of IVIC Project boundaries, the majority of receivers (e.g. residential buildings) are approximately 50 feet from the centerline of proposed improvement. Therefore, construction activity is evaluated as close as 30 feet from the centerline of the roadway construction activities.

4.14.4 Thresholds of Significance

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

NOISE-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

NOISE-2 Generation of excessive ground-borne vibration or ground-borne noise levels?

NOISE-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use

airport, would the project expose people residing or working in the project area to excessive noise levels?

4.14.4.1 Noise Level Increases (Threshold A)

Noise level increases resulting from the IVIC Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

The Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration and Caltrans.

4.14.4.2 Noise Level Increases (Threshold B)

The vibration impacts originating from the construction of the Inland Valley Infrastructure Corridor, vibration-generating activities are appropriately evaluated using the City of San Bernardino threshold to assess potential temporary construction-related impacts at nearby receiver locations.

The City of San Bernardino Municipal Code identifies an operational vibration level threshold of 0.2 in/sec PPV

4.14.4.3 Airport Noise (Threshold C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The IVIC Project area is located within two miles of an airport or airstrip. The closest airport is the San Bernardino International Airport, located immediately south of the IVIC Project area. As such, the IVIC Project area would be exposed to high noise levels from airport operations. However, since the Project is an infrastructure project and does not propose any occupied structures, the Project would not expose anyone to excessive noise associated with airport operations. Therefore, impacts are considered *less than significant,* and no further noise analysis is necessary to address Appendix G of the CEQA Guidelines, Noise Threshold C.

San Bernardino International Airport (SBIA)

The San Bernardino International Airport (SBIA) is located south of the IVIC Project area. This places the IVIC Project area within the SBIA Influence Area. The SBIA was initially built as Norton Air Force Base by the United States Air Force (USAF). Under the Base Realignment and Closure Act of 1990, Norton Air Force base was closed and disposed of by the USAF for a civilian aviation reuse in 1994 and transferred to the San Bernardino International Airport Authority (SBIAA). The SBIAA operates the facility as a public-use general aviation airport that accommodates aircraft ranging from piston-powered propeller aircraft to multi-engine jet aircraft including large air cargo aircraft. The latest aircraft noise contour boundaries for the SBIA were published by the SBIAA on July 2, 2019, as part of the Eastgate Air Cargo Facility Final Environmental Assessment. Figure 4-6 of the Final Environmental Assessment describes the proposed Project CNEL Contours for the SBIA. The future SBIA noise level contours boundaries representing approximately 87,500 annual aircraft operations are shown on **Figure 4.14-2**.

As shown on **Figure 4.14-2,** east of about Lankershim Avenue, the IVIC Project boundaries fall within either the 65, 70, or 75 dBA CNEL noise level contours of the SBIA.

4.14.4.8 Significance Criteria Summary

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed Project. Table 4.14-6 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

Table 4.14-6
SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive[1]	If ambient is < 55 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 55 - 60 dBA CNEL	≥ 3 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL	≥ 2 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL	≥ 1 dBA CNEL Project increase	
Operational	Residential	Exterior Noise Level Limit[2]	55 dBA L_{eq}	45 dBA L_{eq}
	Noise-Sensitive[1]	If ambient is < 55 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		If ambient is 55 - 60 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA L_{eq}	≥ 2 dBA L_{eq} Project increase	
		If ambient is < 65 dBA L_{eq}	≥ 1 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Permitted between 7:00 a.m. to 7:00 p.m.; except Sundays and Federal holidays.[3]		
		Noise Level Threshold[1]	80 dBA L_{eq}	n/a
		Vibration Level Threshold[4]	0.2 PPV in/sec	n/a

[1] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[2] County of San Bernardino Development Code, Title 8, Section 83.01.080 (Appendix 3.1 of the NIA)
[3] Section 83.01.080(g)(3) of the County of San Bernardino County Code.
[4] Section 83.01.090(a) of the County of San Bernardino County Code.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. "n/a" = construction activities are not planned during the nighttime hours; "PPV" = peak particle velocity.

4.14.5 Environmental Impacts

NOISE-1 Would the project generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Off-Site Traffic Noise Impacts

The off-site noise impacts associated with the IVIC Project would be impacts to land uses adjacent to the alignments proposed for improvement. Since the Project would not generate substantial new traffic, as the only operational trips would occur to periodically to maintain the proposed infrastructure facilities, the potential impacts are based primarily on the change in proximity of the lanes to nearby receivers.

Figure 4.14-3 shows the proposed changes in lanes associated with the IVIC Project. Based on the proposed changes in lanes and roadway widths, traffic, regardless of any traffic volume increase, would potentially be located closer to existing noise-sensitive receivers, resulting in increases in noise levels. To determine the increase from the IVIC Project only effects, i.e. the roadway widening, multiple model runs were developed based on a static traffic volume and speed with only the width of the roadway increased to accommodate the additional lanes. Based on the evaluation, increasing a roadway from 2-4 lanes would result in an approximate 2 dBA increase at the receivers fronting these roadways. However, increasing the lanes by 4 or more lanes would result in noticeable increases of 3 to 5 dBA. Based on the increase in lanes shown in **Figure 4.14-3**, substantial increases would occur along 3rd Avenue between N Leland Norton

Way and Victoria Avenue, Del Rosa Drive between 3rd Street and 6th Street, and Sterling Avenue between 5th Street and 6th Street. Thus, mitigation is necessary to avoid a significant and unavoidable impact for some area roadway expansions.

The study area roadway segments that would exceed the established thresholds of significance criteria outlined on Table 4.14-6 are limited to Del Rosa Drive so between 3rd Street and 6th Street. All other roadway segments will experience off-site traffic noise level impacts that are considered less than significant either due to a lower noise level increase, or a lack of sensitive receivers along the affect roadway segment. The off-site traffic noise analysis indicates that IVIC Project traffic noise level increases on these two study area roadway segments will exceed 3 dBA and may exceed 5 dBA.

To reduce the potentially significant Project traffic noise level increases on the study area roadway segments for the traffic conditions mentioned above, potential noise mitigation measures are identified in this analysis. Potential mitigation measures discussed below include rubberized asphalt hot mix pavement and off-site noise barriers for the existing noise sensitive residential land uses adjacent to impacted roadway segments.

Rubberized Asphalt

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the off-site Project-related traffic noise level increases. To reduce traffic noise levels at the noise source, Caltrans research has shown that rubberized asphalt can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement, especially when traveling at higher and constant speeds.

According to research conducted by Caltrans and the Canadian Ministry of Transportation and Highways a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

The effectiveness of reducing traffic noise levels is higher on roadways with low percentages of heavy trucks, since the heavy truck engine and exhaust noise is not affected by rubberized alternative pavement due to the truck engine and exhaust stack height above the pavement itself. Per Caltrans guidance a truck stack height is modeled using a height of 11.5 feet above the road. With the primary off-site traffic noise source consisting of heavy trucks with a stack height of 11.5 feet off the ground, the tire/pavement noise reduction benefits associated rubberized asphalt will be primarily limited to autos.

While the off-site Project-related traffic noise level increases would theoretically be reduced with the 4 dBA reduction provided by rubberized asphalt, the reduction would not provide reliable benefits for the noise levels generated by heavy truck traffic. This is, as previously stated, due to the noise source height difference between automobiles and trucks. Since the use of rubberized asphalt would not lower the off-site traffic noise levels below a level of significance, rubberized asphalt is not proposed as mitigation for the IVIC Project and the off-site Project-related traffic noise level increases at adjacent land uses under Existing Conditions would remain *significant.*

Conclusion: Rubberized asphalt would not fully reduce noise generated by the land expansions to a level of less than significant, and therefore is not further considered in the DEIR.

Off-Site Noise Barriers

Since existing and future noise-sensitive receiving land uses are located adjacent to the impacted roadway segments in the IVIC Project study area, off-site noise barriers were considered in this analysis as a potential traffic noise mitigation measure to reduce the impacts. Off-site noise barriers are estimated to provide a readily perceptible 5 dBA reduction which, according to the FHWA, is simple to attain when blocking the line-of-sight from the noise source to the receiver. As previously discussed, Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. Therefore, any exterior noise barriers at receiving noise sensitive land uses experiencing Project-related traffic noise level increases would need to be high enough and long enough to block the line-of-sight from the noise source (at 11.5 feet high per Caltrans) to the receiver (at 5 feet high per FHWA guidance) in order to provide a 5 dBA reduction per FHWA guidance.

Based on the configuration of the majority of lots adjacent to Del Rosa Drive, barriers located along the improved road may be effective. Therefore, a noise abatement measure (**MM NOI-1**) has been included that recommends the IVIC Project evaluate barrier locations during the initial and final roadway design process to reduce noise levels to acceptable levels. With implementation of this mitigation measure, off-site traffic noise impacts would be reduced to comply with local daytime and nighttime noise level limits and impacts would be less than significant.

Construction Impacts

Noise generated by the IVIC Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The IVIC Project construction noise sources are expected to include a combination of loaders, cranes, welders, drill rigs, diesel generators, concrete pumps and mixture of other construction equipment.

As discussed under the Project Description, in order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- **Project Category 1: Roadway Installation.** Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter, up to 300 linear feet per day was assumed to be able to be constructed.
- **Project Category 2: Channel Improvement Installation.** Installation of one-third of the ultimate City Creek Bypass Channel design (length installed each anticipated up to 300 linear feet per day was assumed to be able to be constructed.
- **Project Category 3: Storage Reservoir.** Installation of a 3.5 MG storage reservoir
- **Project Category 4: Extraction Well.** Installation of a new extraction well
- **Project Category 5: Sewer Installation.** Installation of 2,500 feet of sewer, up to 300 linear feet per day, was assumed to be able to be constructed.

Reference Construction Noise Levels

This construction noise analysis was prepared using reference construction equipment noise levels from the FHWA published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. The usage factor is a key input variable of the RCNM noise prediction model that is used to calculate the average L_{eq} noise levels using the reference L_{max} noise levels measured at 50 feet. Table 4.14-7 provides a summary of the reference average L_{eq} noise levels used to describe each stage of construction.

Table 4.14-7
CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})	Reference Power Level (dBA L_w)
Pavement Removal/ Demolition	Concrete Saw	83	86.3	118.0
	Impact Hammer (hoe ram)	83		
	Front End Loader	75		
Grading/Site Preparation	Tractor	80	84.0	115.6
	Backhoe	74		
	Grader	81		
Road Base/Utilities	Scraper	80	83.3	114.9
	Excavator	77		
	Dozer	78		
Paving	Paver	74	78.8	110.5
	Concrete Mixer Truck	75		
	Roller	73		
Sewer Construction	Excavator	77	79.6	111.3
	Front End Loader	75		
	Welder/Torch	70		
Well Drilling	Drill Rig	82	86.2	117.8
	Generator	80		
	Compressor	82		

[1] FHWA Road Construction Noise Model.
[2] Update of noise database for prediction of noise on construction and open site expressed in hourly average Leq based on estimated usage factor.

Because few details are known at this time regarding the construction of specific components of the IVIC Project, it is assumed that construction of any IVIC Project component may occur simultaneously. As a conservative measure, and in order to identify a reasonable worst-case scenario, this analysis assumes that the IVIC Project would construct roadway improvements, with sewer improvements, and channel improvements simultaneously. However, the extraction

well and storage reservoir locations are not known at this time but are not anticipated to occur near active roadway, sewer, and channel improvements.

Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. A default ground attenuation factor of 0.5 was used in the CadnaA noise prediction model to account for mixed hard and soft site conditions.

Construction Noise Levels

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the IVIC Project construction noise level impacts at the nearby sensitive receiver locations were completed for the roadway, sewer, and channel improvements. The extraction well and storage reservoir locations are not known at this time; thus, these activities are evaluated separately.

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Roadway, sewer, and channel activities were modeled, assuming activities would occur in segments of approximately 50 feet by 300 feet. Additionally, due to the distances associated with the improvements and the number of receiver locations, noise levels are predicted at a common distance of 30 feet from these activities assuming the IVIC Projects would maintain one-way traffic. To assess a reasonable worst-case construction scenario and account for the dynamic nature of construction activities, the IVIC Project construction noise analysis models the equipment combination with the highest reference level as multiple moving point sources within the construction area. Based on the average setback from roadways and the right-of-way, construction would occur within 30 feet of noise-sensitive residential receivers along most of the roadway improvements, sewer line improvements, and the City Creek bypass channel improvements. At a distance of 30 feet, construction activity is estimated to generate noise levels up to 79.1 dBA L_{eq} for segments with paving and 75.6 dBA L_{eq} for the sewer segments without paving as well within the unfinished City Creek bypass channel west of Third Street. Appendix 8.1 of the NIA includes the CadnaA construction noise model inputs. These noise levels would not exceed the applicable daytime noise level limit of 80 dBA L_{eq}. Therefore, no mitigation is required for daytime construction activities associated with roadway improvements, sewer improvements, and the City Creek bypass channel improvements.

The noise levels shown in Table 4.14-8 represent the highest construction noise levels that are expected at representative noise-sensitive receiver locations shown in **Figure 4.14-4**. The modeled results are based on a conservative model with simultaneous activities along all segments of the IVIC Project alignment. Thus, the results shown in Table 4.14-8 are based on the activities occurring in front of each receiver at the same time. As shown, with these assumptions, construction noise levels are anticipated to range from 67.8 to 72.1 dBA L_{eq} at the modeled representative receiver locations. Appendix 8.1 of the NIA includes the detailed CadnaA construction noise model inputs. These noise levels would not exceed the applicable daytime noise level limit of 80 dBA L_{eq}. Therefore, no mitigation is required for daytime construction activities.

Table 4.14-8
CONSTRUCTION EQUIPMENT NOISE LEVELS

Receiver Location[1]	Construction Noise Levels (dBA L_{max})					
	Pavement Removal/ Demolition	Grading/Site Preparation	Road Base/Utilities	Paving	Sewer Construction	Highest Levels[2]
R1	69.9	67.6	66.8	65.4	62.4	69.9
R2	69.4	67.1	66.3	64.9	61.9	69.4
R3	71.7	69.4	68.6	67.2	64.2	71.7
R4	72.1	69.8	69.0	67.6	64.6	72.1
R5	71.0	68.7	67.9	66.5	63.5	71.0
R6	69.4	67.1	66.3	64.9	61.9	69.4
R7	67.8	65.5	64.7	63.3	60.3	67.8

[1] Noise receiver locations are shown in Figure 4.14-4
[2] Construction noise level calculations are based on distance from the construction activity, measured from the IVIC Project area boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 1 of the NIA.

To evaluate whether the IVIC Project roadway, sewer, and City Creek bypass channel improvements will generate potentially significant short-term noise level impacts at specific nearby receiver locations, a construction-related daytime noise level limit of 80 dBA L_{eq} is used to assess the impact. The construction noise analysis shows that the nearby receiver locations will satisfy the daytime significance threshold during IVIC Project construction activities. Therefore, the noise impacts due to IVIC Project construction noise is considered *less than significant* at all receiver locations.

Table 4.14-9
CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	69.9	80	No
R2	69.4	80	No
R3	71.7	80	No
R4	72.1	80	No
R5	71.0	80	No
R6	69.4	80	No
R7	67.8	80	No

[1] Noise receiver locations are shown on **Figure 4.14-4**
[2] Highest construction noise level from the primary Project construction activity area to nearby receiver locations.
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

EVWD Well Development
Well-drilling activities noise levels are expected to exceed the daytime and nighttime noise level limit at the nearest receiver locations within 600 feet and 900 feet, respectively. Since the exact locations of these activities are unknown, and these activities would occur for 24-hours a day for

up to two weeks, without mitigation, these activities may exceed the applicable noise level limit during the daytime or nighttime. This would be considered a significant impact. Therefore, mitigation is required for well-drilling activities.

To demonstrate compliance with the nighttime noise level limit, a scenario where well-drilling activities would occur within 300 feet of residences was developed. Assuming the residence is 150 feet from the well location, using the well drilling noise levels shown in Table 8-1, and assuming the drill rig has a height of 14 feet, a 20-foot-high barrier surrounding the drilling rig/well location, such that the construction activities, including the top of the drill rig, are completely shielded from the residences, the noise levels would be reduced to a maximum noise level of 55 dBA L_{eq} at the residence during the nighttime. Other effective measures could include erecting a taller barrier closer to the drill rig and a shorter barrier around all other activities, covering or blocking the drill rig and other significant noise sources with sound blankets. Therefore, well drilling can be mitigated with proper design once the final locations are known. Noise abatement **MM NOI-1** is recommended to reduce noise impacts to less than significant. With the implementation of the **MM NOI-1**, noise levels would be reduced to comply with local daytime and nighttime noise level limits and impacts would be less than significant.

EVWD Reservoir
Storage reservoir construction noise levels are expected to exceed the daytime and nighttime noise level limit at the nearest receiver locations within 50 feet and 150 feet, respectively. Nighttime exceedances are primarily anticipated during concrete pours. Since the exact locations of these activities are unknown, and these activities would occur 24 hours a day for up to two weeks, without mitigation, these activities may exceed the applicable noise level limit during the daytime or nighttime. This would be considered a significant impact. Therefore, mitigation is required for the storage reservoir construction activities.

To demonstrate compliance with the nighttime noise level limit, a scenario where a nighttime concrete pour would occur within 100 feet of residences was developed. Assuming the residence is 100 feet from the location of trucks and pumps, using the paving noise levels shown in Table 4.14-8 and assuming the concrete pour activities have an average height of 8 feet, a 16-foot-high barrier shielding the location of trucks and pumps, such that the construction activities are completely shielded from the residences, the noise levels would be reduced to a maximum noise level of 55 dBA L_{eq} at the residence during the nighttime. Another effective measure could simply be locating equipment further away and using pump hoses. Therefore, construction on the reservoir, including nighttime concrete pours, can be mitigated with properly designed noise abatement measures once the final locations of the equipment are known. Noise abatement **MM NOI-3** is recommended to reduce noise impacts to less than significant. With the implementation of the **MM NOI-3**, noise levels would be reduced to comply with local daytime and nighttime noise level limits and impacts would be less than significant.

Conclusion

Construction-related impacts for the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would be less than significant without the need for mitigation. The only operational noise sources of any significance are off-site traffic noise related, as any mechanical equipment associated with the EVWD Well and Reservoir are expected to be placed within structures or underground to minimize operational noise sources. Off-site traffic noise can be minimized to a level of less than significant through the implementation of **MM NOI-1**. EVWD Well Development and Reservoir construction noise can be minimize to a level of less than significant

through **MMs NOI-2 and NOI-3.** Thus, overall temporary and permanent noise generated by the IVIC Project would be less than significant through the implementation of mitigation.

Mitigation Measures:

NOI-1 ***During the initial design phase for roadway improvements along Del Rosa Drive, the Project will conduct a noise study to identify noise levels and potential locations for barriers necessary to reduce noise impacts. The analysis should evaluate the effectiveness of different noise barrier locations, such as along the right-of-way, the parcel line of the receiving property, and any intervening high point. The initial noise analysis should be updated when plans are final and all noise reduction calculations should be checked with final grading and wall locations.***

NOI-2 ***To comply with the daytime and nighttime noise level limits, a focused technical noise analysis of the drilling activities would be prepared when drilling activity occurs within 2,000 feet of residences. The focused well-drilling noise analysis should, at a minimum:***

- ***provide a detailed description of activities;***
- ***identify ambient noise levels near the closest affected residences;***
- ***determine predicted noise levels at local residences from drilling rig activities, including the drill top drive, compressors, generator sets, mud pumps, roll-off bins, pipe trailers, and field offices; and,***
- ***evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.***

NOI-3 ***To comply with the nighttime noise level limit during the nighttime hours noise, a focused noise analysis of the construction activities would be required surrounding the reservoir construction site locations when within 100 feet of residences. The focused reservoir noise analysis should, at a minimum:***

- ***provide a detailed description of activities;***
- ***identify ambient noise levels near the closest affected residences;***
- ***determine predicted noise levels at local residences from construction activities, including the excavation activities and nighttime concrete pours; and,***
- ***evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.***

Level of Significance After Mitigation: Less Than Significant

MM NOI-1 would minimize off-site traffic noise through future evaluation of noise generated by roadway land expansion projects and would require solutions that would minimize off-site traffic noise below significance thresholds, and therefore **MM NOI-1** would ensure that off-site traffic noise would be less than significant.

MM NOI-2 would require a well drilling noise analysis for the future EVWD Well Development Project in order to ensure that proper noise mitigation strategies are employed to minimize construction noise impacts below significance thresholds. Implementation of **MM NOI-2** would ensure that well drilling noise would be less than significant.

MM NOI-3 would require a reservoir construction noise analysis for the future EVWD Reservoir Project in order to ensure that proper noise mitigation strategies are employed to minimize construction noise impacts below significance thresholds. Implementation of **MM NOI-2** would ensure that reservoir construction noise would be less than significant.

NOISE-2 Would the Project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Construction Vibration Assessment

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 4.14-10. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the Caltrans. To describe the vibration impacts Caltrans provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

Table 4.14-10
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Hoe Ram (Breaker)	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from typical construction activities would cause only intermittent or transient, localized intrusion. The proposed IVIC Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to building, the vibration is usually short-term (transient) and is not of enough magnitude to cause building damage.
- Trucks: Trucks hauling building materials to construction sites can be sources of transient vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

To assess the IVIC Project construction vibration levels, this analysis describes both the transient vibration levels associated with typical construction roadway equipment.

Based on the levels presented in Table 4.14-10, above, vibratory rollers would generate the greatest vibration levels and would occur as close as 20 feet from residents fronting roadway construction activities. At a distance of 20 feet from the highest vibration source, the construction vibration velocity levels are estimated to be 0.29 PPV (in/sec). Vibrations at receivers further away would be lower than those experienced at 20 feet. Based on the vibration standards outlined in

Table 4.14-6, the typical IVIC Project construction vibration levels will satisfy the transient human annoyance and building damage thresholds. Therefore, the vibration impacts due to IVIC Project construction activities are considered less than significant.

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

NOISE-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Please refer to the discussion under **Subsection 4.14.4.3**. Ultimately, as shown on **Figure 4.14-2,** east of about Lankershim Avenue, the IVIC Project boundaries fall within either the 65, 70, or 75 dBA CNEL noise level contours of the SBIA. Standard building construction practices required under the State of California Green Building Standards Code (CALGreen) typically provide up to 25 dBA of attenuation for any necessary indoor uses developed under the IVIC Project. With respect to noise generated by the SBIA facilities and activities, application of standard CALGreen construction practices would yield acceptable Project interior noise levels of approximately 45 dBA Leq. Furthermore, most projects proposed under the IVIC Project, including the well, the storage reservoir, sewer installation, City Creek Bypass Channel, and roadway improvements, would be unmanned and would require infrequent maintenance visits that likely would not require extended exposure to aircraft noise if projects were located near airports or airstrips. The implementing agencies would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise. These regulations would reduce employee exposure to high noise levels such that operational activities would not expose employees to excessive noise levels. Therefore, operational impacts related to aircraft noise would be less than significant. The IVIC Project would not be adversely affected by SBIA noise, nor would the IVIC Project contribute to or result in adverse airport noise impacts.

4.14.6 Mitigation Measures

The following mitigation measures would reduce noise related impacts to a level of less than significant:

NOI-1 During the initial design phase for roadway improvements along Del Rosa Drive, the Project will conduct a noise study to identify noise levels and potential locations for barriers necessary to reduce noise impacts. The analysis should evaluate the effectiveness of different noise barrier locations, such as along the right-of-way, the parcel line of the receiving property, and any intervening high point. The initial noise analysis should be updated when plans are final and all noise reduction calculations should be checked with final grading and wall locations.

NOI-2 To comply with the daytime and nighttime noise level limits, a focused technical noise analysis of the drilling activities would be prepared when drilling activity occurs within 2,000 feet of residences. The focused well-drilling noise analysis should, at a minimum:

- ***provide a detailed description of activities;***
- ***identify ambient noise levels near the closest affected residences;***
- ***determine predicted noise levels at local residences from drilling rig activities, including the drill top drive, compressors, generator sets, mud pumps, roll-off bins, pipe trailers, and field offices; and,***

- ***evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.***

NOI-3 ***To comply with the nighttime noise level limit during the nighttime hours noise, a focused noise analysis of the construction activities would be required surrounding the reservoir construction site locations when within 100 feet of residences. The focused reservoir noise analysis should, at a minimum:***

- ***provide a detailed description of activities;***
- ***identify ambient noise levels near the closest affected residences;***
- ***determine predicted noise levels at local residences from construction activities, including the excavation activities and nighttime concrete pours; and,***
- ***evaluate and recommend various mitigation strategies, including temporary barriers, time restrictions for various activities, as well as equipment placement; to reduce noise levels to comply with local daytime and nighttime noise level limits.***

4.14.7 Cumulative Impacts

Based on the impact significance criteria described in **Subsection 4.14.5**, the IVIC Project contributions to the cumulative noise environment are as follows. Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the IVIC Project areas. The construction associated with the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would be less than significant without the need for mitigation, and cumulative impacts thereof would be ***less than significant***. Cumulative contributions to noise as a result of construction of the EVWD Well Development and Reservoir can be minimized to a level of less than significant through the implementation of **MMs NOI-2 and NOI-3,** and therefore cumulative construction impacts thereof would be ***less than significant with the implementation of mitigation*****.** IVIC Project construction vibration levels will satisfy the typical Project construction vibration levels will satisfy the transient human annoyance and building damage threshold. Therefore, the cumulative vibration impacts due to Project construction are considered ***less than significant***. Furthermore, the analysis shows that the unmitigated Project-related off-site traffic noise levels can be minimized to a level of less than significant through the implementation of **MM NOI-1**, and therefore cumulative off-site impacts are considered ***less than significant with the implementation of mitigation***. Thus, no cumulatively considerable noise impacts are anticipated.

4.14.8 Significant and Unavoidable Impacts

The evaluation of noise and vibration presented in the preceding analysis demonstrates that neither construction nor operation of individual projects under the proposed IVIC Project would result in the exceedance of the identified noise and vibration thresholds after implementation of the recommended mitigation measures. Furthermore, although individual projects implemented under the IVIC Project may be located in close proximity to the SBIA, compliance with existing regulations and the infrequent nature of operation and maintenance activities would minimize to a level of insignificance the potential for the exposure of future employees to excessive noise levels from airport operations. Therefore, no unavoidable significant impact to noise and vibration would result from implementing the proposed IVIC Project.

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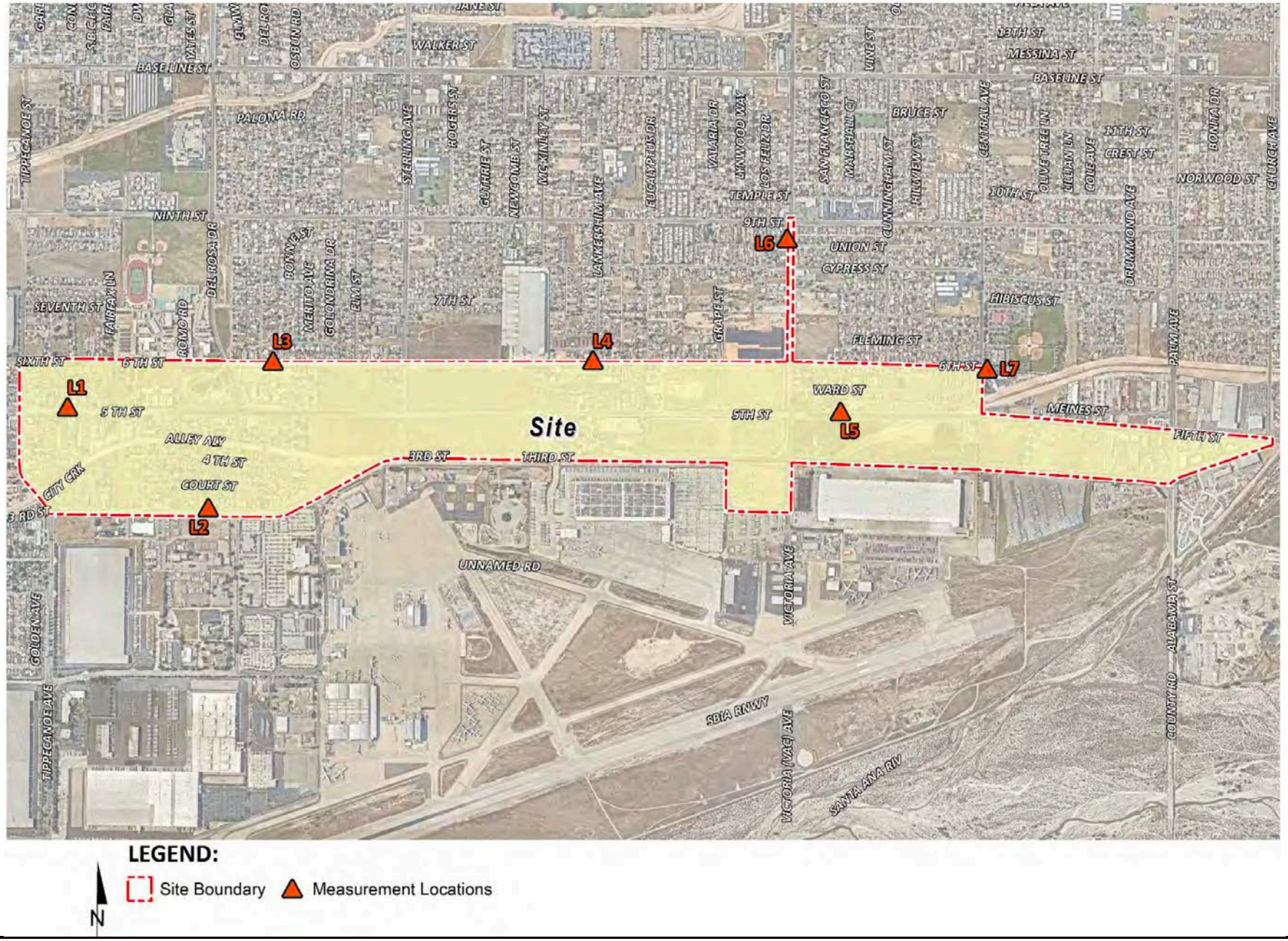

FIGURE 4.14-1

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Environmental Consultants

Noise Measurement Locations

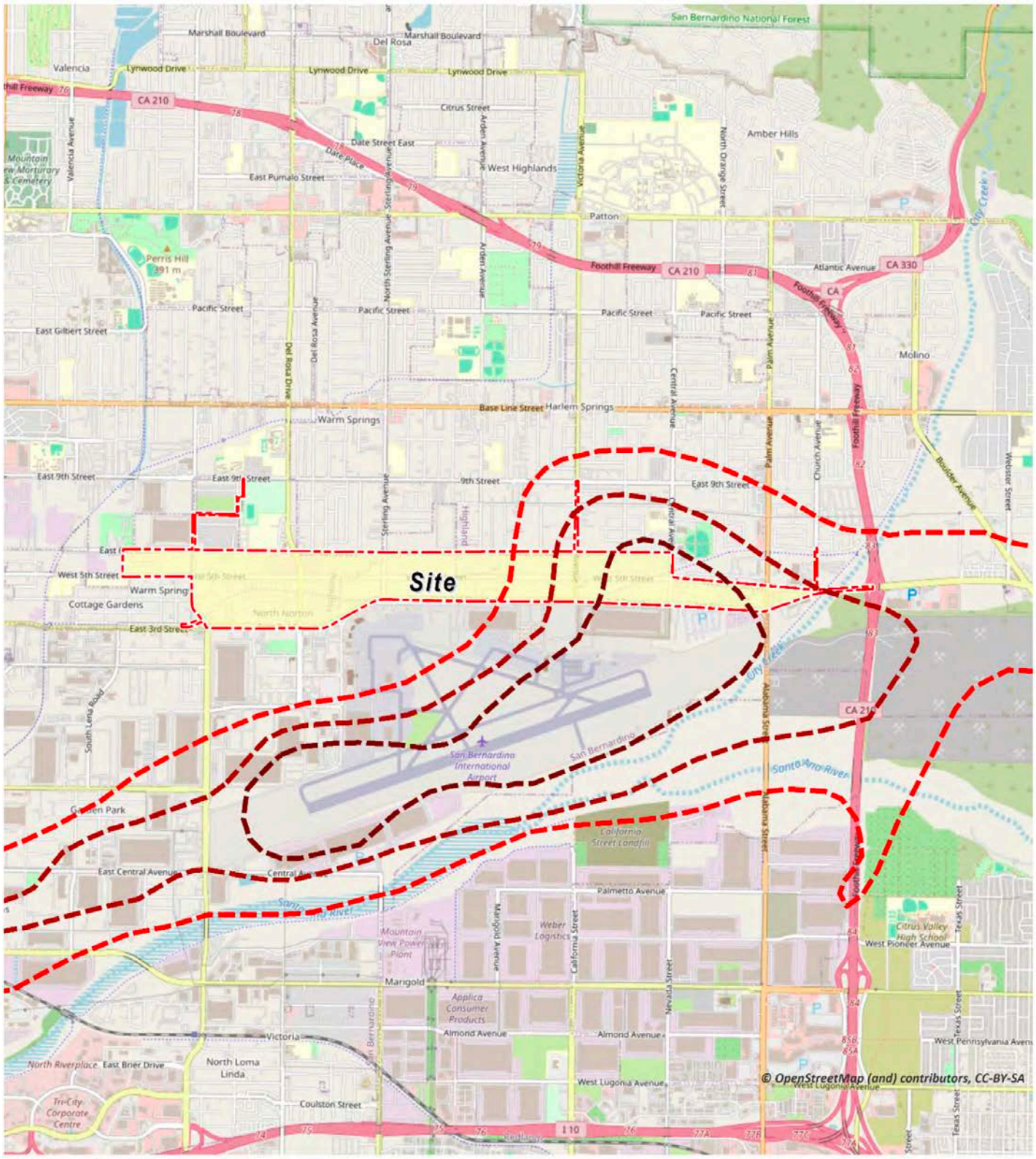

FIGURE 4.14-2

Tom Dodson & Associates
Environmental Consultants

SBIA Noise Contours

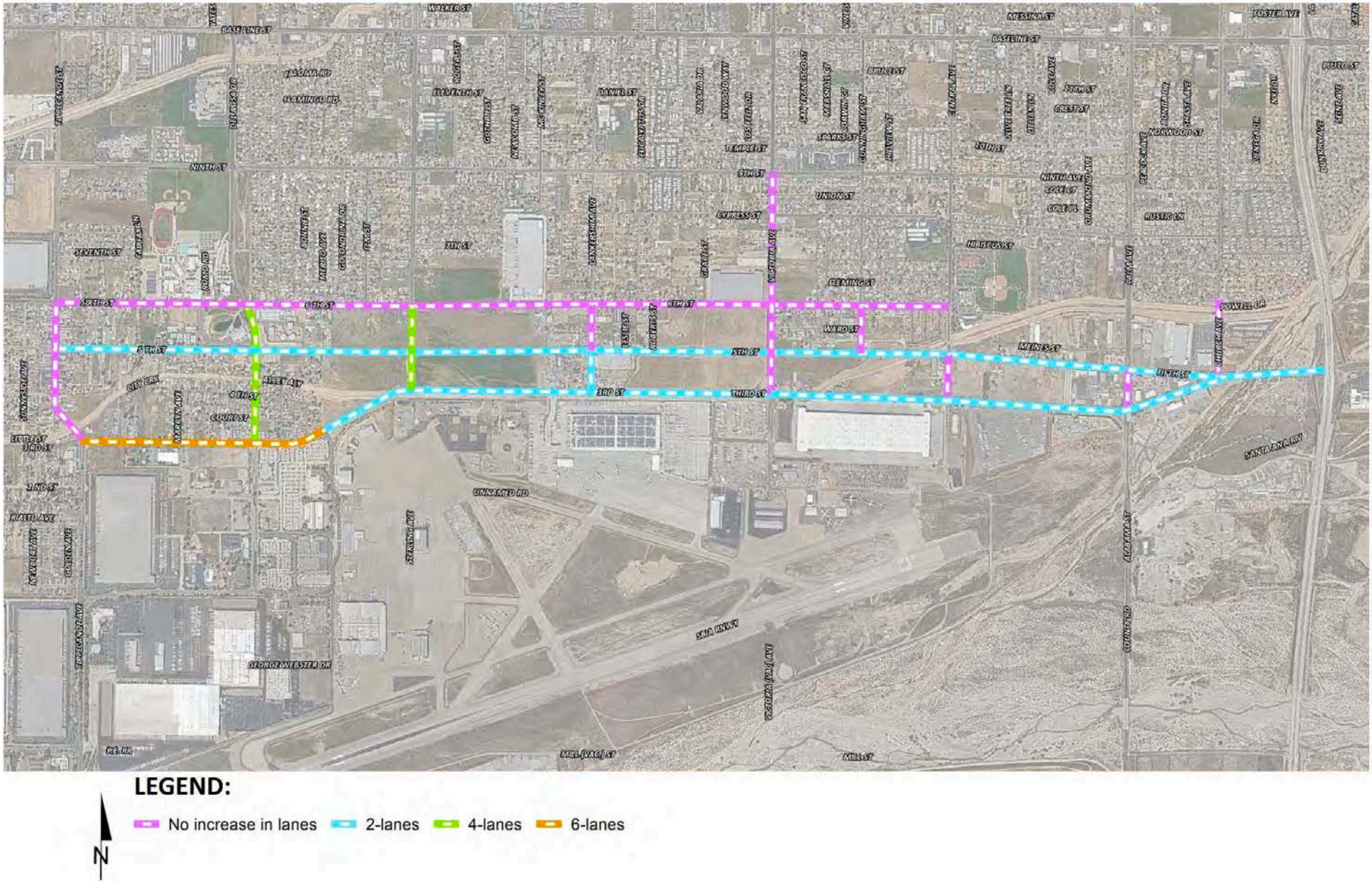

FIGURE 4.14-3

Tom Dodson & Associates
Environmental Consultants

IVIC Project Area Lane Configuration Changes

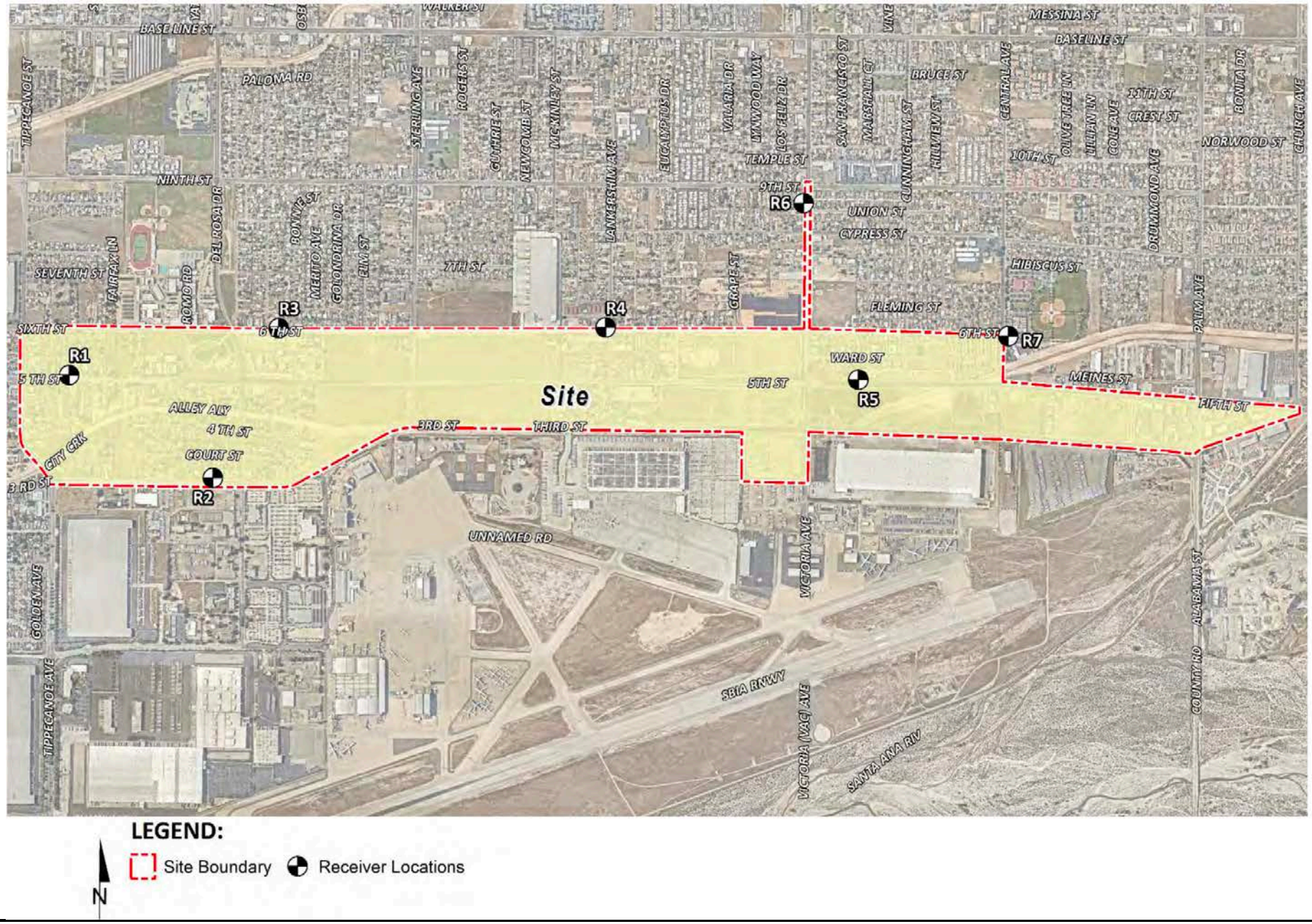

FIGURE 4.14-4

Tom Dodson & Associates
Environmental Consultants

Sensitive Receivers

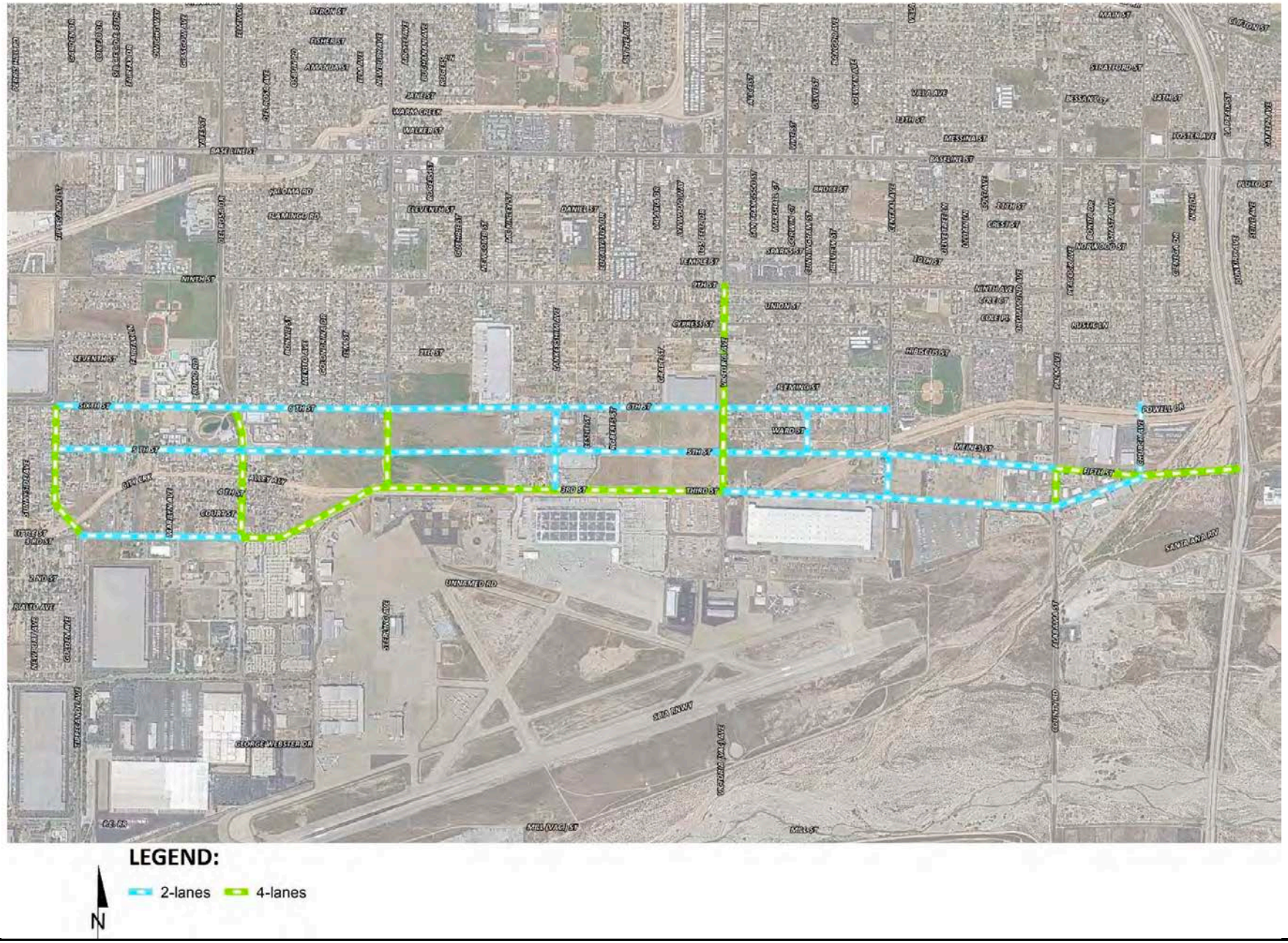

FIGURE 4.14-5

Tom Dodson & Associates
Environmental Consultants

Existing Lane Configurations

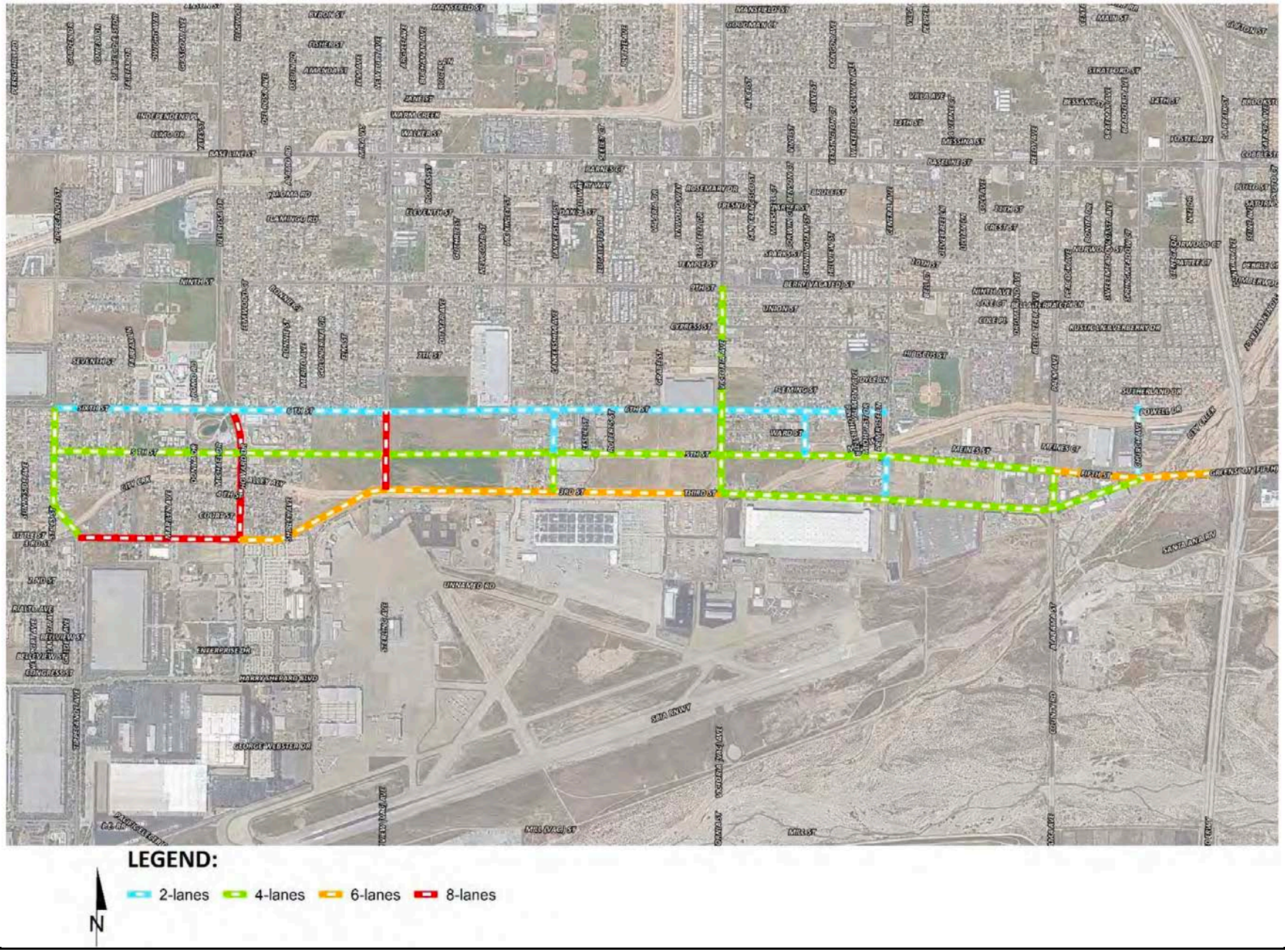

FIGURE 4.14-6

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Environmental Consultants

Proposed Roadway Lanes

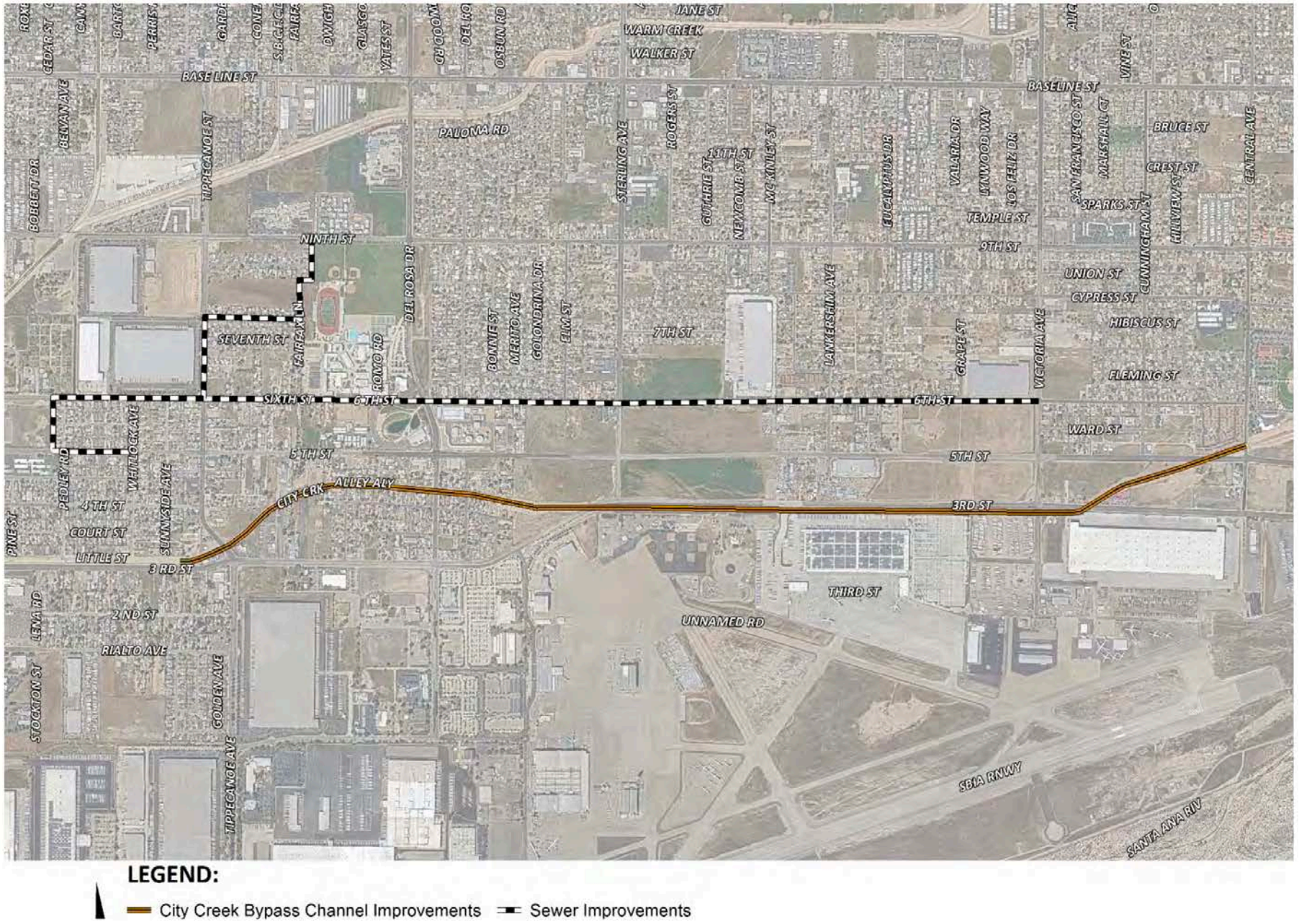


FIGURE 4.14-8

Tom Dodson & Associates
Environmental Consultants

Future Lane Configurations

4.15 POPULATION AND HOUSING

4.15.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of population and housing from implementation of the proposed IVIC Project.

This document is a full-scope DEIR for the above-described Project and all of the standard issues related to Population and Housing identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC would induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); and, whether implementation of the IVIC would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The IVIC Project area is located within the Cities of Highland and San Bernardino which have a combined population of contains a population estimated at 273,146 and contain a combined 76,839 residential units.[1] It is assumed that the IVIC Project area supports about 1% of the overall population and residential housing units within the combined Cities of Highland and San Bernardino.[2] This proposed Project does not include construction of any new development (residential or otherwise) and with implementation of all the proposed infrastructure improvements it is possible that one or a few residential parcels may be replaced by a well or reservoir. These issues are addressed in the following analysis.

These issues pertaining to population and housing will be discussed below as set in the following framework:

4.15.1 Introduction
4.15.2 Regulatory Setting
4.15.3 Environmental Setting
4.15.4 Thresholds of Significance
4.15.5 Methodology
4.15.6 Environmental Impacts
4.15.7 Mitigation Measures
4.15.8 Cumulative Impacts
4.15.9 Significant and Unavoidable Impacts

The following reference documents were used in preparing this section of the DEIR.

- City of Highland, March 2006. *General Plan*
- EDD, 2024. Monthly Labor Force Data for Cities and Census Designated Places (CDP) https://labormarketinfo.edd.ca.gov/file/lfmonth/sanbrsub.xls (accessed 04/23/24)
- Inland Valley Development Agency, 2022. Airport Gateway Specific Plan (AGSP) Draft Program Environmental Impact Report (DEIR) https://ceqanet.opr.ca.gov/2022060349/2 (accessed 04/23/24)

[1] SCAG, 2021. 2020 Local Profiles. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 04/23/24)
[2] Refer to the Airport Gateway Specific Plan (AGSP) Draft Program Environmental Impact Report (DEIR) for population estimates that cover the general area covered by the IVIC Project. Note that the IVIC only pertains to infrastructure and does not propose to modify or displace any housing or persons. https://ceqanet.opr.ca.gov/2022060349/2 (accessed 04/23/24)

- City of San Bernardino, November 1, 2005. *General Plan*.
- SCAG, 2021. 2020 Local Profiles. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 04/23/24)
- SCAG 6th Cycle Regional Housing Needs Assessment Final Allocation Plan, 2021. https://scag.ca.gov/sites/main/files/file-attachments/6th-cycle-rhna-final-allocation-plan.pdf?1616462966 (accessed 04/23/24)
- SCAG Connect SoCal Demographics and Growth Forecast (2020): https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579 (accessed 04/23/24)
- SCAG, 2024. Connect SoCal Demographics. https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed 04/23/24)
- US CPS/HVS, 2024. Housing Vacancies and Homeownership (2023) https://www.census.gov/housing/hvs/data/prevann.html (accessed 04/23/24)

No comments from the public regarding population and housing were received during the NOP comment period.

4.15.2 Regulatory Setting

The following regulations are applicable to population and housing.

4.15.2.1 State

Housing Element Law: California Government Code Section 65584(a)(1)
Pursuant to California Government Code Section 65584(a)(1), the California Department of Housing and Community Development (HCD) is responsible for determining the regional housing needs assessment (segmented by income levels) for each region's planning body known as a "council of governments" (COG), SCAG being the COG serving the Southern California area, except for San Diego County. HCD prepares an initial housing needs assessment and then coordinates with each COG to arrive at the final regional housing needs assessment.

The Sustainable Communities and Climate Protection Act of 2008
The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg) focuses on aligning transportation, housing, and other land uses to achieve regional GHG emission reduction targets established under the California Global Warming Solutions Act, also known as AB 32. SB 375 requires MPOs to develop a SCS as part of the RTP, with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. As set forth in SB 375, the SCS must: (1) identify the general location of land uses, residential densities, and building intensities within the region; (2) identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period; (3) identify areas within the region sufficient to house an eight-year projection of the regional housing need; (4) identify a transportation network to service the regional transportation needs; (5) gather and consider the best practically available scientific information regarding resource areas and farmland in the region; (6) consider the state housing goals; (7) establish the land use development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from automobiles and light-duty trucks to achieve GHG emission reduction targets set by CARB, if there is a feasible way to do so; and (8) comply with air quality requirements established under the CAA.

Housing Crisis Act of 2019
The Housing Crisis Act of 2019 (SB 330, Skinner) seeks to speed up housing production in the next half decade by eliminating some of the most common entitlement impediments to the creation of new housing, including delays in the local permitting process and cities enacting new requirements after an application is complete and undergoing local review—both of which can exacerbate the cost and uncertainty that sponsors of housing projects face. In addition to speeding up the timeline to obtain building permits, the bill prohibits local governments from reducing the number of homes that can be built through down-planning or down-zoning or the introduction of new discretionary design guidelines. The bill is in effect as of January 1, 2020, and expires on January 1, 2025.

Fair Employment and Housing Act (FEHA)
The Fair Employment and Housing Act (FEHA) of 1959 (Government Code § 12900 et seq.) prohibits housing discrimination on the basis of race, color, religion, sexual orientation, marital status, national origin, ancestry, familial status, disability, or source of income.

Unruh Civil Rights Act
The Unruh Civil Rights Act of 1959 (California Civil Code § 51) prohibits discrimination in "all business establishments of every kind whatsoever." The provision has been interpreted to include businesses and persons engaged in the sale or rental of housing accommodations.

AB 1763
AB 1763, effective January 1, 2020, amends the State Density Bonus Law (California Government Code § 65915) to allow for taller and denser 100 percent affordable housing developments, especially those near transit, through the creation of an enhanced affordable housing density bonus.

Housing Element Law
California Government Code Section 65583 requires cities and counties to prepare a housing element, as one of the seven state-mandated elements of the General Plan, with specific direction on its content.

Relocation Assistance Law: California Government Code Section 7261(a)
Section 7261(a) of the California Government Code requires programs or projects undertaken by a public entity must be planned in a manner that (1) recognizes, at an early stage in the planning of the programs or projects and before the commencement of any actions which will cause displacements, the problems associated with the displacement of individuals, families, businesses, and farm operations, and (2) provides for the resolution of these problems to minimize adverse impacts on displaced persons and to expedite program or project advancement and completion. The displacing agency must ensure the relocation assistance advisory services are made available to all persons displaced by the public entity. If the agency determines that any person occupying property immediately adjacent to the property where the displacing activity occurs is caused substantial economic injury as a result of the displacement, the agency may also make the advisory services available to that person.

4.15.3.2 Local

Southern California Association of Governments
As the designated MPO for the six-county subregion that includes, but is not limited to, Riverside, San Bernardino, and Los Angeles Counties, SCAG prepares several plans to address regional

growth, including the RTP/SCS/Connect SoCal). On September 3, 2020, SCAG adopted its Connect SoCal: The 2020-2045 RTP/SCS, which is an update to the previous 2016 RTP/SCS. Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide reduction targets and in so doing identifies the amount and location of growth expected to occur within the region.

The regional growth forecasts undertaken by SCAG are developed through the 2045 planning horizon. SCAG is mandated by Federal and State law to research and draw up plans for transportation, growth management, hazardous waste management, and a regional growth forecast that is the foundation for these plans and regional air quality plans developed by SCAQMD. SCAG prepares several plans to address regional growth, including the RHNA, the RTP/SCS/Connect SoCal), the Federal Transportation Improvement Program (FTIP), and the annual State of the Region reports to measure progress toward achieving regional planning goals and policies. The projected growth in population, household, and employment is the data relied upon during development of SCAG's RTP, SCS, and RHNA. Consistency with the growth forecast at the subregional level is one criterion that SCAG uses in exercising its Federal mandate to review "regionally significant" development projects for conformity with regional plans.

Regional Housing Needs Assessment

SCAG prepares the RHNA mandated by State law so that local jurisdictions can use this information during their periodic updates of each General Plan Housing Element. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate-income groups, and allocates these targets among the local jurisdictions that comprise SCAG. The RHNA addresses existing and future housing needs based on the most recent United States Census data on forecasted household growth, historical growth patterns, job creation, household formation rates, and other factors. The need for new housing is distributed among the four income groups so that each community moves closer to the regional average income distribution, referred to as a "social equity adjustment."

The most recent RHNA allocation, the 6th Cycle Final RHNA Allocation Plan, was adopted by SCAG's Regional Council on March 4, 2021 and modified on July 1, 2021. This allocation identifies housing needs for the projection period of June 30, 2021 through October 15, 2029. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation and to plan a method of meeting the RHNA requirements of each local jurisdiction.

Local

City of Highland Housing Element

The City of Highland General Plan, 2011-2029 Housing Element offers the following Housing Goals, Policies and Programs regarding population and housing:

Housing Element: Goal 1

A preserved and enhanced housing stock within high-quality neighborhoods.

Housing Element: Policy 1.1

Facilitate neighborhood improvement and connect residents to housing rehabilitation programs that offer financial and technical assistance to lower-income households.

Housing Element: Policy 2.1

Encourage housing improvement, preservation, rehabilitation, and the replacement of substandard housing as a means to enhance quality of life in Highland.

Housing Element: Policy 3.1
Support housing and neighborhood quality through the enforcement of building and property maintenance standards, the education of landlords and tenants, and the inspection of properties.

Housing Element: Goal 2

A diverse range and adequate supply of housing types that align with the needs of all current and future Highland households.

Housing Element: Policy 2.1
Bolster the City's affordable housing supply through regulatory tools that encourage the development of and funding for quality lower- and moderate-income housing preservation and development.

Housing Element: Policy 2.2
Provide a transparent, timely, and cost-effective regulatory review process that facilitates housing development opportunities at all income levels.

Housing Element: Policy 2.3
Ensure new residential and mixed-use developments are adequately served by park and recreation, libraries, transportation, public safety, and other public services and facilities.

Housing Element: Policy 2.4
Encourage the development of a range of housing types in targeted areas of the City, such as inventoried vacant residential sites, Planned Development districts, Mixed-Use districts, special Policy Areas identified in the Land Use Element, and areas with access to resources and amenities.

Housing Element: Policy 2.5
Encourage innovation and creativity in housing development through regulations that increase flexibility in the development approval process and allow the use of construction materials and techniques that reduce the cost of housing and its impact on the environment.

Housing Element: Policy 2.6
Provide adequate outreach to residents to preserve the City's factory-built housing stock and protect residents from displacement.

Housing Element: Goal 3

A City with adequate sites and resources appropriate for accommodating a variety of housing types.

Housing Element: Policy 3.1
Establish higher-density nodes with increased housing capacity for a variety of housing types, including housing for lower-income households.

Housing Element: Policy 3.2
Ensure adequate capacity for the development of a range of housing types.

Housing Element: Policy 3.3
Expand the affordable housing stock and provide homeowners with an additional source of income by facilitating the construction of accessory dwelling units.

Housing Element: Goal 4

An affordable housing supply that equitably meets the needs of extremely low-, very low-, low-, and moderate-income households.

Housing Element: Policy 4.1
Improve quality of life for lower- and moderate-income Highland residents by increasing opportunities for the creation of lower-cost owner-occupied housing types and by providing housing assistance through the promotion of homeowner and renter assistance opportunities.

Housing Element: Policy 4.2
Provide regulatory and financial incentives to encourage and facilitate the development of affordable single-family, multifamily, and mixed-use housing.

Housing Element: Policy 4.3
Prohibit housing discrimination and other related discriminatory actions in all aspects affecting the sale or rental of housing based on race, religion, or other protected classifications.

Housing Element: Goal 5

A City with a broad range of housing types to meet the diverse needs of all Highland residents.

Housing Element: Policy 5.1
Provide the regulatory framework necessary to facilitate special needs housing in Highland.

Housing Element: Policy 5.2
Encourage development of accessible housing for all levels of ability through regulatory relief.

Housing Element: Policy 5.3
Create a continuum of care for those experiencing homelessness in Highland through establishing a housing plan for homelessness, including zoning districts allowing emergency shelters, low-barrier navigation centers, transitional housing, and permanent supportive housing.

Housing Element: Policy 5.4
Support innovative public, private, and nonprofit efforts in the development and financing of affordable, special needs housing.

City of San Bernardino General Plan Policies

The City of San Bernardino General Plan, 2014-2021 Housing Element offers the following Housing Goals, Policies and Programs regarding population and housing:

Housing: Goal 3.1

Identify adequate sites for a variety of housing type.

Housing: Policy 3.1.1
Provide adequate sites to accommodate the production of a variety of housing types through land use designation, zoning, specific plans, and overlay zones.

Housing: Policy 3.1.2
Encourage the use of density bonus provisions to provide mixed-income housing and maximize the use of vacant and underutilized residential sites.

Housing: Policy 3.1.3
Encourage the development of senior housing and housing for persons with disabilities (including developmental disabilities) in all areas of the City, especially on sites with access to public transportation and community facilities.

Housing: Policy 3.1.4
Direct the production of new housing, including mixed-use and mixed-income projects, in the downtown core and along public transportation corridors.

Housing: Policy 3.1.5
Support the development of residential uses in primarily commercial areas that allow residential or mixed-use development.

Housing: Goal 3.2

Conserve and improve the existing affordable housing stock and revitalize deteriorating neighborhoods.

Housing: Policy 3.2.1
Improve the quality of the existing housing stock through the rehabilitation and improvement of market rate neighborhoods and affordable housing projects.

Housing: Policy 3.2.2
Support code enforcement programs that identify problem areas and assist lower-income homeowners in correcting building code violations.

Housing: Policy 3.2.3
Assist in the maintenance and rehabilitation of rental units whose owners provide affordable housing to lower-income tenants in exchange for long-term affordability agreements.

Housing: Policy 3.2.4
Encourage and facilitate the rehabilitation and reuse of distressed and abandoned properties.

Housing: Policy 3.2.5
Support neighborhood conservation and residential rehabilitation programs that offer financial or technical assistance to owners of lower- and moderate-income housing or distressed properties.

Housing: Policy 3.2.6
Encourage resident involvement in neighborhood improvement program planning to identify needs and implement programs targeted for the area's most in need of rehabilitation.

Housing: Policy 3.2.7
Dedicate resources to eradicate and prevent blighting conditions and maintain standards to safeguard and preserve the City's neighborhoods.

Housing: Goal 3.3
Assist in the provision of housing affordable to lower- and moderate-income households.

Housing: Policy 3.3.1
Increase housing opportunities and choices for lower- (including extremely low-) and moderate-income households.

Housing: Policy 3.3.2
Create and support opportunities to assist first time homebuyers.

Housing: Policy 3.3.3
Support innovative public, private, and not-for-profit efforts for the development and financing of affordable housing.

Housing: Policy 3.3.4
Apply for regional, state, and federal funds for the development or restriction of housing for lower- and moderate-income households.

Housing: Policy 3.3.5
Establish guidelines for the purchase, rehabilitation, and resale of foreclosed properties restricted to lower- and moderate-income households.

Housing: Goal 3.4
Promote equal housing opportunities for all persons in San Bernardino.

Housing: Policy 3.4.1
Provide a regulatory environment in which housing opportunities are available for all persons.

Housing: Policy 3.4.2
Implement housing policies and programs without regard to race, ethnicity, national origin, age, religion, sex, family status, or other arbitrary factors not related to the purpose of the policy or program.

Housing: Policy 3.4.3
Improve quality of life for disabled persons by facilitating relief from regulatory barriers to accessible housing.

Housing: Policy 3.4.4
Encourage senior housing facilities in multi- family and commercial areas of the community, particularly when in proximity to public transportation and supportive commercial, health, and social service facilities.

Housing: Policy 3.4.5
Create a continuum of care for the homeless and those transitioning out of homelessness by facilitating the establishment of emergency shelters, transitional housing, and permanent supportive housing.

Housing: Policy 3.4.6
Encourage the development of market rate and affordable housing with family-oriented and childcare amenities to help meet the needs of large families and single parents.

Housing: Goal 3.5

Reduce the adverse effects of governmental actions on the production, preservation, and conservation of housing, particularly for lower- and moderate-income households.

Housing: Policy 3.5.1
Remove regulatory constraints that inhibit the provision of quality affordable housing.

Housing: Policy 3.5.2
Incentivize and monitor the development, maintenance, and preservation of affordable housing.

Housing: Policy 3.5.3
Ensure that appropriate fees are charged to new residential development to cover expansion costs without unduly increasing the cost of providing housing.

Housing: Policy 3.5.4
Encourage and facilitate the construction, maintenance, and preservation of a variety of housing types adequate to meet a range of household needs.

Housing: Policy 3.5.5
Ensure that adequate utilities and infrastructure are readily available for new or rehabilitated affordable housing projects.

Housing: Goal 3.6

Reduce the amount of energy expended on the construction, conservation, and preservation of housing.

Housing: Policy 3.6.1
Promote infill rehabilitation and new construction projects through increasing housing potential in already developed areas of the community.

Housing: Policy 3.6.2
Facilitate housing development and rehabilitation that conserve natural resources and minimize greenhouse gas emissions.

Housing: Policy 3.6.3
Encourage and enforce green building regulations or incentives that do not serve as constraints to the development or rehabilitation of housing.

Housing: Policy 3.6.4
Focus sustainability efforts on measures and techniques that also assist the occupant in reducing energy costs, thereby reducing housing costs.

4.15.3 Environmental Setting: Population and Housing

4.15.3.1 City of San Bernardino

Population

The City of San Bernardino is one of twenty-two cities within the County of San Bernardino. According to the U.S. Census Bureau and the Southern California Association of Governments (SCAG), the City of San Bernardino experienced a 13.23 percent population increase between 2000 and 2010 and a 3.82 percent increase between 2010 and 2020 (see **Table 4.15-1**).

Table 4.15-1
POPULATION TRENDS – 2000 – 2020: CITY OF SAN BERNARDINO

City/County	2000	2010	2020	Growth 2000-2010	Growth 2010-2016
San Bernardino	185,401	209,924	217,935	13.23%	3.82%

Source: U.S. Census, SCAG Connect SoCal Demographics, SCAG Local Profile 2021

As the largest metropolitan planning organization in the nation, SCAG is responsible for developing long-range transportation plans and a Sustainable Communities Strategy for a vast and varied region, which includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura. The centerpiece of that planning work is Connect SoCal, which is the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).[3] In their RTP/SCS, SCAG forecasts that the population of the City of San Bernardino will grow from 216,300 (2016) to 230,500 by 2045, an increase of 6.56% over the next 25 years. The City's General Plan Projects that buildout of the entire Planning Area of the City would accommodate a population of 276,264 persons.

Housing

According to the City of San Bernardino General Plan, in 2005, the City contained 15,107.1 acres of land designated for residential use, with the potential for 82,714 dwelling units[4] at buildout of the City. According to the City's General Plan, the number of households within the City in 2000 was 54,482, while according to the SCAG Local Profile depicting 2020 population and demographics, the number of households within the City in 2020 was 60,953, reflecting a growth of 11.88% between the years 2000 and 2020. The current average household size is 3.47 persons per household with a homeowner vacancy rate of about 0.9% and a rental vacancy rate of about 3.7% in 2023 according United States (US) Census Bureau Housing Vacancies and Homeownership (CBS/HVS).[5]

SCAG's RHNA as it pertains to the City of San Bernardino indicates the City's "fair share" of regional housing need, which is the number of additional housing units that would need to be constructed to accommodate projected growth in the number of households, to replace expected demolitions and conversion of housing units to non-housing uses, and to achieve a future vacancy

[3] SCAG Connect SoCal Demographics and Growth Forecast (2020): https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579 (accessed 04/23/24)
[4] Residential buildout is projected to occur at 85% of the maximum density for each land use category.
[5] US CPS/HVS, 2024. Housing Vacancies and Homeownership (2023) https://www.census.gov/housing/hvs/data/prevann.html (accessed 04/23/24)

rate that allows for healthy functioning of the housing market. **Table 4.15-2** below depicts the Housing Allocation for the City of San Bernardino.

Table 4.15-2
REGIONAL HOUSING NEEDS ASSESSMENT: CITY OF SAN BERNARDINO

City/County	Total	Very Low Income	Low Income	Moderate Income	Above Moderate Income
San Bernardino	8,123	1,415	1,097	1,448	4,163

Employment

The SCAG RTP/SCS indicates that there were 101,300 jobs within the City of San Bernardino in 2016, and anticipates that by 2045, the City of San Bernardino will employ 125,600, a growth of about 24% between 2016 and 2045. The City's General Plan indicates that, at build out, the land use plan for the City could generate approximately 338,712 jobs using the adjusted intensity factors (FARs), reflecting a growth of 234.36% between 2016 and City buildout.

According to the California Employment Development Department (EDD), the labor force in the City consists of 89,200 persons, and with 83,700 of those persons being employed, the unemployment rate within the City was 6.3% in March 2024.[6]

4.15.3.2 City of Highland

Population

The City of Highland is one of twenty-two Cities within the County of San Bernardino. According to the U.S. Census Bureau and the SCAG, the City of Highland experienced an 18.69 percent population increase between 2000 and 2010 and a 3.97 percent increase between 2010 and 2016 (see **Table 4.15-1**).

Table 4.15-3
POPULATION TRENDS – 2000 – 2020: CITY OF HIGHLAND

City/County	2000	2010	2020	Growth 2000-2010	Growth 2010-2020
Highland	44,741	53,104	55,211	18.69%	3.97%

Source: U.S. Census, SCAG Local Profiles

As the largest metropolitan planning organization in the nation, SCAG is responsible for developing long-range transportation plans and a Sustainable Communities Strategy for a vast and varied region, which includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura. The centerpiece of that planning work is Connect SoCal, which is the 2020-2045 RTP/SCS.[7] In their RTP/SCS, SCAG forecasts that the population of the City of Highland will grow from 54,200 (2016) to 68,900 by 2045, an increase of 27.1% over the next 25

[6] EDD, 2024. Monthly Labor Force Data for Cities and Census Designated Places (CDP) https://labormarketinfo.edd.ca.gov/file/lfmonth/sanbrsub.xls (accessed 04/23/24)
[7] SCAG Connect SoCal Demographics and Growth Forecast (2020): https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579 (accessed 04/23/24)

years. The City's General Plan projects that buildout of the entire Planning Area of the City would accommodate a population of 72,137 persons.

Housing

According to the City of Highland General Plan, in 2006, the City contained 6,395 acres of land designated for residential use, with the potential for 20,910 dwelling units at buildout of the City. According to the City's General Plan, the number of households within the City in 2012 was 15,685, while according to the SCAG Local Profile depicting 2020 population and demographics, the number of households within the City in 2020 was 15,886, reflecting a growth of 1.28% between the years 2000 and 2020. The current average household size is 3.47 persons per household with a homeowner vacancy rate of about 0.9% and a rental vacancy rate of about 3.7% in 2023 according US CPS/HVS.[8]

SCAG's RHNA for the City of Highland indicates the City's "fair share" of regional housing need, which is the number of additional housing units that would need to be constructed to accommodate projected growth in the number of households, to replace expected demolitions and conversion of housing units to non-housing uses, and to achieve a future vacancy rate that allows for healthy functioning of the housing market. **Table 4.15-4** below depicts the Housing Allocation for the City of Highland.

Table 4.15-4
REGIONAL HOUSING NEEDS ASSESSMENT: CITY OF HIGHLAND

City/County	Total	Very Low Income	Low Income	Moderate Income	Above Moderate Income
Highland	2,513	619	409	471	1,014

Employment

The SCAG RTP/SCS indicates that there were 6,900 jobs within the City of Highland in 2016, and anticipates that by 2045, the City of Highland will employ 11,100, a growth of about 60.87% between 2016 and 2045. The City's General Plan indicates that, at build out, the land use plan for the City could generate approximately 19,492 jobs using the probable intensity factors (FARs) for each nonresidential land use, reflecting a growth of 182.49% between 2016 and City buildout.

According to the California EDD, the labor force in the City consists of 26,000 persons, and with 24,700 of those persons being employed, the unemployment rate within the City was 5.2% in March of 2024.[9]

4.15.3.3 IVIC Project Area

A majority of the residential uses within the IVIC Project Area are nonconforming uses. This is because, in the City of Highland, the adopted General Plan already identified the area adjacent

[8] US CPS/HVS, 2024. Housing Vacancies and Homeownership (2023) https://www.census.gov/housing/hvs/data/prevann.html (accessed 04/23/24)
[9] EDD, 2024. Monthly Labor Force Data for Cities and Census Designated Places (CDP) https://labormarketinfo.edd.ca.gov/file/lfmonth/sanbrsub.xls (accessed 04/23/24)

to the Airport as suitable and ideal for Business Park and Industrial use. However, when the General Plan was adopted, many residential units existed within the area identified to transition to non-residential use, and thus remain as non-conforming uses due to lack of development within the Project area over the past 20 years.

Within the City of San Bernardino, much of the land area is presently vacant (**Figure 3-16**). The City of San Bernardino does not presently contain any conforming residential uses within the IVIC Project area, but some nonconforming residential uses exist within the area designated for Industrial Light use north of 3rd Street on either side of Lankershim Avenue.

4.15.3.4 SCAG Region

The SCAG region, the second most populous metropolitan region in the nation, had approximately 18.961 million residents in 2020[10]. The annual average growth rate for the 2000-2016 period was only 0.8 percent. The SCAG region is forecast to grow to 22,504,000 by 2045, by 19.5% in the next 20+ years.

The SCAG region employed 7,419,000 persons in the year 2000, and employed 8,937,000[11] persons in 2022, a growth of 20.4% during this period. The SCAG region is forecast to employ 10,049,000 persons in the year 2045, equal to an anticipated growth of 12.44% within the next 20+ years.

The SCAG region was home to 5,386,000 households in the year 2000, and in 2020 this number of households grew to 6,128,240, a 13.78% increase during this period. The SCAG region is forecast to be home to 7,633,000 households by 2045, equal to an anticipated growth of 24.55% within the next 20+ years.

4.15.4 Thresholds of Significance

As stated in the preceding section, the standard issues related to population and housing resources identified in the Standard Environmental Checklist Form provided in Appendix G of the State CEQA Guidelines are analyzed in this DEIR. Accordingly, population, employment, and housing impacts resulting from the implementation of the proposed IVIC may be considered significant if they would result in the following:

PH-1 Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

PH-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Based on these significance thresholds and criteria, the proposed IVIC's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially

[10] SCAG, 2021. 2020 Local Profiles. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 04/23/24)
[11] SCAG, 2024. Connect SoCal Demographics (Draft). https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed 04/23/24)

significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

4.15.5 Methodology

The information provided in this Subchapter of the DPEIR was obtained through a mix of library research and field investigation. Most of the population data was obtained by reviewing population and housing data from the cities, the County, SCAG, the State and the 2010 Census Data for the IVIC Project area (Census Tracts). The estimates of the number of units were developed based on research of the County Assessor Records, review of high resolution aerial photos of the IVIC Project area, and verification in the field. Please note that some residences have been eliminated since the original data were compiled and the residences were replaced by new business/industrial development allowed based on the existing land use designations within each city.

4.15.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.15.6.1 Impact Analysis

PH-1 Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction of the proposed infrastructure would require temporary employment. It is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within Southern California. They would become part of the IVIC Project Area's temporary population during the construction of each facility. Locally available temporary housing

for the maximum of 90 construction employees that would be required at any given time during the implementation of the proposed IVIC Project. Adequate temporary housing resources are available within the IVIC Project Area that can accommodate a temporary housing population of 90 persons on an average daily basis (90/76,839 = 0.117%). Based on an overall homeowner vacancy rate of about 0.9% and a rental vacancy rate of about 3.7% the potential temporary increase in new residents within the IVIC Project Area would be nominal, i.e., a less than significant impact.

SCAG acknowledges that installing infrastructure does not necessarily encourage or promote growth, particularly in existing developed areas, but rather allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promotes transportation mobility, and addresses social equity, fair share housing needs. The proposed IVIC Project envisions installing new infrastructure over a 20 year period to meet both City's build-out growth forecasts based on the existing mix of General Plan uses within the Project area. The IVIC Project does not directly contribute to future permanent development (population or housing), but will accommodate growth as it occurs under the existing cities' General Plan land use designations, and as envisioned in the cities' General Plans. Thus, the proposed IVIC Project would have a less than significant potential to result in a substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Impacts are less than significant.

Mitigation Measures: None Required

Level of Significance: Less Than Significant Impact

PH-2 Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The IVIC Project area has been mostly designated for business park/light industrial uses since the 2005/2006 General Plans were adopted by San Bernardino and Highland, respectively. However, growth/transition of the Project area has been slow to occur due to a variety of factors, including a roadway system that has deteriorated in some areas where roadway improvements have not already occurred, and lack of a viable drainage system. Regardless as stated above, the proposed IVIC Project envisions gradually installing infrastructure but not directly supporting any new uses.

The proposed improvements of the City Creek Bypass Channel would remain within and adjacent to the existing rights-of-way of this feature, and as the City Creek Bypass Channel does not support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The proposed sewer installation would occur within existing road rights-of-way, and as the roadways within the IVIC Project area do not support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
The proposed roadway improvements would occur within existing and adjacent to road rights-of-way. The areas adjacent to the road rights-of-way that would be expanded in width could result in some encroachment onto adjacent properties, but this take would not encroach into residential housing units within the IVIC Project area. As the roadways within the IVIC Project area do not

support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

While the locations of the EVWD Reservoir and Well Development are not presently known beyond that these facilities would be located within the lower and intermediate zones of EVWD's service area (**Figure 3-15**), respectively, EVWD anticipates avoid impacting any housing as a matter if site selection. As such, neither construction nor operation of the EVWD Reservoir and Well Development are not anticipated to impact persons or housing, as each will operate within its own facility intended to support water infrastructure. Thus, there is no potential for adverse impacts on housing and potential relocation of people during construction and no impacts would occur. No mitigation is required

Level of Significance Before Mitigation: Less Than Significant Impact

Mitigation Measures: None required.

4.15.7 Mitigation Measures

No mitigation measures are required because no significant adverse land use impacts have been identified.

4.15.8 Cumulative Impacts

As previously described, the IVIC Project would not result in a cumulatively considerable contribution to population growth within the IVIC Project and surrounding area. The IVIC Project is not forecast to cause significant growth inducement in the community or to cause the elimination of a substantial number of homes with the subsequent relocation of a substantial population. Thus, the IVIC Project would have a less than cumulatively considerable potential to impact the local population or housing and would therefore not result in a considerable contribution to cumulative impacts to population and housing.

4.15.9 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, no significant and unavoidable impacts relating to population and housing would occur as a result of implementing the IVIC Project, and the IVIC Project's potential impacts on population and housing will be less than significant.

4.16 PUBLIC SERVICES

4.16.1 Introduction

This section identifies police and fire protection services, as well as school and library, and other public services within the Cities of Highland and San Bernardino that serve the IVIC Project area, and provides an analysis of potential impacts associated with implementation of the IVIC. Public services consist of the following topics/issues that are provided by local government to meet a community's needs for safety and education: Fire Protection and Emergency Response Services; Sheriff Law Enforcement Services; School/Education Services; Library, Cultural, and Other Public Services; and Health Services. Of the above services, all but Health Services are typically provided solely by local government. In contrast, some Health Services are provided/supported by local government, but most Health Services are available through private businesses (doctors, hospitals, etc.). Therefore, health services will not be further analyzed in this document as it is assumed that service and demand are balanced through the commercial markets. Each of the other referenced Public Service issues is addressed in a separate discussion/evaluation below.

This document is a full-scope DEIR for the above-described project and all of the standard issues related to public service resources identified in Appendix G of the CEQA Guidelines are analyzed in this DEIR. The topics are organized in a different manner in this Subchapter compared to the preceding Subchapters. Also, this Subchapter does not include a discussion of Parks; the discussion of Parks can be found in **Subchapter 4.17, Recreation and Parks**, and is therefore omitted from this Chapter.

- Fire Services
- Police Protection
- Schools
- Library, Cultural and Other Public Services

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Public Services
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for each topic—Fire Protection, Police Protection, Schools, and Other Services—are provided under the individual impact analysis for each topic.

None of the comment letters raised the issue of public services as an issue of concern.

4.16.2 Fire Protection

This section identifies fire protection services within the IVIC Project area and provides an analysis of potential impacts associated with the buildout of the proposed IVIC. Information in this section is based on information in the City of Highland General Plan and City of San Bernardino General Plan Public Services and Facilities Element, and information provided by the County of San Bernardino Fire Department and City of Highland Fire Department.

The following reference documents were used in preparing this section of the DEIR:

- City of Highland, March 2006. *General Plan*
- City of San Bernardino, November 1, 2005. *General Plan*
- California Building Standards Commission, *2022 California Fire Code*
- National Fire Protection Association, *NFPA Code 1710 Implementation Guide*, Current Edition 2020
- San Bernardino County Fire Protection District, 2024. About us. https://sbcfire.org/about/ (accessed 04/23/24)
- San Bernardino County Fire Protection District, 2024. San Bernardino County Fire Statistics Fiscal year 2022-23 https://sbcfire.org/statistics/#district-facts-anchor (accessed 04/23/24)

4.16.2.1 Environmental Setting: Fire Protection

San Bernardino County Fire Department

The San Bernardino County Fire Protection District is a community-based, all hazard emergency services provider. The San Bernardino County Fire Department (SBCFD) provides fire and emergency response services to more than 60 communities/cities and all unincorporated areas of the County. SBCFD's Office of Emergency Services (OES) serves as the Operational Area Lead Agency, coordinating the provision of emergency services with 24 cities and towns in San Bernardino County.[1] SBCFD has 50 professionally staffed fire stations within its service area, 7 paid/volunteer fire station, and covers 19,278 square miles.[2] There are 1,166 County fire personnel and 712 fire suppression personnel.

In the vicinity of the IVIC, there are three SBCFD stations: Stations 233, located at the San Bernardino International Airport to the south of the planning area; Station 221, located about a mile to the west of the planning area at 200 E 3rd Street, and Station 226, located about two miles to the north of the project site at 1920 Del Rosa Ave.

City of Highland Fire Department

The CAL FIRE provides fire protection and emergency medical services to the Highland community through a cooperative agreement that provides for Cal Fire employees to staff City-owned facilities and apparatus. The City has three fire stations: Station 541 located at 26974 Base Line; Station 542 located at 29507 Base Line; and Station 543 is located at 7469 Sterling Avenue. Station 541 is located about one mile north of the planning area, while Station 543 is located less than one-half mile north of the planning area.

4.16.2.2 Regulatory Setting

State

The CAL FIRE is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California. In most cases, SRAs are protected directly by CAL FIRE; the Department provides varied emergency services in 36 of the State's 58 counties via contracts with local governments. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the County under contract with CAL FIRE

[1] San Bernardino County Fire Protection District, 2024. About us. https://sbcfire.org/about/ (accessed 04/23/24)
[2] San Bernardino County Fire Protection District, 2024. San Bernardino County Fire Statistics Fiscal year 2022-23 https://sbcfire.org/statistics/#district-facts-anchor (accessed 04/23/24)

(CAL FIRE, 2016). However, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the County (CAL FIRE, 2012).

Local

City of Highland Public Services and Facilities Element

The City of Highland General Plan offers the following Public Services and Facilities Goals and Policies regarding fire protection services:

Public Services and Facilities Element: Goal 4.8
Ensure the provision of adequate staffing, equipment and facilities to support effective fire protection and emergency medical services that keep pace with growth.

Public Services and Facilities Element: Policy 1
Work with the fire department to ensure that response time standards and a high level of service are maintained.

Public Services and Facilities Element: Policy 2
Ensure the City has adequate fire training facilities, equipment and programs for firefighters and inspection personnel, and education programs for the general public.

Public Services and Facilities Element: Policy 3
Coordinate and cooperate with the East Valley Water District to maintain and/or upgrade water facilities to ensure adequate water supply is available for fire suppression operations.

Public Services and Facilities Element: Policy 4
Ensure the availability of adequate fire flow prior to the recordation of residential tracts or parcel maps and prior to the issuance of commercial building permits by requiring the testing of all fire hydrants in the vicinity of the project at the applicant's expense. In the absence of adequate flow, require either the installation of on-site fire protection devices or improvements that upgrade the area's water system to accommodate an adequate flow.

Public Services and Facilities Element: Policy 5
Ensure that development in Fire Hazard Zones comply with adequate fire safety standards (e.g., fuel modification zones, perimeter roads, greenbelts, etc.).

City of San Bernardino Public Facilities and Services

The City of San Bernardino General Plan offers the following Public Facilities and Services Goals and Policies regarding fire protection services:

Public Facilities and Services Element: Goal 7.2
Protect the residents and structures of San Bernardino from the hazards of fire.

Public Facilities and Services Element: Policy 7.2.1
Assure that adequate facilities and fire service personnel are maintained by periodically evaluating population growth, response time, and fire hazards in the City. (A-3 and PFS-2)

Public Facilities and Services Element: Policy 7.2.2
Assess the effects of increases in development density and related traffic congestion on the provision of adequate facilities and services ensuring that new development will maintain fire protection services of acceptable levels. (PFS-2)

Public Facilities and Services Element: Policy 7.2.3
Establish a program whereby new development projects are assessed a pro rata fee to pay for additional fire service protection to that development. (PFS-3)
Public Facilities and Services Element: Policy 7.2.4

Coordinate inter-agency fire service protection agreements with County U.S. Forest Service, and other fire protection agencies. (PFS-5)

Public Facilities and Services Element: Policy 7.2.5
Maintain an "ISO" fire rating of at least class 3.

Public Facilities and Services Element: Policy 7.2.6
Require that all buildings subject to City jurisdiction adhere to fire safety codes. (LU-1)

Public Facilities and Services Element: Policy 7.2.7
Develop and implement a comprehensive high-rise fire safety program.

Public Facilities and Services Element: Policy 7.2.8
Promote public education regarding fire safety to address issues such as storage of flammable material and other fire hazards. (PFS-1 and PFS-4)

Public Facilities and Services Element: Policy 7.2.9
Continue uniform reporting of all fire emergency data including type and cause of fire alarm response time and damage/injury data. (PFS-2)

4.16.2.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

4.16.2.4 Potential Impacts

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

FP-1 Would the Project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?

As of July 1, 2016, the San Bernardino County Fire District (SBCFD) provides fire protection services to the City of San Bernardino, while the Highland Fire Department, supported by the CAL FIRE, serves the City of Highland. The IVIC Project area will be served by both fire departments depending on the area within which an incident occurs.

Construction of the proposed project would require temporary employment. It is unknown whether these employees would be drawn from within or outside the IVIC Project area or even within the cities of San Bernardino or Highland; however, as discussed under Subchapter 4.15, Population and Housing, it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Southern California area.

Operation and maintenance of the majority of the proposed infrastructure would be anticipated to be provided by existing employees serving the agencies within the IVIC Project area. Thus, there is no potential for an increase in area residents as a result of operation of the IVIC Project that may contribute to a minimal increased demand for fire protection services.

Implementation of the proposed Project is not forecast to change land uses or otherwise create activities that could increase demand for additional fire protection services beyond that anticipated in the General Plans of the cities of Highland and San Bernardino.

In addition, operational activities associated with the proposed EVWD Well and Reservoir may require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given individual project site. However, a Hazardous Materials Business Plan (HMBP) would be required for use of chemicals during operation (i.e., sodium hypochlorite, etc.). Additionally, EVWD has developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous, which comply with all federal, State, and local regulations, thereby minimizing the potential for the need for fire protection services. Although the proposed project may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by would result in a nominal increase in service. Any Project improvements requiring structures would be required to meet applicable fire and building codes. The indirect increase in population and the use of hazardous materials associated with project development would result in a nominal increase in fire protection services. As a result, no new fire protection facilities or altered facilities would be required. Impacts related to fire protection services would be less than significant.

Mitigation Measures: None Required

Level of Significance: Less Than Significant Impact

4.16.3 Police Protection

This section identifies police protection services within the IVIC Project area and provides an analysis of potential impacts associated with the buildout of the proposed IVIC. Information in this section is based on information in the City of Highland General Plan and City of San Bernardino General Plan Public Services and Facilities Element, and information provided by the San Bernardino Police Department and San Bernardino County Sheriff's Department

The following reference documents were used in preparing this section of the DEIR:

- City of Highland, March 2006. *General Plan*
- City of Highland, July 6, 2023. Development Impact Fees Calculation and Nexus Report. https://www.cityofhighland.org/DocumentCenter/View/3910/Development-Impact-Fee-Report-July-2023-PDF (accessed 04/24/24)
- City of San Bernardino, November 1, 2005. *General Plan*.
- San Bernardino City Police Department, 2024. About SBPD. https://www.sbcity.org/city_hall/police_department/about_sbpd (accessed 04/24/24)
- San Bernardino County Sheriff Department, 2024. City of Highland Patrol Station https://wp.sbcounty.gov/sheriff/patrol-stations/highland/ (accessed 04/24/24)

4.16.3.1 Environmental Setting: Police Protection

San Bernardino Police Department

Police services are provided by the City Police Department within the City limits. The planning area is served by a main police station and six community service offices that serve five designated geographical patrol districts. Police services are provided by the City Police Department within the City limits and the County Sheriff in unincorporated areas. The San Bernardino Police Department maintains a ratio of approximately one sworn officer for every 733 residents. Currently, 297 sworn officers make up the sworn component of the department. Another 171 civilian support staff members do a variety of service-orientated tasks so that sworn personnel can be a focus on law enforcement related duties..[3]

The San Bernardino Police Department is located at 710 North D Street, San Bernardino, CA 92401, which is about 2 miles west of the IVIC Project area.

San Bernardino County Sheriff's Department

The San Bernardino County Sheriff Department provides police protection services to the Highland community. The Sheriff's Department has one patrol station in the City of Highland, located at 26985 East Baseline, Highland, California 92346. The Sheriff Station is located a little more than one mile north of the IVIC Project area. According to the Sheriff Department's website, Reserve Deputy Sheriff's benefit the Highland Station by volunteering their time working patrol and supplementing the patrol staff.[4] Additionally, the Sheriff Department's Citizen Volunteers also provide extra-patrol to local residents and businesses while assisting patrol personnel at the scenes of major traffic collisions, crime scene perimeters, and assisting at many local community events. The station is currently staffed with 34 sworn officers (which includes 1 Captain, 1 Lieutenant, 6 Sergeants, 3 Detectives and 23 patrol deputies), as well as 9 non-sworn civilian employees (which includes 1 secretary, 4 clerical personnel, and 4 Sheriff's Service Specialists). The Highland Station is the busiest station within the San Bernardino County Sheriff's Department in terms of calls for service, arrests per deputy and reports per deputy. As part of the Sheriff's contract, the station, its personnel, and the community have access to an impressive array of specialty resources offered by the Sheriff's Department these include: Narcotics, SWAT, Arson-Bomb, Crimes against Children, Homicide, Scientific Investigations/Crime Lab, Aviation, Volunteer Forces/Search and Rescue, Major Accident Investigation Team and more.

4.16.3.2 Regulatory Setting

State

California Penal Code
The *California Penal Code* establishes the basis for the application of criminal law in California.

[3] San Bernardino City Police Department, 2024. About SBPD.
https://www.sbcity.org/city_hall/police_department/about_sbpd (accessed 04/24/24)
[4] San Bernardino County Sheriff Department, 2024. City of Highland Patrol Station
https://wp.sbcounty.gov/sheriff/patrol-stations/highland/ (accessed 04/24/24)

Local

City of Highland Public Services and Facilities Element

The City of Highland General Plan offers the following Public Services and Facilities Goals and Policies regarding police protection services:

Public Services and Facilities Element: Goal 4.7
Ensure the provision of adequate law enforcement and police protection services and facilities.

Public Services and Facilities Element: Policy 1
Ensure that police services, response times, equipment, and the number of police personnel keep pace with growth and the changing needs of the community.

Public Services and Facilities Element: Policy 2
Maintain and expand crime prevention and other public education programs.

Public Services and Facilities Element: Policy 3
Encourage the use of urban design strategies to help prevent crime, when feasible.

Public Services and Facilities Element: Policy 4
Ensure law enforcement services are involved in the development review process.

City of San Bernardino Public Facilities and Services

The City of San Bernardino General Plan offers the following Public Facilities and Services Goals and Policies regarding police protection services:

Public Facilities and Services Element: Goal 7.1
Protect the residents of San Bernardino from criminal activity and reduce the incidence of crime.

Public Facilities and Services Element: Policy 7.1.1
Maintain a complement of personnel in the Police Department that is capable of providing a timely response to criminal activity and can equitably protect all citizens and property in the City. (A-3 and PFS-2)

Public Facilities and Services Element: Policy 7.1.2
Coordinate inter-agency agreements with the County and adjacent jurisdictions to provide assistance and cooperation on inter-jurisdictional cases. (PFS-5)

Public Facilities and Services Element: Policy 7.1.3
Continue to support and encourage community-based crime prevention efforts through regular interaction and coordination with existing neighborhood watch programs, assistance in the formation of new neighborhood watch groups, and regular communication with neighborhood and civic organizations. (LU-4 and PFS-6)

Public Facilities and Services Element: Policy 7.1.4
Assist the San Bernardino City Unified School District and other educational agencies in creating a program of early intervention for students that will provide instruction, recreation, and training programs outside of the classroom. (PFS-1)

Public Facilities and Services Element: Policy 7.1.5
Ensure that landscaping (i.e., trees and shrubbery) around buildings does not obstruct views required to provide security surveillance. (LU-1 and PRT-1)

Public Facilities and Services Element: Policy 7.1.6
Require adequate lighting around residential, commercial, and industrial buildings in order to facilitate security surveillance. (LU-1 and PRT-1)

Public Facilities and Services Element: Policy 7.1.7
Require the provision of security measures and devices that are designed to increase visibility and security in the design of building siting, interior and exterior design, and hardware. (LU-1 and PRT-1)

4.16.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

4.16.3.4 Potential Impacts

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

PP-1 Would the Project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

Operation of the proposed facilities is not forecast to require any additional permanent employees. Similar to the discussion under issue **FP-1** above, the development of the proposed project would not cause a substantial increase in population that would substantially increase demand for police protection services. Implementation of the proposed project would improve local infrastructure within the IVIC Project area; however, it is not forecast to change land uses or otherwise create activities that could increase demand for additional police protection services beyond that which is anticipated in the Cities of San Bernardino and Highland General Plans. The IVIC Project area is currently served by the San Bernardino Police Department and San Bernardino County Sheriff Department, as discussed under the Settings sections above. Overall levels of police service would be increased based upon the future population growth and demands of the local agencies within the IVIC Project and surrounding area. Operational activities associated with the proposed project could require police department service in the unlikely event of an emergency or trespass at a given project site, at, for instance, the EVWD Well and Reservoir sites. However, it is anticipated that all sites containing facilities located outside of the Channel and road rights-of-way associated with the proposed project would be fenced in and contain security lighting, which would minimize the future need for police protection from trespass. Though a significant demand for police protection services is not anticipated, mitigation is proposed to address trespass issues that would reduce Project impacts to a level of less than significant.

Mitigation Measures:

PS-1: IVIC Project facilities located outside of existing Channel or Road rights-of-way shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites.

Implementation of **MM PS-1** above would minimize the potential for trespass that could

exacerbate police protection services. As such, impacts are less than significant.

Level of Significance After Mitigation: Less Than Significant Impact

4.16.4 School / Education Services

This section identifies school services within the IVIC Project area and provides an analysis of potential impacts associated with the buildout of the proposed IVIC. Information in this section is based on information in the City of Highland General Plan and City of San Bernardino General Plan Public Services and Facilities Element, and information provided by the San Bernardino City Unified School District.

The following reference documents were used in preparing this section of the DEIR:

- City of Highland, March 2006. *General Plan*
- City of San Bernardino, November 1, 2005. *General Plan*.
- Ed Data, 2024. Ed Data San Bernardino City Unified School District http://www.ed-data.org/district/San-Bernardino/San-Bernardino-City-Unified (accessed 04/24/24)
- San Bernardino City Unified School District, District Overview https://resources.finalsite.net/images/v1681759891/sbcusdcom/rvbg2wmrs4otuizsj43h/District-Overview-2022-2 (accessed 04/24/24)

4.16.4.1 Environmental Setting: School / Education Services

San Bernardino City Unified School District

The San Bernardino City Unified School District (SBCUSD) serves the entirety of the IVIC Project area. At present, there are no schools located within this IVIC Project area, though Indian Springs High School is located just north of the IVIC Project area at the northwest corner of 6th Street and North Del Rosa Drive.

Enrollment within the SBCUSD has decreased over the last decade from about 53,000+ students enrolled to 46,509 students in the 2022-2023 school year.[5]

The IVIC Project area is also served by two institutions of higher education: the San Bernardino Valley College—a community college—and the California State University, San Bernardino, which is a four-year liberal arts and science college, with several master's degree programs.

4.16.4.2 Regulatory Setting

State

AB 2926

The State of California has traditionally been responsible for the funding of local public schools. To assist in providing facilities to serve students generated by new development projects, the State passed Assembly Bill 2926 (AB 2926) in 1986. This bill allowed school districts to collect impact fees from developers of new residential and commercial/industrial building space. Development impact fees were also referenced in the 1987 Leroy Greene Lease-Purchase Act,

[5] San Bernardino City Unified School District, District Overview https://resources.finalsite.net/images/v1681759891/sbcusdcom/rvbg2wmrs4otuizsj43h/District-Overview-2022-2 (accessed 04/24/24)

which required school districts to contribute a matching share of project costs for construction, modernization, or reconstruction.

Title 5
Title 5 Education Code of the *California Code of Regulations* governs all aspects of education within the State.

Public School Funding
There are two major types of state funding: general purpose and categorical. The majority of money that schools receive from the state is general purpose funding, which basically has "no strings attached." Districts determine how to best use this money. Each district has a base amount of 'general purpose' money it spends per student. That amount is called a "revenue limit". Original revenue limits were based on 1972 spending levels and have been updated ever since with cost of living adjustments (COLA). A district's total revenue limit is primarily based on how many students it has, or its average daily attendance (ADA).

Categorical aid is earmarked for targeted programs such as federal Title I Program, special education and child nutrition. Categorical programs are largely funded by state and federal sources, which come in the form of grants or conditional funding.

Prop. 13 and Prop. 98 are two major laws—both approved by California voters— have had a far-reaching effect on school finance. The first is Prop. 13 which was passed in 1978 in an attempt to limit property taxes. Since Prop. 13, California schools have increasingly relied on the state for the majority of their funding. Prop. 98 was approved in 1988 to guarantee a minimum level of funding for public schools. Most of the funding for K-12 school facilities comes from state and local bonds. A school bond enables a school district to borrow money to finance the construction of a new school or make major improvements over many years. Bond money can alleviate the burden placed on a district's general fund, freeing up money to pay for those needs.

In 2018, based on the facility cost impacts to the District for the average new home and for commercial/industrial construction as set forth in the Studies, the District Statutory School Fees equaled $3.79 per SF for residential construction within the District and $0.61 per square foot for commercial/industrial construction within the District.[6]

Local

City of Highland Public Services and Facilities Element
The City of Highland General Plan offers the following Public Services and Facilities Goals and Policies regarding school services:

> **Public Services and Facilities Element: Goal 4.9**
> Maintain cooperative school and public facility planning to ensure the provision of adequate school facilities and quality educational programs in a manner consistent with other City goals and policies on facility location, use, timing, funding, recreational and social joint use programs.

[6] San Bernardino City Unified School District, District Overview
https://resources.finalsite.net/images/v1681759891/sbcusdcom/rvbg2wmrs4otuizsj43h/District-Overview-2022-2
(accessed 04/24/24)

Public Services and Facilities Element: Policy 1
Continue to coordinate with local school districts on resolving issues such as joint use facilities, new facility locations and alternative use of vacant or underutilized sites in the City.

Public Services and Facilities Element: Policy 2
Require that new development provide the necessary funding and/or resources to establish school facilities commensurate with the impact of development on school services. In cases where existing school capacity does not support new development, require the implementation of appropriate funding mechanisms, as permitted by law, to ensure the availability of adequate school facilities. Potential financing avenues include:

- A contract with the developer to provide funds for schools
- Land dedications
- Lease back turnkey program
- Special assessment district financing, such as Mello-Roos Community Facilities Districts, for the proposed area of development

Public Services and Facilities Element: Policy 3
Encourage that all school impact fees collected from development projects be allocated toward the acquisition of land and construction of schools that serve the residents of those projects.

Public Services and Facilities Element: Policy 4
Continue to coordinate development activity with local school districts by:

- Participating with local school districts in joint planning efforts;
- Establishing a joint task force comprised of representatives from the City, school district and development community to identify additional means of funding school construction;
- Notifying school districts of proposed development applications early in the review process;
- Requesting that school districts indicate the level of facilities available to serve development projects requiring discretionary review; and
- Establishing a clear methodology for determining the impacts of development on the school facilities in the City.

Public Services and Facilities Element: Policy 5
Continue to work with local school districts to prepare a Master Plan of Schools that outlines specific sites needed to meet the future demand for school facilities.

Public Services and Facilities Element: Policy 6
Explore the possibility of locating a major institution of higher learning in Highland.

City of San Bernardino Public Facilities and Services

The City of San Bernardino General Plan offers the following Public Facilities and Services Goals and Policies regarding school services:

Public Facilities and Services Element: Goal 7.3
Meet the educational needs of the City's residents and integrate our higher educational facilities into the fabric of our community.

Public Facilities and Services Element: Policy 7.3.1
Work with the local school districts, CSUSB, and SBVC to expand facilities and services to meet educational needs. (LU-1 and PFS-4)

Public Facilities and Services Element: Policy 7.3.2
Work with the School District to ensure that new residential subdivisions dedicate land or contribute fees for the expansion of school facilities to meet the needs attributable to the new housing. (LU-1)

Public Facilities and Services Element: Policy 7.3.3
Work with the School District to consider alternative funding programs for school facilities construction and provision of educational programs should there be a shortfall of traditional revenue. (PFS-1)

Public Facilities and Services Element: Policy 7.3.4
Cooperate with the San Bernardino City Unified School District, California State University, San Bernardino, and San Bernardino Valley College to integrate educational programs and facilities; ensure that adequate educational services are provided for youth; the educational needs of the students are being monitored; and the educational curricula is being designed to meet these needs. (PFS-1)

Public Facilities and Services Element: Policy 7.3.5
Work with the Unified School District and all local educational agencies, including private schools, to provide continuing adult education courses. (PFS-1)

4.16.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for school services.

4.16.4.4 Potential Impacts

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

SS-1 Would the project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for school services?

Similar to the discussions under Fire and Police Protection above, the development of the proposed Project would not cause a substantial increase in demand for schools. Implementation of the proposed project would improve local infrastructure within the IVIC Project area. However, implementation of the proposed project is not forecast to change existing land uses or increase either the number of residential units located within the IVIC Project area or the number of students generated from the IVIC Project area beyond that anticipated in the Cities of Highland and San Bernardino General Plans. Operation of the proposed Project is not forecast to require any additional permanent employees which would result in no increase in demand for school services. The San Bernardino Unified School District has adopted classroom loading standards (number of students per classroom) and collect development fees per square foot of residential, commercial, and industrial development. Because the proposed project is not forecast to change land uses, increase housing, or create activities that can increase demand for additional school capacity beyond that anticipated in the Cities of Highland and San Bernardino General Plans, and because there are adopted standards and development fees are collected for new development, impacts related to demand for school services would be less than significant.

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

4.16.5 Library, Cultural and Other Public Services

This section identifies library and cultural services within the IVIC Project area and provides an analysis of potential impacts associated with the buildout of the proposed IVIC. Information in this section is based on information in the City of Highland General Plan and City of San Bernardino General Plan Public Services and Facilities Element.

The following reference documents were used in preparing this section of the DEIR:

- City of San Bernardino, November 1, 2005. *General Plan*.
- City of Highland, March 2006. *General Plan*

4.16.5.1 Environmental Setting: Library, Cultural and Other Public Services

City of San Bernardino

According to the City of San Bernardino General Plan, the San Bernardino Public Library is governed by the administrative Library Board of Trustees as provided by Article XII of the Charter of the City of San Bernardino. Library services are provided at four sites within the City, the Normal Feldheym Library being the closest to the IVIC Planning area, located about two miles to the west of the IVIC along 6th Street (refer to **Figure 4.16-1**, which depicts the City's Civic, Institutional, and Cultural Facilities). The San Bernardino planning area contains a variety of civic institutions, including City and County government offices, the County Courthouse, two public colleges and the public library system. Cultural facilities include theaters, libraries, art galleries, and a museum.

City of Highland

The City of Highland has one public library, the Highland Branch of the San Bernardino County Library, which is a Library and Environmental Learning Center located at 7863 Central Avenue. The Highland Branch Library serves residents in the City and in the neighboring City of San Bernardino. Funding for the library services comes from the City's Development Impact Fee fund collected from other projects and a variety of state and federal grants. The library building is situated across from Cypress Elementary School and will serve the needs of the school as well as the general public. The library is also located next to the Jerry Lewis Community Center. The City of Highland maintains a standard of 10,000 square feet of library space per 36,000 residents; 18.3 weekly service hours per 10,000 population; 2.82 books per capita.

4.16.5.2 Regulatory Setting

Local State

There are no applicable state regulations related to library services.

City of Highland Public Services and Facilities Element

The City of Highland General Plan offers the following Public Services and Facilities Goals and Policies regarding library, cultural, and other public services:

> **Public Services and Facilities Element: Goal 4.1**
> Coordinate and balance the provision of public services with development activity to eliminate service gaps, maximize the use of public facilities, provide efficient and economical public services, achieve the equitable and legally defensible sharing of costs of such services and

facilities, and maintain adequate service systems capable of meeting the needs of Highland residents.

Public Services and Facilities Element: Policy 1
Prior to permitting, ensure that all major extensions of services, facilities and utilities are comprehensively reviewed for related social, economic and environmental impacts and identify mitigation measures as appropriate.

Public Services and Facilities Element: Policy 2
Ensure that proposed development, which requires the extension of public services and facilities, will generate sufficient municipal income to pay for the operations, maintenance and replacement of those services and facilities by the City.

Public Services and Facilities Element: Policy 3
Ensure that existing residents and businesses are not burdened with the cost of financing infrastructure aimed at supporting new development or the intensification of existing development.

Public Services and Facilities Element: Policy 4
Continue to ensure that public water, sewer, drainage and other facilities needed for a project phase are constructed prior to or concurrent with initial development within that phase, unless otherwise approved by the City.

Public Services and Facilities Element: Policy 5
Continue to make the project sponsor of a proposed development ultimately responsible for ensuring the timely availability of all infrastructure improvements (including system- wide improvements) needed to support the development.

Public Services and Facilities Element: Policy 6
Continue to require that deficiencies in existing public services and facilities are corrected prior to or concurrent with proposed development.

Public Services and Facilities Element: Policy 7
Continue to coordinate with public service and utility companies to assure the long-term provision of services including water, wastewater, solid waste, electricity, natural gas and other private utilities (e.g., cable, Internet, telephone) for City residents.

Public Services and Facilities Element: Policy 8
Continue to direct future growth to areas with adequate existing facilities and services, or areas with adequate facilities and services committed, or areas where public services and facilities can be economically extended.

Public Services and Facilities Element: Policy 9
Develop a public facility assessment reporting system as part of the Capital Improvement Program and in accordance with AB 1600 to monitor the capacity of existing facilities to ensure that new developments do not overwhelm existing facilities. The following are guidelines for developing the reporting system:

- Identify and understand the demands for services that will be placed on Highland by regional demographic and economic changes.
- Monitor the progress of current local development projects, and ensure that public service and facility plans, as well as their forecasts and funding mechanisms, reflect changing conditions.
- Track the status of capital improvement program implementation.
- Develop a community survey to identify public facility deficiencies and usage.

Public Services and Facilities Element: Policy 10
Conduct and maintain an inventory of the availability and adequacy of public services and facilities in coordination with the County and service agencies in the area. Use the information to coordinate capital improvement programs and to make determinations on the adequacy of community facilities.

Public Services and Facilities Element: Policy 11
Continue to follow the procedures established for the regular exchange of information regarding proposed development and availability and adequacy of public services and facilities.

Public Services and Facilities Element: Policy 12
Continue to utilize a proactive approach to assuring that the flow of information between service agencies is maintained.

Public Services and Facilities Element: Policy 13
Utilize performance standards to determine the adequacy of public services and facilities and to establish requirements, fees and exactions provided by new development in the City.

Public Services and Facilities Element: Policy 14
Maintain a development review process that places the ultimate responsibility on the project sponsor for ensuring that necessary infrastructure improvements (including system-wide improvements) needed to support new development are, in fact, available at the time they are needed.

Public Services and Facilities Element: Policy 15
Require the construction of public facilities as a condition of approval for a proposed development if the development exceeds the capacity of existing public facilities to support such development.

Public Services and Facilities Element: Policy 16
Continue to require that project applicants provide sufficient information in the application process so that the City may comprehensively determine the potential impacts and/or the need for improvements to existing services and facilities to support project buildout consistent with the City's performance.

Public Services and Facilities Element: Policy 17
Continue to require that all new development pay the applicable Development Impact Fees established by the City Council.

Public Services and Facilities Element: Policy 18
Maintain flexibility in the collection and application of Development Impact Fees to permit the construction of master planned facilities in lieu of fees when the City determines that it is in the public interest to do so.

Public Services and Facilities Element: Policy 19
Continue to require the construction of public facilities as a condition of approval where the value of the services and facilities needed to support buildout of a proposed development exceed established Development Impact Fees, as consistent with the City's performance standards. Require an agreement with the developer for reimbursement from future development fees for the excess costs. Such reimbursements shall be from future fees collected for the specific excess facilities, which the initial developer was required to construct.

Public Services and Facilities Element: Policy 20
In the event that the performance standards for public services and facilities are not being met, the following conditions shall apply:

- Where the performance standards are not being met due to needs created by existing development, the City Council shall adopt in its Capital Improvement Plan a program to ensure that the performance criteria will be met at the earliest possible date.
- In instances where the performance standards are being exceeded prior to approval of a proposed development as the result of existing development, require that the proposed development provide such facilities as are necessary to ensure that performance criteria are met for new public facilities and services provided to the development, and that existing public services and facilities are not further downgraded.

Public Services and Facilities Element: Policy 21
Review the development fee structure, user charges, and mitigation fees every five years in accordance with the provisions of AB 1600 to ensure that the charges are consistent with the costs of improvement and maintenance and that public services and facilities are being expanded in a cost-efficient manner. Utilize the City's performance standards for public services and facilities as the basis for this review.

Public Services and Facilities Element: Policy 22
Continue to require that planned communities participate in the development of public infrastructure, in addition to the payment of development impact fees, through the following methods:

- An approved development agreement for all new specific plan or planned unit development projects that specifies the timing of infrastructure improvements in relation to project development.

- An annual review of improvements conducted for all new specific plans and an annual report in a format that can be easily included in the City's infrastructure assessment and reporting system.

Public Services and Facilities Element: Policy 23
Continue to proactively monitor and review development proposals in surrounding areas to protect City interests and minimize impacts on the community.

Public Services and Facilities Element: Policy 24
Continue to work with the County on a system of requiring appropriate mitigation to ensure that new unincorporated development will not impact services and facilities in the City.

Public Services and Facilities Element: Policy 25
Continue to support an assessment district alternative to development impact fees for large-scale developments undergoing urbanization when a single owner or small number of owners is involved, and when it is in the public interest to do so.

Public Services and Facilities Element: Policy 26
Continue to allow new development and the intensification of existing development only where and when adequate public services and facilities can be provided.

City of San Bernardino Public Facilities and Services

The City of San Bernardino General Plan offers the following Public Facilities and Services Goals and Policies regarding library and cultural services:

Public Facilities and Services Element: Goal 7.4

Maintain and enhance the cultural quality of life for the City's residents.

Public Facilities and Services Element: Policy 7.4.1
Actively support public and private arts activities by coordinating City sponsored programs, private support activities, loans and grants, and other means of participation. (A-3 and PFS-9

Public Facilities and Services Element: Policy 7.4.2
Work with public and private organizations in the community, county, and state to ensure that cultural and art programs are coordinated.

Public Facilities and Services Element: Policy 7.4.3
Require developers to incorporate art in new commercial and industrial projects or contribute in-lieu fees for public art improvements as permitted by State Law. (LU-1)

Public Facilities and Services Element: Policy 7.4.4
Incorporate sculpture, paintings, and other forms of art in City buildings.

Public Facilities and Services Element: Policy 7.4.5
Focus elements of art in the City's key activity areas and corridors. (CD-1 and PFS-1)

Public Facilities and Services Element: Policy 7.4.6
Evaluate the feasibility for the development of a regional center for the performing and fine arts. (PFS-1)

Public Facilities and Services Element: Policy 7.4.7
Evaluate the feasibility of developing a facility as an archive for the City's historical resources. (PFS-1)

Public Facilities and Services Element: Policy 7.4.8
Coordinate and promote the public's awareness of arts programs through City newsletters and other publications and cable television public access. (PFS 10-12)

Public Facilities and Services Element: Policy 7.4.9
Facilitate the formation of community groups involved in cultural activities and provide artists, craftsman and dancers with communication opportunities by establishing a referral service or newsletter.

Public Facilities and Services Element: Policy 7.4.10
Work with recreation services and schools to develop art appreciation programs.

Public Facilities and Services Element: Policy 7.4.11
Annually allocate funds to support cultural and arts activities in the City. (A-3)

Public Facilities and Services Element: Policy 7.4.12
Solicit state and federal funds to support local cultural and arts activities, as they are available. (A-3 and PFS-9)

Public Facilities and Services Element: Policy 7.4.13
Solicit corporate sponsorship and private donations for public art and art and cultural facilities and programs.

Public Facilities and Services Element: Policy 7.4.14
Construct new libraries and rehabilitate and expand existing library facilities and programs as required to meet the needs of existing and future residents. (PFS-6)

Public Facilities and Services Element: Policy 7.4.15
Acquire materials for the library facilities that reflect the needs and interests of the City residents. (PFS 9 and PFS-6)

Public Facilities and Services Element: Policy 7.4.16
Provide outreach services for seniors and the handicapped, if they cannot visit library facilities.

Public Facilities and Services Element: Policy 7.4.17
Provide appropriate linkages for the library's use of telecommunication and computer-based data for the storage, retrieval, and display of information including online access and CD Rom, as technologies develop and are standardized. (PFS-9 and A-3)

Public Facilities and Services Element: Policy 7.4.18
Continue to provide funding for library facilities and activities, examining other potential funding sources, including state and federal and corporate and private contributions. (A-1)

Public Facilities and Services Element: Policy 7.4.19
Develop and install automated library circulation system and automated catalog for accurate and efficient control of materials. (A-3 and PFS-1)

4.16.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for library, cultural, and other public services.

4.16.4.4 Potential Impacts

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

LOPS-1 Would the project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for library and other public services?

Other public services include Library Services within the City of San Bernardino. The City of San Bernardino bases its library services requirements on the Division of Library Development Services of the State of California's standard of 1.5 volumes per capita, while the City of Highland's standards are 10,000 square feet of library space per 36,000 residents; 18.3 weekly service hours per 10,000 population; 2.82 books per capita.

Similar to the discussion under Fire Protection, Police Protection, and School Services above, the development of the proposed Project would not cause a significant increase in demand for library or other public services. The proposed Project would not include construction of housing that would result in any direct increase in demand for library or other public services. Operation of the proposed Project is not forecast to require any additional permanent employees. Therefore, the Project would result in no permanent increase in demand for libraries and other public services. Implementation of the proposed project would improve local infrastructure within the IVIC Project area. However, the Project is not forecast to change land uses or otherwise create activities that can increase demand for library services beyond that which is anticipated in the Cities of Highland and San Bernardino General Plans. Libraries are currently provided by the counties and other local agencies under authority of the two jurisdictions that cover the IVIC Project area. Local agencies would increase overall levels of library service based upon the future population within their jurisdiction. The Project would not substantially increase demand for library or other public services and impacts would be less than significant.

Mitigation Measures: None Required.

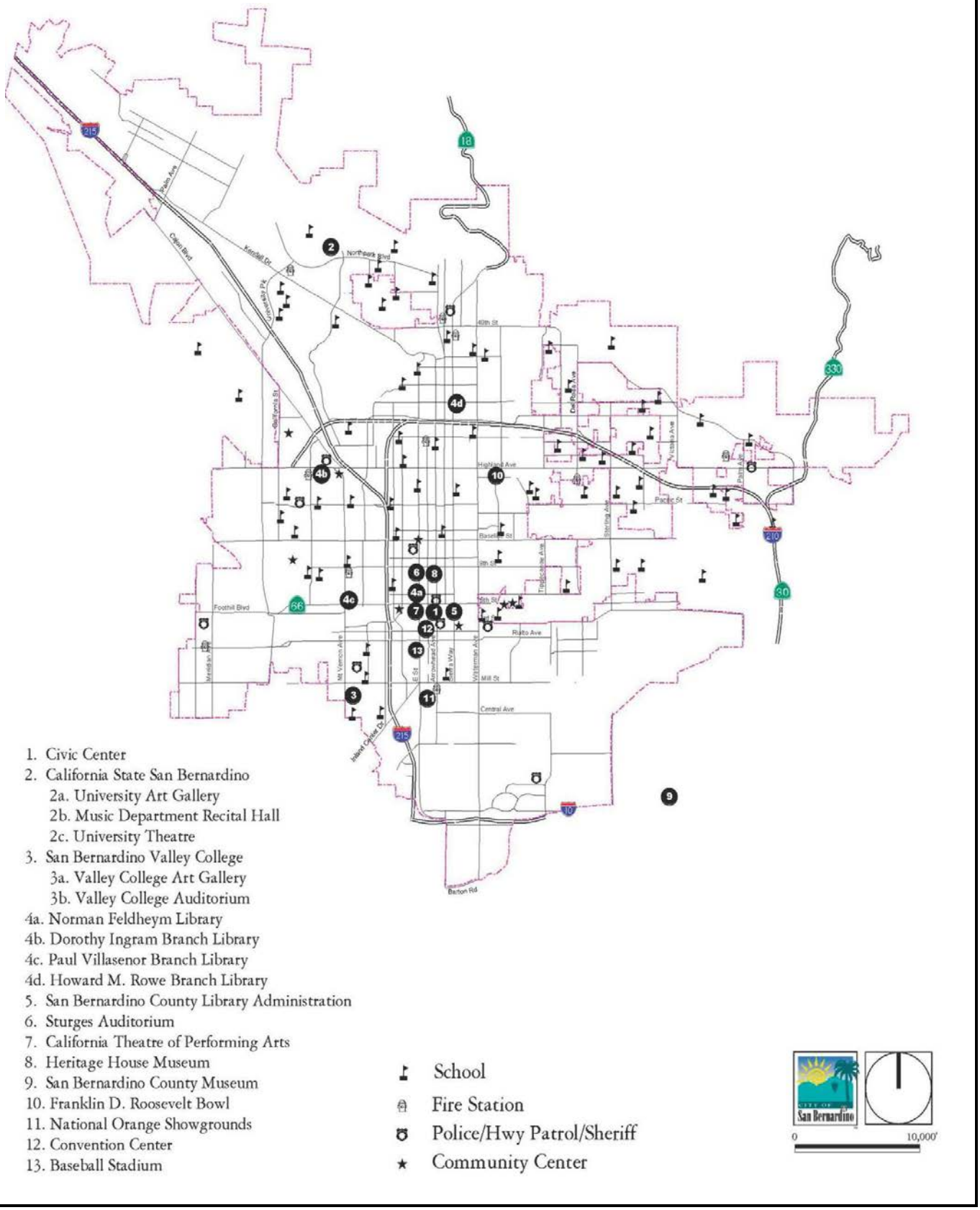
Level of Significance After Mitigation: Less Than Significant.

4.16.6 Cumulative Impacts

As previously discussed, the proposed Project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would not substantially increase demand for public services. However, the proposed Project has a potential to, without **MM PS-1**, which requires the EVWD Reservoir and Well site to be fenced, attract trespass, and thus result in greater demand for police protection. With the implementation of **MM PS-1**, police protection impacts would be reduced to a level of less that cumulatively considerable, and therefore would not contribute to significant cumulative impacts thereof. Therefore, the Project would not result in a considerable contribution to cumulative impacts to public services.

4.16.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of **MM PS-1**, no significant and unavoidable impacts relating to public services would occur as a result of implementing the proposed Project, and the project's potential impacts on public services will be less than significant.



SOURCE: City of San Bernardino General Plan, November 2005 (Figure PFS-1)

FIGURE 4.16-1

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San Bernardino Civic Facilities

4.17 RECREATION AND PARKS

4.17.1 Introduction

This Subchapter evaluates the environmental impacts to the issue area of parks and recreation from implementation of the proposed Project, the proposed IVIC. Information in this section is based on information in the City of Highland General Plan Conservation and Open Space Element, and the City of San Bernardino General Plan Parks, Recreation, and Trails Element.

This document is a full-scope DEIR for the above-described Project and all of the standard issues related to recreation identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC would result in an impact to parks; would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or, would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The IVIC Project area is located within the Cities of Highland and San Bernardino which have a combined population of contains a population estimated at 273,146 and contain a combined 76,839 residential units.[1] It is assumed that the IVIC Project area supports about 1% of the overall population and residential housing units within the combined Cities of Highland and San Bernardino.[2] This proposed Project does not include construction of any new development (residential or otherwise) and with implementation of all the proposed infrastructure improvements it is possible that one or a few residential parcels may be replaced by a well or reservoir. These issues are addressed in the following analysis.

These issues pertaining to population and housing will be discussed below as set in the following framework:

4.17.1 Introduction
4.17.2 Regulatory Setting
4.17.3 Environmental Setting
4.17.4 Thresholds of Significance
4.17.5 Methodology
4.17.6 Environmental Impacts
4.17.7 Mitigation Measures
4.15.8 Cumulative Impacts
4.15.9 Significant and Unavoidable Impacts

No comments on this topic were received during the NOP review period.

The following reference documents were used in preparing this section of the DEIR.

- City of Highland, March 2006. *General Plan*

[1] SCAG, 2021. 2020 Local Profiles. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 04/23/24)
[2] Refer to the Airport Gateway Specific Plan (AGSP) Draft Program Environmental Impact Report (DEIR) for population estimates that cover the general area covered by the IVIC Project. Note that the IVIC only pertains to infrastructure and does not propose to modify or displace any housing or persons. https://ceqanet.opr.ca.gov/2022060349/2 (accessed 04/23/24)

- City of Highland, July 6, 2023. Development Impact Fees Calculation and Nexus Report. https://www.cityofhighland.org/DocumentCenter/View/3910/Development-Impact-Fee-Report-July-2023-PDF (accessed 04/24/24)
- City of San Bernardino, November 1, 2005. *General Plan*.
- City of San Bernardino, 2005. General Plan Draft Environmental Impact Report
- City of San Bernardino, 2024. Parks & Recreation. https://www.sbcity.org/city_hall/parks_recreation (accessed 04/24/24)
- City of San Bernardino Website: Parks, Recreation & Community Services Commission. at: https://sanbernardinocityca.iqm2.com/Citizens/Board/1034-Parks--Recreation-Commission (accessed 04/24/24)
- City of San Bernardino, 2024. Development Code https://www.sbcity.org/city_hall/community_development_and_housing/development_code (accessed 04/24/24)
- SCAG, 2021. 2020 Local Profiles. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 04/23/24)

4.17.2 Regulatory Setting

State

Quimby Act

The Quimby Act was established by the California legislature in 1965 to provide parks for growing communities in California. The Act authorizes cities to adopt ordinances addressing park land and/or fees for residential subdivisions for the purpose of providing and preserving open space and recreational facilities and improvements. The Act requires the provision of a minimum of three acres of park area per 1,000 persons residing within a subdivision. The Act also specifies acceptable uses and expenditures of such funds.

State Public Park Preservation Act

This primary instrument for protecting and preserving parkland is the State Public Park Preservation Act pf 1971. Under the Public Resource Code Section 5400, et seq., cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

State Street and Highway Code

The State Street and Highway Code assists in providing equestrian and hiking trails within the right-of-way of county roads, streets, and highways.

Local

Municipal Codes

Development within each of the jurisdictions within the project area is regulated by the respective municipal code for those jurisdictions, which contain requirements for payment of development fees to fund parks and recreational facilities in accordance with the Mitigation Fee Act (California Government Code §§ 66000-66025).

City of Highland Conservation and Open Space Element

The City of Highland General Plan offers the following Conservation and Open Space Element Goals and Policies regarding parks and recreations:

Conservation and Open Space Element: Goal 5.10

Maintain a high-quality system of parks that meet the needs of all segments of the community.

Conservation and Open Space Element: Policy 1
Develop and periodically update a Parks and Recreation Master Plan, with direction from the Planning Commission, Design Review Board and City Council, to identify specific future sites for additional parks and recreational open space.

Conservation and Open Space Element: Policy 2
Supplement existing development fee program for parkland acquisition with other funding sources, grants and programs (fee sponsors, corporate sponsors, fund raising, for example).

Conservation and Open Space Element: Policy 3
Use the redevelopment process for the selection, acquisition and funding of additional parkland in western portions of the City.

Conservation and Open Space Element: Policy 4
Prepare a phased strategy for developing new facilities.

Conservation and Open Space Element: Policy 5
Assess areas of potential annexation into the City and, if necessary, negotiate an agreement with the County of San Bernardino to provide parks meeting City standards within areas of eventual annexation into the City.

Conservation and Open Space Element: Policy 6
Conduct periodic assessments of park and recreation facilities and services, including user surveys.

Conservation and Open Space Element: Policy 7
Provide handicap access to all parks.

Conservation and Open Space Element: Policy 8
Develop a multi-dimensional recreation program for all citizen groups in Highland including exercise, arts and crafts and cultural enrichment.

Conservation and Open Space Element: Policy 9
Provide a variety of activity options, including active and passive uses, within each park.

Conservation and Open Space Element: Policy 10
Study the desirability of developing “specialty parks” such as skate, dirt bike, fishing and art parks.

Conservation and Open Space Element: Policy 11
Evaluate the facilities and amenities of all City parks as part of the periodic update of the Parks and Recreation Master Plan.

Conservation and Open Space Element: Policy 12
Conduct periodic user surveys on the design of public parks.

Conservation and Open Space Element: Policy 13
Conduct service-area based design charettes with community members on park design.

Conservation and Open Space Element: Policy 14
Give priority to the acquisition of large parcels for the development of Community Parks that accommodate athletic fields.

Conservation and Open Space Element: Policy 15
Encourage design competitions for new and remodeled parks.

Conservation and Open Space Element: Policy 16
Continue to implement the local park ordinance through developer dedication of parkland or in-lieu fees.

Conservation and Open Space Element: Policy 17
Require that new specific plans and planned unit developments (PUDs) incorporate sufficient park and recreation facilities along with natural open space areas, where appropriate, to serve the needs of their future residents.

Conservation and Open Space Element: Policy 18
Given the residential focus in Highland, increase park standard acreage ratios above state required minimums.

Conservation and Open Space Element: Policy 19
Connect newly developed parks, wherever practical, to the existing and future bicycle and recreational trail system.

Conservation and Open Space Element: Policy 20
Initiate a long-term program to correct park deficiencies.

Conservation and Open Space Element: Policy 21
Adopt a density bonus program for development that includes usable park and open space lands above the City-required standard.

Conservation and Open Space Element: Policy 22
Develop recreational opportunities within the Greenspot area.

Conservation and Open Space Element: Policy 23
Design parks in accordance with contemporary safety standards and "CPTED" (Crime Prevention Through Environmental Design) principles.

Conservation and Open Space Element: Policy 24
Periodically evaluate parks for safety and maintenance.

Conservation and Open Space Element: Policy 25
Conduct evaluation of park improvements to test for safety compliance, crime prevention and effective maintenance.

Conservation and Open Space Element: Policy 26
Pursue joint public/private development of recreation facilities, especially in areas where joint development would maximize use of existing facilities, as well as add new land to the facility.

Conservation and Open Space Element: Policy 27
Develop and implement a facilities plan that indicates the potential development of recreational facilities, their costs and implementation at selected school sites.

Conservation and Open Space Element: Policy 28
Establish clear policies about the proper community use of school facilities including maintenance, scheduling, fees and regulations.

Conservation and Open Space Element: Policy 29
Locate parks and recreation facilities within convenient walking and biking distance of all neighborhoods.

Conservation and Open Space Element: Policy 30
Integrate park and recreation facilities with existing and future trail and bikeways, wherever practical.

Conservation and Open Space Element: Policy 31
Prepare templates for proper on and off-site signage for all parks.

City of San Bernardino Parks, Recreation, and Trails Element

The City of San Bernardino General Plan offers the following Parks, Recreation, and Trails Goals and Policies regarding parks and recreation:

Parks, Recreation, and Trails Element: Goal 8.1

Improve the quality of life in San Bernardino by providing adequate parks and recreation facilities and services to meet the needs of our residents.

Parks, Recreation, and Trails Element: Policy 8.1.1
Establish a comprehensive parks master plan, which accomplishes the following:

a. Establishes the standard of 5 acres of parkland for every 1,000 residents;
b. Establishes guidelines for the types and amounts of recreational facilities and services necessary to adequately serve future residents;
c. Defines park development standards based on types and sizes of parks (mini, neighborhood, community, regional) and their service area (e.g. Mini- ¼ to ½ service radius);
d. Describes the steps necessary to achieve the park standards and guidelines;
e. Defines existing and anticipated recreational needs (based on population size, density, demographics, and types of facilities);
f. Identifies areas in need of new or expanded recreational facilities and the types of facilities needed;
g. Disperses park facilities and equipment throughout the City to prevent an undue concentration at any location; including sports fields, basketball courts, tennis courts, swimming pools, picnic areas, and other facilities;
h. Identifies appropriate park fees;
i. Identifies potential locations and types of new or expanded facilities; and
j. Identifies potential funding sources. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.1.2
Provide a variety of park "experiences", including those developed for intense recreational activity, passive open space enjoyment, and a mixture of active and passive activities. (PRT-1 and PRT-4)

Parks, Recreation, and Trails Element: Policy 8.1.3
Pursue the development of portions of the Santa Ana River, Lytle Creek, and flood control drainages and detention basins for recreational uses that will not inhibit flood control purposes or be adversely impacted by flooding. (PRT-6)

Parks, Recreation, and Trails Element: Policy 8.1.4
Examine the potential use of geothermal resources for recreational use (e.g., pools). (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.1.5
Integrate parks and recreation facilities with the Master Plan for Trails and Bikeways. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.1.6
Accommodate the recreational needs of the City's residents reflecting their unique social, cultural, ethnic, and physical limitations in the design and programming of recreational spaces and facilities. (PRT-1 and PRT-4)

Parks, Recreation, and Trails Element: Policy 8.1.7
Continue to evaluate the community's recreational needs and the adequacy of the City's recreational facilities and programs in meeting these needs. (PRT-4)

Parks, Recreation, and Trails Element: Policy 8.1.8
Inform residents of recreational programs through the internet, cable television, newsletters, and other publications. (PRT-5)

Parks, Recreation, and Trails Element: Policy 8.1.9
Initiate and attend joint meetings with the Forest Service, County Parks and Recreation Department, and the state to coordinate the joint use of recreational facilities, parkland acquisition, and the establishment of new recreational programs. (PRT-6)

Parks, Recreation, and Trails Element: Policy 8.1.10
Maintain and expand cooperative arrangements with the San Bernardino Unified School District, City Municipal Water Department, Cal State San Bernardino and San Bernardino Valley College for after hour and summertime use of parks, pools, concert halls, and other facilities. (PRT-6)

Parks, Recreation, and Trails Element: Goal 8.2

Design and maintain our parks and recreation facilities to maximize safety, function, beauty, and efficiency.

Parks, Recreation, and Trails Element: Policy 8.2.1
Parks shall be designed in accordance with contemporary safety standards and "CPTED" (Crime Prevention Through Environmental Design) principles. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.2
Each park within the City shall be evaluated for safety and maintenance on an established schedule. (PRT-4)

Parks, Recreation, and Trails Element: Policy 8.2.3
Encourage local individuals and groups to contribute or plant trees (in accordance with a prescribed tree planting plan) in neighborhood and community parks.

Parks, Recreation, and Trails Element: Policy 8.2.4
Develop master plans for each park to ensure that (a) the siting of buildings, open air facilities, and landscape are unified, functionally related to efficiency, and compatible with adjacent uses; and (b) landscape locations and species are coordinated with architectural and site design. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.5
Design and develop parks to complement and reflect their natural environmental setting and maximize their open space character. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.6
Design and improve our parks according to the following:

a. Locate parks on collector or neighborhood streets so they are easily accessible to adjacent residential neighborhoods;
b. Site uses so that they do not adversely impact adjacent residences (e.g., locating high activity, noise-generating, and nighttime uses away from residences);
c. Fulfill the particular needs of residents of the area they serve (i.e., senior citizens, and families with children);
d. Provide for parking so that it does not disrupt abutting residences; and
e. Incorporate landscape that "fits" with adjacent areas. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.7
Install new and replace existing landscaping where it is severely deteriorated, inappropriately located for park activities, and incompatible with other landscape and adjacent uses. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.8
Ensure that all parks are adequately illuminated for safe use at night. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.9
Provide for the supervision of park activities and promote enforcement of codes restricting illegal activity. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.2.10
Restrict and control nighttime park use so that adjacent residences are not adversely affected. (PRT-1)

Parks, Recreation, and Trails Element: Goal 8.4

Provide adequate funding for parkland and trails acquisition, improvements, maintenance, and programs.

Parks, Recreation, and Trails Element: Policy 8.4.1
Pursue the acquisition of surplus federal, state, and local lands to meet present and future recreation and community service needs. (PRT-2 and PRT-6)

Parks, Recreation, and Trails Element: Policy 8.4.2
Continue to require developers of residential subdivisions to provide fee contributions based on the valuation of the units to fund parkland acquisition and improvements. (LU- 1)

Parks, Recreation, and Trails Element: Policy 8.4.3
Grant Quimby fee waivers only when usable parklands are received and when such waivers are determined to be in the best interest of City residents as certified by the Mayor and Common Council on recommendation of the Parks, Recreation and Community Services Department. (PRT-1 and LU-1)

Parks, Recreation, and Trails Element: Policy 8.4.4
Continue and expand mechanisms by which the City may accept gifts and dedications of parks, trails, open space, and facilities. (PRT-2)

Parks, Recreation, and Trails Element: Policy 8.4.5
Consider the use of special taxes, sale of bonds, or assessment districts for park and trail development and maintenance. (PRT-2)

Parks, Recreation, and Trails Element: Policy 8.4.6
Continue to provide financial support, including user fees and in-lieu fees, for summer lunch, playground, swimming pool programs and recreational facilities, and other appropriate programs. (PRT-2 and PRT-3)

Parks, Recreation, and Trails Element: Policy 8.4.7
Installation and/or replacement of the recreational facilities and equipment and the bikeway and trail system shall be carried out as part of the City's Capital Improvement Program. (A-2)

4.17.3 Environmental Setting: Recreation and Parks

City of Highland

According to the City of Highland General Plan, there were 143.6 acres of developed park, and 36 acres of natural parkland within the City, totaling 179 acres, which meets the City's goal for parkland/open space acreage per resident. The open space ratio established for the Highland is 2.5 acres per 1,000 residents, which includes a ratio of 2.0 acres of developed park acreage and 0.5 acre of undeveloped natural parkland. Additional recreational needs of the City are met by the sports fields and playgrounds of the eight schools in the City, parks or schools in surrounding cities, vacant lots and a few privately held fields that serve as informal ball fields and gathering places. The City not only collects Quimby funds and general revenues, but also collects fees for certain planned uses of their parks (planned uses include scheduling organized sports such as baseball and soccer, etc.). There are no parks located within the IVIC Project area, as shown on **Figure 4.17-1**, the City of Highland Park Services Area, though the Project area is located within a half mile radius of three parks or public schools with recreation facilities open to the public including Highland Community Park, facilities at Cypress Elementary School, and facilities at Warm Springs Elementary School. Highland Community Park sits on the northerly border of the Specific Plan Area on the east side of Central Avenue at the terminus of 6th Street. It includes more than 20 acres of active ball fields, passive trails, tot lot, and a community recreation center (Jerry Lewis Community Center) including a gymnasium, pool, fitness center and community gathering areas open to the public. The Highland Branch Library and Environmental Learning Center is situated to the south of the Community Center making it convenient to visit both facilities.

City of San Bernardino

According to the City of San Bernardino General Plan, the City utilizes a park acreage standard of five acres per 1,000 residents, which is one acre greater than the land required by the state's Quimby Act, which requires developers to provide land and/or fees for new parks based on a standard of four acres per thousand residents. When the City's General Plan was adopted, the parkland needs for the Incorporated City was 1,140.4 acres, and at present that need is about 1,081.5 acres; however, the City is deficient in terms of parkland with only 539.98 acres identified in the City's General Plan EIR. At present, the City of San Bernardino Parks, Recreation and

Community Services Department offers 38 parks (including open spaces and ballfields), 31 playground areas and several park locations with walking tracks for recreational activities.[3] The Parks, Recreation and Community Services Department maintains all City parks and develops programs for the community to enjoy. Main annual events include, the Veterans Day Parade, Operation Splash, Inland Empire Senior Games, Winter Wonderland and more. The Department has also reintroduced youth and adult sports programs for 2017.[4] The City includes seven community centers that offer a variety of leisure and social activities for all ages and cultural interest such as youth and adult sports, summer and off track lunch program, teen and youth clubs, tutoring, arts and crafts, senior nutrition, family night, etc.

In addition, there are three regional parks totaling 158 acres that have active recreation facilities, the many school sites in the City that are available for recreational activities, special recreation facilities (community centers and senior centers) and the presence of year-round passive and active recreation opportunities in the nearby San Bernardino National Forest.

As with the City of Highland, there are no parks located within the IVIC Project area within the City of San Bernardino, though the nearest park-type facility is the Indian Springs High School located just north of the Project area at the northwest corner of Del Rosa Drive and 6th Street. The school has extensive outdoor recreation fields and an aquatics center utilized by local swim clubs.

4.17.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

REC/PK-1 Would result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.

REC/PK-1 Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

REC/PK-1 Would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.17.5 Methodology

The information provided in this Subchapter of the DEIR was obtained through a mix of library research and field investigation. Most of the park and recreation data was obtained by reviewing the two city General Plans. The location of existing parks and recreation facilities was field verified by driving the local roads and observing the location of such facilities.

[3] City of San Bernardino, 2024. Parks & Recreation. https://www.sbcity.org/city_hall/parks_recreation (accessed 04/24/24)
[4] City of San Bernardino, 2024. Parks, Recreation & Community Services Commission. at: https://sanbernardinocityca.iqm2.com/Citizens/Board/1034-Parks--Recreation-Commission (accessed 04/24/24)

4.17.6 Potential Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.17.6.1 Impact Analysis

REC/PK-1 Would the project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

According to the 2005 City of San Bernardino General Plan Draft Environmental Impact Report (DEIR), the City of San Bernardino has an adopted park standard of 5 acres per 1,000 residents, while the City of Highland has an adopted park standard of 2.5 acres per 1,000 residents. As stated under Chapter 4.15, Population and Housing, proposed IVIC Project envisions installing new infrastructure over a 20 year period to meet both City's build-out growth forecasts based on the existing mix of General Plan uses within the Project area. The IVIC Project does not directly contribute to future permanent development (population or housing), but will accommodate growth as it occurs under the existing cities' General Plan land use designations, and as envisioned in the cities' General Plans.

The City Creek Bypass Channel, Roadway Improvements & Sewer would be installed primarily within or adjacent to public rights-of-way to the extent feasible. The ROW include the channel ROW and the road ROW within and adjacent to which the roadway improvements would occur, and within which the sewer improvements would occur. The EVWD Well Development and Reservoir would be installed above ground and would be located within sites that are fenced. The IVIC is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and

because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. There is a potential that the EVWD Well Development and Reservoir could be located within parks or facilities designated for such use. Construction and staging areas within parks at which the EVWD Well Development and Reservoir may be installed may result in the temporary closure of parks or portions of parks. However, several parks in the area surrounding the IVIC Project area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to development within existing parks, there is a potential for the EVWD Well Development and Reservoir to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the area surrounding the IVIC Project. As such, mitigation is provided below to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

Once in operation, the proposed wells would not directly increase the population, though there is a potential for this development to result in nominal indirect population growth. Overall demand for parks and recreation facilities will be increased based on the future population-based demands of the local agencies within the surrounding IVIC Project area. The IVIC Project is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below.

Mitigation Measures:

REC-1 IVIC Project infrastructure that is proposed to be located within vacant parkland or IVIC Project infrastructure that is proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland or (2) shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the IVIC Project infrastructure.

Level of Significance After Mitigation: Less Than Significant

Implementation of **MM REC-1** above would minimize the potential for loss of park or recreational facilities as a result of IVIC Project infrastructure located within facilities designated for such uses. As such, impacts are less than significant.

REC/PK-2 Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Please refer to the discussion under issue **REC/PK-1** above. The proposed IVIC Project would not directly increase the use of existing neighborhood and regional parks or other recreation

facilities because no housing would be developed as part of the IVIC Project that would subsequently generate new residents within the cities of San Bernardino or Highland.

The proposed project would include infrastructure improvements including roadway, channel, sewer, well and reservoir infrastructure. The proposed project does not include construction of new homes or businesses. Therefore, the proposed project would not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the surrounding IVIC Project area. Construction of the proposed infrastructure would require temporary employment. As discussed in **Subchapter 4.15**, Population and Housing, it is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within or in close proximity to the surrounding IVIC Project area. No new permanent employees required. Operation and maintenance of the other proposed infrastructure would be anticipated to be provided primarily by existing utility agency employees within the surrounding IVIC Project area. Thus, there is no long-term potential to increase new residents within the surrounding IVIC Project area that would contribute to a minimal increased demand for parks and recreation facilities. Because the proposed project would not substantially increase the population within the surrounding IVIC Project area, the proposed Project would not substantially increase use of existing neighborhood or regional parks or other recreational facilities.

Furthermore, analysis contained in **REC/PK-1** above determined whether the IVIC Project would increase the use of existing neighborhood and regional parks or other recreational facilities and physical deterioration thereof. As stated under issue (d) of **Subchapter 4.16**, the development of IVIC Project infrastructure may be located within parks or facilities designated for parks and/or recreation use. Construction and staging areas within parks and/or recreation facilities at which IVIC Project infrastructure may be installed may result in the temporary closure of such facilities or portions of such facilities. However, several park and recreation facilities in the surrounding IVIC Project area would be available for use. This increased use of other park and recreation facilities would be temporary, during construction only. Once construction is completed, park and recreation facilities would return to serve their original purpose, with only slightly less land area available for such uses. In addition to IVIC Project development within existing park and recreation facilities, there is a potential for IVIC Project infrastructure to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the surrounding IVIC Project area. As such, mitigation is required to ensure that, for IVIC Project infrastructure located within vacant land designated for park and/or recreation facility use, or for IVIC Project infrastructure larger than one acre in size within existing park and/or recreation facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

*Mitigation Measures: Implementation of **MM REC-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

Implementation of **MM REC-1** above would minimize the potential for loss of park or recreational facilities as a result of IVIC Project infrastructure located within facilities designated for such uses. As such, impacts are less than significant.

REC/PK-3 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The development of IVIC Project infrastructure will not involve the construction or expansion of recreational facilities. There is a potential that a proposed IVIC Project infrastructure could be located within parks or facilities designated for such use. Depending on the area required for the given IVIC Project infrastructure, an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, mitigation is required to ensure that, should loss of recreation or park facilities occur, replacement occurs resulting in impacts to recreational facilities are minimized.

Mitigation Measures: **MM REC-1** outlined above and under Subsection 4.17.5(a), above as well as the following:

REC-2: The Implementing Agency shall prepare subsequent CEQA documentation for any Parks or Recreation facilities required to be developed as part of implementation of MM REC-1—i.e., in the event an IVIC Project infrastructure project would be result in loss of parkland or recreation facilities.

Level of Significance After Mitigation: Less Than Significant

Implementation of **MM REC-1** above would minimize the potential for loss of park or recreational facilities as a result of IVIC Project infrastructure located within facilities designated for such uses. As such, impacts are less than significant. Implementation of **MM REC-2** would ensure that, should construction of recreation or park facilities be required as a part of the IVIC Project, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated.

4.17.7 Mitigation Measures

The preceding analysis has identified two mitigation measures to address the potential indirect demand that may result from implementing the IVIC Project. These measures are:

REC-1 IVIC Project infrastructure that is proposed to be located within vacant parkland or IVIC Project infrastructure that is proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland or (2) shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the IVIC Project infrastructure.

REC-2: The Implementing Agency shall prepare subsequent CEQA documentation for any Parks or Recreation facilities required to be developed as part of implementation of MM REC-1—i.e., in the event an IVIC Project infrastructure project would be result in loss of parkland or recreation facilities.

4.17.8 Cumulative Impacts

As discussed above in **Subchapter 4.15**, the proposed Project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the IVIC Project would not substantially increase demand for recreation facilities. However, the proposed Project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the IVIC Project could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result. **MM REC-1** would ensure that IVIC Project infrastructure site selection would not impact the cumulatively available parkland

within the region, and **MM REC-2** would ensure that subsequent CEQA documentation is completed should new park or recreation facilities be required to replace a loss thereof as a result of IVIC Project implementation, thus reducing the impacts to park and recreation facilities to less than cumulatively significant. Therefore, the IVIC Project would not result in a considerable contribution to cumulative impacts to public services.

4.17.8 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of **MMs REC-1** and **REC-2**, no significant and unavoidable impacts relating to recreation would occur as a result of implementing the proposed Project, and the Project's potential impacts on recreation will be less than significant.

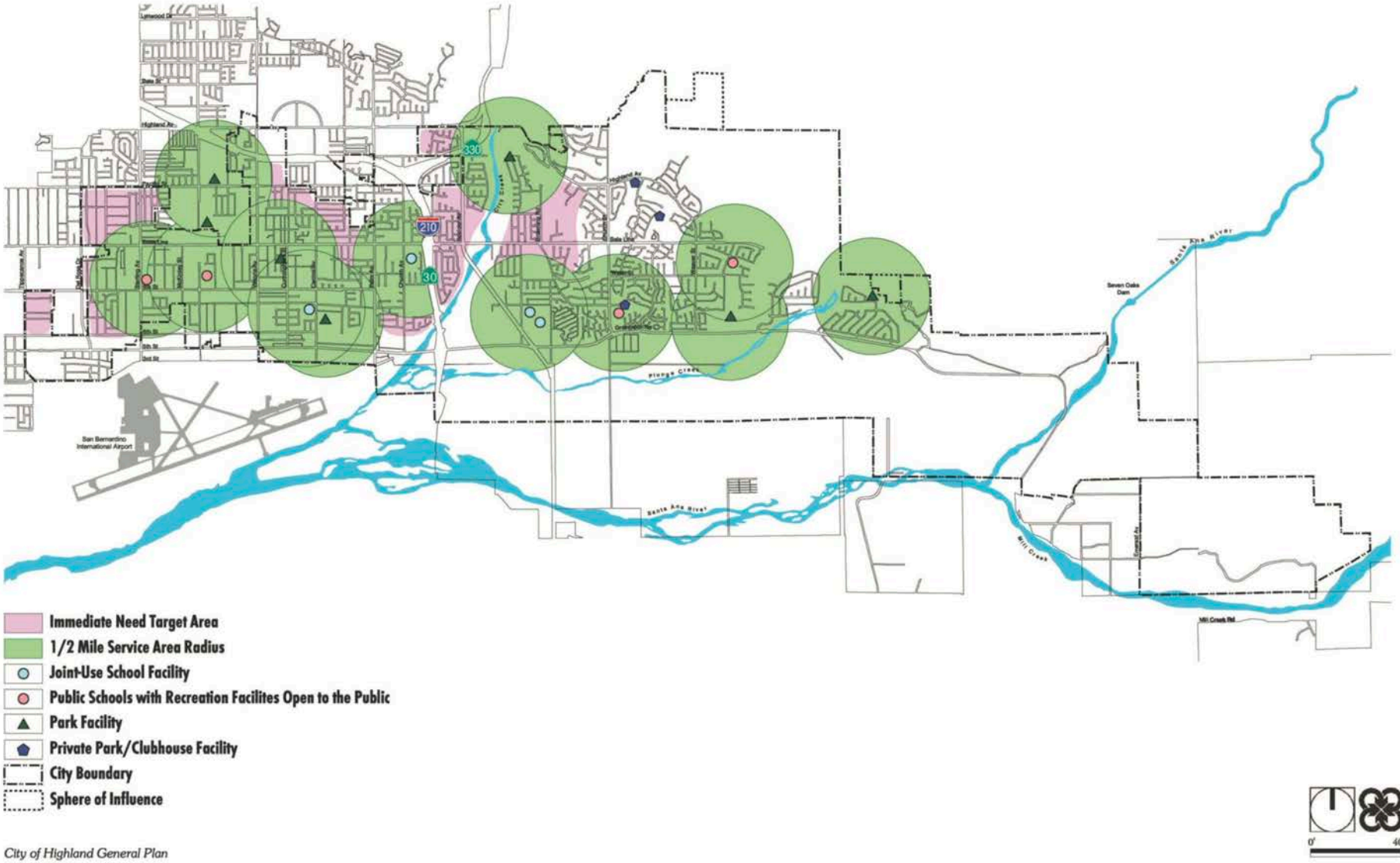


FIGURE 4.17-1

Tom Dodson & Associates
Environmental Consultants

Parks

4.18 TRANSPORTATION

4.18.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of transportation from implementation of the proposed Inland Valley Infrastructure Corridor (IVIC).

This document is a full-scope Draft Environmental Impact Report (DEIR) for the above-described project and all of the standard issues related to Transportation identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC would result in a conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; whether implementation of the IVIC would result in a significant impact pertaining to vehicle miles traveled; whether implementation of the IVIC would result in hazards due to design or incompatible uses; and, whether implementation of the IVIC would result in inadequate emergency access.

The IVIC project area contains a substantial existing backbone circulation system, which currently has many roadways with older, deteriorating pavement. The Project area includes parcels in both the City of Highland, and the City of San Bernardino. **Figures 3-3 and 3-12 through 3-14b** show the circulation system in the area surrounding the Project area. Regional access to the IVIC area is provided primarily by the Interstate 215 (I-215) Freeway, located approximately 2 miles to the west of the Project area. In addition, the I-10 Freeway is located approximately 3 miles to the south of the project. State Route 210 (SR-210) is oriented in an east-west direction approximately 2.5 miles to the north of the Project area, and then turns southward and is oriented in a north-south direction adjacent to the Project's eastern boundary.

These issues pertaining to transportation will be discussed below as set in the following framework:

4.18.1 Introduction
4.18.2 Regulatory Setting
4.18.3 Environmental Setting
4.18.4 Thresholds of Significance
4.18.5 Methodology
4.18.6 Environmental Impacts
4.18.7 Mitigation Measures
4.18.8 Cumulative Impacts
4.18.9 Significant and Unavoidable Impacts

The following reference documents were used in preparing this section of the DEIR.

- City of Highland, March 2006. *General Plan*
- Kimley-Horn and Associates, Inc, November 2020. *Airport Gateway Specific Plan Traffic Impact Study* (TIS)
- City of San Bernardino, November 1, 2005. *General Plan*.
- SCAG, April 4, 2024. *CONNECT SOCAL 2024 The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments.* https://scag.ca.gov/connect-socal (accessed 06/12/24)
- Urban Crossroads, May 29, 2024. *Inland Valley Infrastructure Corridor Transportation Impact Assessment*

The following comments from the public regarding transportation/traffic were received during the NOP comment period:

NOP Comment Letter #3 San Bernardino County Public Works: The Comment Letter indicates that the IVIC is located near the County Maintained Road System (CMRS) at Tippecanoe Avenue, and that a Road Construction Permit, Excavation permit, and Encroachment Permit would be necessary to improve CRMS roadways.

Response: The impacts to these residences and Multi-Family land use designations, including support for relocation of residents, are fully analyzed in Subchapter 4.15, Population and Housing.

4.18.2 Regulatory Setting

4.18.2.1 City of Highland

City of Highland General Plan Policies

The City of Highland General Plan offers the following Circulation Goals, Policies and Programs regarding traffic and transportation:

Circulation Element: Goal 3.1
A circulation network that efficiently, safely and economically moves people, vehicles, and goods using transportation facilities that meet the current demands and projected needs of the City, while maintaining and protecting its residential and spa resort character.

Circulation Element: Policy 1
Require new development proposals to ensure that all mid-block street segments operate at LOS "D" or better during the peak hours of traffic. (Note: Because of the location of the Palm Avenue/Pacific Street intersection within the Historic District, consideration will be given to alternatives to traffic signal mitigation. Alternatively, the City may elect to accept a lower LOS to retain the historic character of the District.)

Circulation Element: Policy 2
Ensure that all intersections operate at LOS "D" or better during the peak hours of traffic.

Circulation Element: Policy 3
Ensure that the City's street system be designed and constructed to accommodate the traffic generated by buildout of the General Plan land use designations.

Circulation Element: Policy 4
Maintain flexibility in the cross-sections and configuration of streets within topographically rugged or environmentally sensitive areas as long as mid-block street segments and intersections operate at LOS "D" or better.

Circulation Element: Policy 5
Design and employ traffic control measures (e.g., install traffic signals, provide access restrictions, etc.) to ensure city streets and roads function as intended.

Circulation Element: Policy 6
Periodically update the General Plan master traffic study to maintain its relevance and correspondence to the General Plan land use designations and the design and construction of new and existing City streets.

Circulation Element: Policy 7
Monitor the intensity of land use to keep traffic on any arterial in balance with roadway capacity.

Circulation Element: Policy 8
Require development proposals with the potential to generate traffic volumes or other impacts not adequately evaluated in the Circulation Element and the General Plan Program EIR to prepare a traffic analysis consistent and compatible with the City's Master General Plan Traffic Model.

Circulation Element: Policy 9
Restrict the number of access points and intersections along arterials to preserve mid block and intersection capacities and to maintain public safety.

Circulation Element: Policy 10
Encourage major employers to reduce vehicular trips by offering incentive concepts discussed in the General Plan Circulation Element, including but not limited to reduced transit passes and preferential parking for ridesharing.

Circulation Element: Goal 3.2
Provide a well-maintained roadway system.

Circulation Element: Policy 1
Maintain and rehabilitate all components of the circulation system, including roadways, sidewalks, bicycle facilities, pedestrian facilities and traffic signals.

Circulation Element: Policy 2
Establish and maintain a roadways pavement management program (PMP) that sets forth budgeting, timelines and schedules for maintenance of existing roadways in the community.

Circulation Element: Policy 3
Continue to study the need and feasibility of providing additional all-weather crossings along critical roadways, and develop an implementation plan and schedule, if appropriate.

Circulation Element: Policy 4
Coordinate maintenance or enhancement of transportation facilities with related infrastructure improvements.

Circulation Element: Policy 5
Develop and implement programs and policies that require additional improvements or mitigation from industries or entities that generate heavy truck traffic and pavement impacts.

Circulation Element: Goal 3.3
Preserve and enhance uniquely scenic or special visual resource areas along appropriate routes for the enjoyment of all travelers.

Circulation Element: Policy 1
Designate the following roadways as Scenic Highways and establish guidelines that protect visual resources in the community and allow for the development of additional recreational opportunities:

- Boulder Avenue
- Base Line (east of City Creek)
- Palm Avenue
- Greenspot Road
- Church Street
- Highland Avenue (east of City Creek)

Circulation Element: Policy 2
Attractively landscape and maintain Highland's Secondary Highways, Special Secondary Highways, Major Highways, Primary Arterials, and Modified Primary Arterials and prepare/ implement distinctive streetscape improvement plans.

Circulation Element: Policy 3
Take such actions as may be necessary to protect scenic routes, including but not limited to:

- regulation of land use and intensity of development;
- detailed land and site planning;

- control of outdoor advertising;
- careful attention to and control of grading and landscaping; and
- careful design and maintained appearance of structures and equipment.

Circulation Element: Goal 3.4
Provide a safe circulation system.

Circulation Element: Policy 1
Establish the local street system within developing neighborhoods through a cooperative public/private planning process.

Circulation Element: Policy 2
Require new development to install and maintain streets within planned residential areas as private streets and in accordance with development standards set forth in the Development Code and other applicable standards and guidelines.

Circulation Element: Policy 3
Promote the principle that streets have multiple uses and users, and protect the safety of all users.

Circulation Element: Policy 4
Require new development to provide pedestrian paths and linkages through projects, locating linkages to avoid conflicts with motorized traffic.

Circulation Element: Policy 5
Discourage high-speed, through traffic on local streets with appropriate traffic-calming measures (e.g., traffic enforcement, bulb-outs, lane striping, chokers, etc.).

Circulation Element: Policy 6
Design access onto major arterial streets in an orderly and controlled manner.

Circulation Element: Policy 7
Utilize shared driveways in common areas to minimize disruptions to traffic and pedestrian/bicycle flow.

Circulation Element: Policy 8
Implement street design features such as the use of medians, bus turnouts and consolidated driveways to minimize mid-block traffic congestion.

Circulation Element: Policy 9
Support freeway improvements that remove through traffic from local streets.

Circulation Element: Policy 10
Provide adequate sight distances for safe vehicular movement on roadways and at intersections.

Circulation Element: Policy 11
Encourage and improve pedestrian connections from residential neighborhoods to retail activity centers, employment centers, schools, parks, open space areas and community centers.

Circulation Element: Policy 12
Encourage barrier-free accessibility for all handicapped residents, employees and visitors throughout the City's circulation system.

Circulation Element: Policy 13
Support the planning of sidewalks of appropriate width to allow the provision of buffers to shield nonmotorized traffic from vehicles.

Circulation Element: Policy 14
Add raised, landscaped medians and bulb-outs, where appropriate, to reduce exposure to cross traffic at street crossings.

Circulation Element: Policy 15
When feasible, walkways should include pedestrian amenities such as shade trees and/or plantings, trash bins, benches and shelters.

Circulation Element: Goal 3.5
Promote Bus Service and paratransit improvements.

Circulation Element: Policy 1
Continue to support the regional bus system to provide intracity service, intercity service to major employment centers, and connection to regional transportation transfer points.

Circulation Element: Policy 2
Plan for the provision of areas within the City to be used as park- and-ride regional bus and car pool facilities.

Circulation Element: Policy 3
Work with Omnitrans to ensure that transit services are extended to serve residents in the eastern portion of the study area.

Circulation Element: Policy 4
Coordinate with Omnitrans to provide safe, clean and attractive bus shelters at bus stops and transfer stations.

Circulation Element: Policy 5
Ensure accessibility of disabled persons to public transportation.

Circulation Element: Policy 6
Investigate new opportunities to finance further transit service for the elderly, handicapped and recreational purposes.

Circulation Element: Policy 7
Support privately funded local transit systems for commuter residents and maintain local transit systems for seniors and youth.

Circulation Element: Policy 8
Design transit improvements to minimize impacts on other modes of travel.

Circulation Element: Goal 3.6
Provide a circulation system that reduces conflicts between commercial trucking, private/ public transportation and land use.

Circulation Element: Policy 1
Maintain designated truck routes for use by commercial trucking that link industrial and commercial activity areas with major roadways and regional transportation routes and minimize impacts on local traffic neighborhoods.

Circulation Element: Policy 2
Provide appropriately designed roadways for the designated truck routes that can safely accommodate truck travel.

Circulation Element: Policy 3
Develop berms and barriers where feasible along truck routes to minimize noise impacts to sensitive land uses.

Circulation Element: Policy 4
Provide sufficient loading areas to minimize interference with efficient traffic circulation.

Circulation Element: Policy 5
Regulate on-street parking of trucks where necessary to discourage truck parking on primarily residential streets or where they are incompatible with adjacent land uses.

Circulation Element: Policy 6
Conduct a study examining the interface between proposed truck routes, the complete roadway network, and adjacent land uses.

Circulation Element: Policy 7
Evaluate truck route alternatives based on Caltrans Traffic Study guidelines.

Circulation Element: Policy 8
Require as a part of the development review process for all new or expanding mineral extraction and all other heavy industry activities within the City, that the following information be provided:

- A detailed plan of haul roads, indicating measures that will be taken to minimize aesthetic, noise, traffic, and particulate emission impacts to the surrounding land uses;
- A traffic analysis that indicates both the number of projected trucks and their associated potential impact to city streets;
- A "fair-share" mitigation analysis indicating the impacts and associated maintenance costs caused by the potential generation of future truck traffic; and
- A comprehensive mitigation program, designed to run the life of the mineral extraction activity (including reclamation) that will:
    - Cover the fair-share portion of surrounding roadway maintenance costs due to the increase in local truck activity, or
    - Provide new or appropriate improvements to existing roadway facilities which in the opinion of the City would mitigate the impacts caused by the increase in local truck traffic.

Circulation Element: Policy 9
Work with private mining operators to establish specialized truck routes that:

- Allow for the transport of raw and finished materials from quarries within the Santa Ana River Wash area to the Foothill Freeway on paved private haul roads;
- Reduce, to the extent feasible, the movement of mining transport trucks on City streets; and
- Mitigate, to the extent feasible, the noise, dust and vibration effects of such transport activities on surrounding land uses.

Circulation Element: Goal 3.7
Protect and encourage bicycle travel.

Circulation Element: Policy 1
Develop a system of continuous and convenient bicycle routes to places of employment, shopping centers, schools, and other high activity areas with potential for increased bicycle use.

Circulation Element: Policy 2
Encourage new development to provide reasonable and secure space for bicycle storage.

Circulation Element: Policy 3
Provide bicycle racks at all public facilities and along major public streets.

Circulation Element: Policy 4
Assure that local bicycle routes will complement regional systems and be compatible with routes of neighboring municipalities.

Circulation Element: Policy 5
Provide linkages between bicycle routes and other trails, such as the Santa Ana River Trail, within the City as appropriate.

4.18.2.2 City of San Bernardino

City of San Bernardino General Plan Policies

The City of San Bernardino General Plan offers the following Circulation Goals, Policies and Programs regarding traffic and transportation:

Circulation: Goal 6.1
Provide a well-maintained street system.

Circulation: Policy 6.1.1
Maintain and rehabilitate all components of the circulation system, including roadways, sidewalks, bicycle facilities and pedestrian facilities. (A-2)

Circulation: Policy 6.1.2
Develop list of priorities for maintenance and reconstruction projects. (A-2)

Circulation: Policy 6.1.3
Coordinate maintenance or enhancement of transportation facilities with related infrastructure improvements. (A-2)

Circulation: Goal 6.2
Maintain efficient traffic operations on City streets

Circulation: Policy 6.2.1
Maintain a peak hour level of service D or better at street intersections.

Circulation: Policy 6.2.2
Design each roadway with sufficient capacity to accommodate anticipated traffic based on intensity of projected and planned land use in the City and the region while maintaining a peak hour level of service (LOS) "C" or better.

Circulation: Policy 6.2.3
Keep traffic in balance with roadway capacity by requiring traffic studies to identify local roadway and intersection improvements necessary to mitigate the traffic impacts of new developments and land use changes. (LU-1)

Circulation: Policy 6.2.4
Review the functioning of the street system as part of the Capital Improvement Program to identify problems and address them in a timely manner. (A-2)

Circulation: Policy 6.2.5
Design roadways, monitor traffic flow, and employ traffic control measures (e.g. signalization, access control, exclusive right and left turn-turn lanes, lane striping, and signage) to ensure City streets and roads continue to function safely within our Level of Service standards.

Circulation: Policy 6.2.6
Improve intersection operations by modifying signal timing at intersections and coordinating with other signals, as appropriate.

Circulation: Policy 6.2.7
Install new signals as warranted.

Circulation: Goal 6.3
Provide a safe circulation system

Circulation: Policy 6.3.1
Promote the principle that streets have multiple uses and users, and protect the safety of all users.

Circulation: Policy 6.3.2
Discourage high speeds and through traffic on local streets through traffic control devise such as signage, speed bumps, etc. as acceptable by the local neighborhood. (C-2 and C-3)

Circulation: Policy 6.3.3
Require that all City streets be constructed in accordance with the Circulation Plan (Figure C-2) and the standards established by the Development Services Director.

Circulation: Policy 6.3.4
Require appropriate right-of-way dedications of all new developments to facilitate construction of roadways shown on the Circulation Plan. (LU-1)

Circulation: Policy 6.3.5
Limit direct access from adjacent private properties to arterials to maintain an efficient and desirable quality of traffic flow. (LU-1)

Circulation: Policy 6.3.6
Locate new development and their access points in such a way that traffic is not encouraged to utilize local residential streets and alleys. (LU-1)

Circulation: Policy 6.3.7
Require that adequate access be provided to all developments in the City including secondary access to facilitate emergency access and egress (LU-1).

Circulation: Goal 6.4
Minimize the impact of roadways on adjacent land uses and ensure compatibility between land uses and highway facilities to the extent possible.

Circulation: Policy 6.4.1
Work with Caltrans to ensure that construction of new facilities includes appropriate sound walls or other mitigating noise barriers to reduce noise impacts on adjacent land uses. (C-1)

Circulation: Policy 6.4.2
Require, wherever possible, a buffer zone between residential land uses and highway facilities. (LU-1)

Circulation: Policy 6.4.3
Continue to participate in forums involving the various governmental agencies such as Caltrans, SANBAG, SCAG, and the County that are intended to evaluate and propose solutions to regional transportation problems.

Circulation: Policy 6.4.4
Design developments within designated and eligible scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses. (LU-1)

Circulation: Policy 6.4.5
Encourage joint efforts among federal, state, county, and City agencies and citizen groups to ensure compatible development within scenic corridors.

Circulation: Policy 6.4.6
Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features. (LU-1)

Circulation: Policy 6.4.7
Utilize contour grading and slope rounding to gradually transition graded road slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors. (LU-1)

Circulation: Policy 6.4.8
Develop appropriate protection measures along routes frequently used by trucks to minimize noise impacts to sensitive land uses including but not limited to residences, hospitals, schools, parks, daycare facilities, libraries, and similar uses. (LU-1)

Circulation: Goal 6.5
Develop a transportation system that reduces conflicts between commercial trucking, private/public transportation, and land uses.

Circulation: Policy 6.5.1
Provide designated truck routes for use by commercial/industrial trucking that minimize impacts on local traffic and neighborhoods.

Circulation: Policy 6.5.2
Continue to regulate on-street parking of trucks to prevent truck parking on residential streets or in other locations where they are incompatible with adjacent land uses. The use of signs, restricted parking, limited parking times, and the posting of "no overnight" parking signs are mechanisms that can be employed depending upon the specific needs of the affected area.

Circulation: Policy 6.5.3
Prepare neighborhood protection plans for areas of the City where heavy vehicle traffic or parking becomes a significant enforcement problem. (C-2)

Circulation: Policy 6.5.4
Require that on-site loading areas minimize interference of truck loading activities with efficient traffic circulation on adjacent roadways. (LU-1)

Circulation: Goal 6.6

Promote a network of multi-modal transportation facilities that are safe, efficient, and connected to various points of the City and the region.

Circulation: Policy 6.6.1
Support the efforts of regional, state, and federal agencies to provide additional local and express bus service in the City.

Circulation: Policy 6.6.2
Create a partnership with Omnitrans to identify public transportation infrastructure needs that improve mobility. In cooperation with Omnitrans, require new development to provide transit facilities, such as bus shelters and turnouts, as necessary and warranted by the scale of the development. (LU-1)

Circulation: Policy 6.6.3
Ensure accessibility to public transportation for seniors and persons with disabilities.

Circulation: Policy 6.6.4
In cooperation with Omnitrans, explore methods to improve the use, speed, and efficiency for transit services. These methods might include dedicated or priority lanes/signals, reduced parking standards for selected core areas, and incorporating Intelligent Transportation System architecture.

Circulation: Policy 6.6.5
Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.

Circulation: Policy 6.6.6
Encourage measures that will reduce the number of vehicle-miles traveled during peak periods, including the following examples of these types of measures:

- Incentives for car-pooling and vanpooling.
- Preferential parking for car-pools and vanpools.
- An adequate, safe, and interconnected system of pedestrian and bicycle paths.
- Conveniently located bus stops with shelters that are connected to pedestrian/bicycle paths. (A-1)

Circulation: Policy 6.6.8
Promote the use of car-pools and vanpools by providing safe, convenient park-and-ride facilities.

Circulation: Policy 6.6.9
Work with Omnitrans to create transit corridors, such as the one currently being explored on E Street linking CSUSB to Hospitality Lane, to increase transit ridership, reduce traffic congestion, and improve air quality.

Circulation: Policy 6.6.10
Consider the provision of incentives, such as reduced parking standards and density/intensity bonuses, to those projects near transit stops that include transit-friendly uses such as child care, convenience retail, and housing.

Circulation: Goal 6.7
Work with the railroads and other public agencies to develop and maintain railway facilities that minimize the impacts on adjacent land uses.

Circulation: Policy 6.7.1
Accommodate railroad services that allow for the movement of people and goods while minimizing their impact on adjacent land uses.

Circulation: Policy 6.7.2
Coordinate with SANBAG, SCAG, the County and other regional, state or federal agencies and the railroads regarding plans for the provision of passenger, commuter, and high-speed rail service.

Circulation: Policy 6.7.3
Encourage the provision of a buffer between residential land uses and railway facilities and encourage the construction of sound walls or other mitigating noise barriers between railway facilities and adjacent land uses.

Circulation: Policy 6.7.4
Identify existing and future high volume at-grade railroad crossings and pursue available sources of funding (e.g., California Public Utilities Commission) to implement grade separations where appropriate. (A-3)

Circulation: Goal 6.8
Support the safe operation of aviation and heliport facilities within and in proximity to the City.

Circulation: Policy 6.8.1
Work with the San Bernardino International Airport Authority (SBIAA) in the preparation of the Airport Master Plan and Comprehensive Land Use Plan to ensure the City's interests are foremost in the improvement of the airport.

Circulation: Policy 6.8.2
Coordinate with surrounding cities, the IVDA, and regional agencies to ensure that access to the San Bernardino International Airport is provided and maintained in a manner that minimizes traffic impacts to the City of San Bernardino.

Circulation: Policy 6.8.3
Work with the Federal Aviation Administration to ensure that the existing or new Heliports within San Bernardino operate in a safe manner and minimize impacts on adjacent properties.

Circulation: Goal 6.9
Achieve a balance between parking supply and demand.

Circulation: Policy 6.9.1
Ensure that developments provide an adequate supply of parking to meet its needs either on-site or within close proximity. (LU-1)

Circulation: Policy 6.9.2
Study the parking standards in the Development Code to determine if adequate flexibility is available to accommodate desirable situations, such as shared parking, Corridor Improvement actions, or transit oriented developments. (A-1)

Circulation: Policy 6.9.3
Continue to expand the supply of public parking in off- street parking facilities in downtown San Bernardino.

Circulation: Policy 6.9.4
Continue to provide an in-lieu parking fee option for developments in the Downtown area to satisfy all or part of their parking requirement through the payment of an in-lieu fee which will be utilized to provide parking in consolidated public parking facilities.

Circulation: Policy 6.9.5
Require that new developments submit a parking demand analysis to the City Engineer for review and approval whenever a proposal is made to provide less than the full code requirement of parking. (LU-1)

Circulation: Policy 6.9.6
Develop parking and traffic control plans for those neighborhoods adversely impacted by spillover parking and traffic. (C-3)

Parks, Recreation, and Trails Element: Goal 8.3

Develop a well-designed system of interconnected multi-purpose trails, bikeways, and pedestrian paths.

Parks, Recreation, and Trails Element: Policy 8.3.1
Work cooperatively with appropriate regional agencies to facilitate development of interconnected trails that tie into major activity areas. (PRT-6)

Parks, Recreation, and Trails Element: Policy 8.3.2
Establish a multi-purpose trail system, as shown on Figure PRT-2, along the foothills of the San Bernardino Mountains, Santa Ana River, Cajon and Lytle Creeks, and interconnecting linkages in collaboration with the U.S. Forest Service, County of San Bernardino, City of Highland, Loma Linda, and other adjacent communities. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.3
Establish a recreational greenbelt system linking the river and drainage corridors with the mountains. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.4
All new developments on designated routes, as shown on Figure PRT-2, shall provide bicycle and pedestrian routes linked to adjacent facilities. (LU-1)

Parks, Recreation, and Trails Element: Policy 8.3.5
Provide routes accessible for disabled persons that link public facilities and commercial areas to residential neighborhoods. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.6
Adequate and secure bicycle storage facilities shall be provided for new institutional and non-residential development. (PRT-1 and LU-1)

Parks, Recreation, and Trails Element: Policy 8.3.7
Provide bicycle racks in public facilities and in activity centers. (PRT-1 and LU-1)

Parks, Recreation, and Trails Element: Policy 8.3.8
Install sidewalks and wheelchair ramps in existing neighborhoods. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.9
Separate bikeway and trail systems from traffic and roadways wherever possible. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.10
Provide clear separation of hikers, joggers, and equestrians where possible. (PRT-1)

Parks, Recreation, and Trails Element: Policy 8.3.11
Seek the use of easements and rights-of-way from owners and continue to negotiate agreements for the use of utility easements, flood controls channels, and railroad rights-of- way to expand the park and trail system. (PRT-1 and PRT- 6)

Parks, Recreation, and Trails Element: Policy 8.3.12
Incorporate the following features in multi-purpose trails, bike routes, and pedestrian paths:
a. Special paving or markings at intersections;
b. Clear and unobstructed signing and trail/lane markings; Improved signal phasing;
c. Vehicular turning restrictions at intersections;
d. Hearing impaired cross walk signals;
e. Trees to provide shade;
f. Safe and well lighted rest areas; and
g. Coordinated street furniture including signs, trash receptacles, newspaper stands, and drinking fountains. (PRT-1 and CD-1)

Parks, Recreation, and Trails Element: Goal 8.4
Provide adequate funding for parkland and trails acquisition, improvements, maintenance, and programs.

Parks, Recreation, and Trails Element: Policy 8.4.1
Pursue the acquisition of surplus federal, state, and local lands to meet present and future recreation and community service needs. (PRT-2 and PRT-6)

Parks, Recreation, and Trails Element: Policy 8.4.2
Continue to require developers of residential subdivisions to provide fee contributions based on the valuation of the units to fund parkland acquisition and improvements. (LU- 1)

Parks, Recreation, and Trails Element: Policy 8.4.3
Grant Quimby fee waivers only when usable parklands are received and when such waivers are determined to be in the best interest of City residents as certified by the Mayor and Common Council on recommendation of the Parks, Recreation and Community Services Department. (PRT-1 and LU-1)

Parks, Recreation, and Trails Element: Policy 8.4.4
Continue and expand mechanisms by which the City may accept gifts and dedications of parks, trails, open space, and facilities. (PRT-2)

Parks, Recreation, and Trails Element: Policy 8.4.5
Consider the use of special taxes, sale of bonds, or assessment districts for park and trail development and maintenance. (PRT-2)

Parks, Recreation, and Trails Element: Policy 8.4.6
Continue to provide financial support, including user fees and in-lieu fees, for summer lunch, playground, swimming pool programs and recreational facilities, and other appropriate programs. (PRT-2 and PRT-3)

Parks, Recreation, and Trails Element: Policy 8.4.7
Installation and/or replacement of the recreational facilities and equipment and the bikeway and trail system shall be carried out as part of the City's Capital Improvement Program. (A-2)

4.18.2.3 San Bernardino County Transportation Authority

The San Bernardino County Transportation Authority (SBCTA) has identified for projects within San Bernardino County, that the San Bernardino Transportation Analysis Model (SBTAM) as the appropriate tool for conducting VMT analysis for transportation projects in their respective jurisdictions. SBTAM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment and roadway network topography. SBTAM is a travel forecasting model that represents a sub-area (San Bernardino County) of the Southern California Association of Governments (SCAG) regional traffic model. SBTAM was designed to provide a greater level of detail and sensitivity in the San Bernardino County area as compared to the regional SCAG model.

4.18.2.4 Regional

Southern California Association of Governments

SCAG recently approved the 2025-2050 RTP/SCS, titled "Connect SoCal" which has expanded goals beyond the 2020-2045 plan outlined above. Connect SoCal 2024 represents the vision for the region and reflects the planned transportation investments, policies and strategies that will integrate with the Forecasted Regional Development Pattern to achieve the Plan's goals. The vision and goals for Connect SoCal 2024 are rooted in the direction set forth by Connect SoCal 2020, reflecting both SCAG's statutory requirements and the emerging trends and persistent challenges facing the region.

SCAG's vision for Southern California in the year 2050 is:

"A healthy, prosperous, accessible and connected region for a more resilient and equitable future."

The following are the goals and subgoals of Connect SoCal 2024 designed to help SCAG achieve this vision:

- Mobility: Build and maintain a robust transportation network
    - Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions
    - Ensure that reliable, accessible, affordable and appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities
    - Support planning for people of all ages, abilities and backgrounds

- Communities: Develop, connect and sustain communities that are livable and thriving
    - Create human-centered communities in urban, suburban and rural settings to increase mobility options and reduce travel distances
    - Produce and preserve diverse housing types in an effort to improve affordability, accessibility and opportunities for all households

- Environment: Create a healthy region for the people of today and tomorrow
    - Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change
    - Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions and enable more sustainable use of energy and water
    - Conserve the region's resources

- Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all residents
    - Improve access to jobs and educational resources
    - Advance a resilient and efficient goods movement system that supports the economic vitality of the region, attainment of clean air and quality of life for our communities

SCAG's Connect SoCal document is guided by the following key laws and requirements:

- Developing a Regional Transportation Plan (RTP) - SCAG is required by federal law to prepare and update a long-range RTP (23 U.S.C. §134 et seq.)
- Keeping up with Clean Air Act Requirements - With respect to air quality, most areas within the SCAG region have been designated as nonattainment or maintenance areas for one or more transportation related criteria pollutants. Pursuant to the federal Clean Air Act, SCAG's 2020 RTP/SCS is required to meet all federal transportation conformity requirements, including regional emissions analysis, financial constraint, timely implementation of transportation control measures, and interagency consultation and public involvement (42 U.S.C. §7401 et seq.).
- Monitoring System Performance - With the passage of the 'Moving Ahead for Progress in the 21st Century' (MAP-21) federal transportation authorization legislation in 2012, transportation system performance planning and monitoring also became a federal mandate. This commitment to a national performance management and reporting system was further solidified with the passage of the subsequent federal transportation authorization package (the 'FAST Act') in 2015
- Developing a Sustainable Communities Strategy - California State law also imposes additional requirements. For example, state law specifies that, "The plan shall be action-oriented and pragmatic, considering both the short-term and long-term future" (Government Code §65080(a)). California Senate Bill 375, codified in 2008 in Government Code §65080 (b)(2)(B), also requires that the RTP include a sustainable communities strategy or "SCS", which outlines growth strategies for land use and transportation and help reduce the state's greenhouse gas emissions from cars and light duty trucks.
- Hitting Specific Targets for Greenhouse Gas Reduction - For the SCAG region, the California Air Resources Board (CARB) has set greenhouse gas reduction targets at eight percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035.

San Bernardino County Congestion Management Program (CMP)

The San Bernardino County Congestion Management Program (CMP) was established in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions. Compliance with CMP requirements ensures a city's eligibility to compete for State gas tax funds for local transportation projects.

The San Bernardino County CMP determines the geographic area for a traffic study with the following criteria:

"At a minimum, the study area must include all freeway links with 100 or more peak-hour project trips (two-way) and other CMP roadways with 50 or more peak-hour project trips (two-way). Within the defined study area, all "key intersections," as listed in the most current CMP, must be analyzed. Key intersections represent intersections of CMP roadways plus those additional intersections recognized by local jurisdictions and/or SANBAG to be important to mobility on CMP roadways".

4.18.2.4 State

State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Assembly Bill 1358: The California Complete Streets Act

The California Complete Streets Act (AB 1358) of 2008 was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 requires circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the general plan." Essentially, this bill requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. AB 1358 tasks the Governor's Office of Planning and Research (OPR) to release guidelines for compliance, which are so far undeveloped.

Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act (SB 375) was signed into law on September 30, 2008. The SB 375 regulation provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal behind SB 375 is to reduce automobile commuting trips and length of automobile trips, thus helping to meet the statewide targets for reducing greenhouse gas (GHG) emissions set by the California Global Warming Solutions Act of 2006 (AB 32). SB 375 requires each metropolitan planning organization to add a broader vision for growth, called a "sustainable communities strategy", to its transportation plan. The SCS must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land use, and housing policies to plan for achievement of the regional emissions target.

Senate Bill 743

SB 743 (2013) changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact. (See PRC § 21099(b)(2) ["automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA]"].)

Under SB 743, the Governor's Office of Planning and Research (OPR) established vehicle miles traveled (VMT) as the preferred metric for measuring transportation impacts of most projects in place of level of service (LOS) or related measures of congestion as the primary metric. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, as of July 1, 2020, is the required metric statewide.

The California Department of Transportation (Caltrans) has provided two guidance documents to address VMT impacts on the state highway system consistent with the requirements of SB 743 and the OPR Technical Advisory:

- The Transportation Analysis under CEQA provides information to support CEQA practitioners in making CEQA significance determinations for transportation impacts of projects on the state highway system.

- The Transportation Analysis Framework guides the preferred approach for analyzing the VMT attributable to proposed projects (induced travel) in various project settings.

CEQA Guidelines Section 15064.3

CEQA Guidelines Section 15064.3 implements SB 743 and establishes VMT as the most appropriate measure of transportation impacts. This marks a shift away from the traditional LOS analysis that evaluated the impacts of a project on traffic conditions at nearby roadways and intersections. The primary components of Section 15064.3 include:

- Identifies VMT as the most appropriate measure of transportation impacts
- Declares that a project's effect on automobile delay shall not constitute a significant environmental impact (except for projects increasing roadway capacity)
- Creates a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT
- Allows a lead agency to qualitatively evaluate VMT if existing models are not available
- Gives lead agencies discretion to select a methodology to evaluate a project's VMT, but requires lead agencies to document that methodology in the environmental document prepared for the project

CEQA lead agencies were required to comply with CEQA Guidelines Section 15064.3 no later than July 1, 2020.

California Vehicle Code Division 15, Chapters 1-5

Caltrans is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards related to transportation safety, design, performance, and accessibility. Specifically, California Vehicle Code Sections 35000-35796 include regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Streets and Highway Code Sections 660-771

Caltrans has the discretionary authority to issue special permits for the use of State highways for other-than-normal transportation purposes and reviews requests from utility companies, developers, and others desiring to conduct activities within State highway rights-of-way. Caltrans encroachment regulations would apply to construction of the proposed project facilities within and immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area. Specifically, California Streets and Highway Code Sections 660-771 include regulations pertaining to transportation of oversized loads, certain materials, and construction-related roadway transportation disturbance.

4.18.3 Environmental Setting: Transportation

4.18.3.1 Existing Traffic Conditions / Street System

Regional access to the site is provided primarily by the Interstate 215 (I-215) Freeway, located approximately 2 miles to the west of the Project area. In addition, the I-10 Freeway is located approximately 3 miles to the south of the project. State Route 210 (SR-210) is oriented in an east-

west direction approximately 2.5 miles to the north of the Project area, and then turns southward and is oriented in a north-south direction adjacent to the Specific Plan eastern boundary.

The following summary of the differences between current and general plan build-out capacities for roadways within the IVIC Project area. The roadways shown on **Figure 3-3** are being considered under the IVIC Project, and roadways outside of this boundary fall outside of the scope of this Project Description.

DEL ROSA DRIVE

Roadway Segment:	Within the IVIC area beginning at 3rd Street (to the South), extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Arterial (up to 8 lanes; may have raised medians)

6th STREET

Roadway Segment:	Within the IVIC area beginning at Church Avenue (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

5th STREET

Roadway Segment:	Within the IVIC area beginning at SR-210 (to the east), with the potential for improvements extending west to Tippecanoe Avenue.
Current Configuration:	2 Lanes Undivided (Waterman Avenue to Marilyn Avenue); 4 Lanes Divided (Marilyn Avenue to Sterling Avenue); 2 lanes (Sterling Avenue to Victoria Avenue), and, 4 lanes (Victoria to SR-210 Eastbound Ramps)
General Plan Buildout Configuration:	Major Highway Tippecanoe Avenue to Palm Avenue (4 Lane, 80-foot roadways; Primary Arterial Palm Avenue to SR-210 (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way)

3rd STREET

Roadway Segment:	Within the IVIC area beginning at SR-210 (to the east), with the potential for improvements extending west to Tippecanoe Avenue.

Current Configuration:	4 Lanes Undivided (Tippecanoe Avenue to Palm Avenue); 2 Lanes (Palm Avenue to Church Avenue/5th Street)
General Plan Buildout Configuration:	Major Highway Victoria Avenue to Church Avenue (4 Lane, 80-foot roadways; Primary Arterial Tippecanoe to N Leland Norton Way (up to 6 lanes; 96-foot roadways, curb-to-curb, within a minimum of 112-foot rights-of-way); Major Arterial N Leland Norton Way to Victoria Avenue (up to 8 lanes; may have raised medians)

TIPPECANOE AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Secondary Highway 3rd Street to 9th Street (4 Lane roadway with a raised median and has a typical right-of-way width of 88 feet and a curb-to-curb pavement width of approximately 64 feet)

STERLING AVENE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Arterial 3rd Street to the City of San Bernardino's Boundary just south of 6th Street (up to 8 lanes; may have raised medians); Major Highway City of Highland's boundary just south of 6th Street (4 Lane, 80-foot roadways)

LANKERSHIM AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Secondary Arterial from 3rd Street to 5th Street (up to 4 lanes); Collector Street from 5th Street north to the City of Highland's Boundary (up to 2 lanes; 66-feet road right-of-way)

VICTORIA AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 9th Street.
Current Configuration:	4 Lanes Undivided
General Plan Buildout Configuration:	Major Highway 3rd Street to Highland Avenue (4 Lane, 80-foot roadways (including a 12-foot median) curb-to-curb, within 104-foot rights-of-way)

CUNNINGHAM STREET

Roadway Segment:	Within the IVIC area beginning at 5th Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

CENTRAL AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

PALM AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 5th Street.
Current Configuration:	4 Lanes with a center queueing lane
General Plan Buildout Configuration:	Major Highway 3rd Street to Base Line (4 Lane, 80-foot roadways (including a 12-foot median) curb-to-curb, within 104-foot rights-of-way)

CHURCH AVENUE

Roadway Segment:	Within the IVIC area beginning at 3rd Street, with the potential for improvements extending north to 6th Street.
Current Configuration:	2 Lanes Undivided
General Plan Buildout Configuration:	Collector Street (up to 2 lanes; 66-feet road right-of-way)

The preceding roadway segments within the IVIC Project area represent about 10 miles. Thus, it is anticipated that up to about 20 miles of new and or repaired lane additions (single lane) will need to be installed over the estimated 20-year period to reach the General Plan Buildout

Configuration of the above roadways. It is anticipated that as the area experiences growth in development, that roadway improvements will be installed gradually as the need for expanded roadway capacity becomes evident. However, IVDA and/or the local jurisdictions will seek opportunities to obtain grants or funding for specific roadway segments as identified above. This document evaluates the installation of up to 20 miles of new and/or repaired lanes, plus curb and gutter improvements, per year, as a baseline to conduct the impact analysis.

4.18.3.2 Existing Alternative Modes of Transportation

Existing Transit Service

Transit service to the project area is provided by OmniTrans, which serves the Cities of San Bernardino, Highland and other surrounding cities. Currently only Route 15 travels on any of the streets within the Project area.

OmniTrans Route 15 operates between the City of Redlands and the City of Fontana, traveling through the Project area along Tippecanoe Avenue, Del Rosa Avenue, Central Avenue, and Palm Avenue. Key stops along Route 15 include the San Bernardino County Court Building, Redlands Mall, San Bernardino Stadium, San Bernardino Valley College, Fontana Metrolink, and the San Bernardino Transit Center. At the San Bernardino Transit Center, passengers can transfer to other OmniTrans routes, as well as to Riverside Transit (RTA), Mountain Transit, Pass Transit and Victor Valley Transit Authority (VVTA) routes, or to Metrolink.

Route 15 operates on weekdays from 6:40 AM to 10:40 PM with approximately 30-minute headways (the time between bus arrivals), and on Saturdays and Sundays from approximately 6:40 AM to 7:25 PM with approximately 1-hour headways.

The OmniTrans bus stops located closest to the Project area are as follows:

- Tippecanoe Avenue at 3rd Street
- Del Rosa Drive at 3rd Street
- Del Rosa Drive at 6th Street
- Central Avenue at 5th Street
- Palm Avenue at 5th Street

Existing Bikeways

The IVIC planning area contains existing bike lanes as follows **Figures 4.18-1 and 4.18-2**:

- Class II Bike Lanes are intended to delineate the rights-of-way assigned to bicyclists and motorists, and to provide for more predictable movements of each. Class II bike lanes are located at the following locations:
  - 3rd Street from Palm Avenue to Victoria Avenue
  - 5th Street from I-210 to Tippecanoe Avenue
  - Palm Avenue (whole of the planning area)
- Class III Bike Routes are considered shared facilities serving either to provide continuity to other bicycle facilities or to designate preferred routes through high-demand corridors. Such bikeways are designated using signage along the roadway without special street striping. Class III bike lanes are located at the following locations:
  - Sterling Avenue from 5th Street to 6th Street
  - Victoria Avenue from 5th Street to 6th Street
  - Tippecanoe from 5th Street to 6th Street

Planned Trail Systems

The City of San Bernardino has expressed the desire to develop a Regional Multi-Purpose Trail along City Creek Bypass Channel, which traverses the IVIC Planning area from east to west. A multi-purpose trail would serve bicycle, pedestrian, and in some cases, equestrian users and provide regional connections. This trail is shown on **Figure 4.18-2**, located in the City of San Bernardino General Plan, and has not yet been fully developed to serve as a Regional Multi-Purpose Trail.

4.18.3.4 Existing Operating Conditions

A Roadway Level of Service analysis was conducted for the former Airport Gateway Specific Plan EIR.[1] This data is being utilized to indicate what recent conditions are along the roadways that would be improved within the IVIC Project area.

Table 4.18-1
SUMMARY OF ROADWAY SEGMENT ANALYSIS
EXISTING CONDITIONS

Roadway	Segment	Jurisdiction	Existing Configuration	LOS E Capacity[1]	Existing ADT [2]	V/C	LOS
Waterman Avenue	Baseline Street to 5th Street	SB	4 Lanes Divided	40,000	25,741	0.644	B
	5th Street to 3rd Street	SB	6 Lanes Divided	60,000	27,528	0.459	A
Tippecanoe Avenue	Baseline Street to 6th Street	SB / H	4 Lanes Undivided	30,000	12,006	0.400	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	14,330	0.478	A
	3rd Street to Mill Street	SB	6 Lanes Divided	60,000	28,362	0.473	A
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	4 Lanes Divided	40,000	32,591	0.815	**D**
	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	SB	6 Lanes Divided	60,000	25,471	0.425	A
Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	SB	4 Lanes Divided	40,000	23,780	0.595	A
	Highland Avenue to Pacific Street	SB	2 Lanes Undivided	12,000	17,645	1.470	**F**
	Pacific Street to Baseline Street	SB / H	4 Lanes Undivided	30,000	12,318	0.411	A
	Baseline Street to 9th Street	SB / H	4 Lanes Divided	40,000	9,963	0.249	A
	9th Street to 6th Street	SB	4 Lanes Divided	40,000	9,871	0.247	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	9,576	0.319	A

[1] Kimley-Horn, 2020. Airport Gateway Specific Plan Traffic Impact Study. https://ceqanet.opr.ca.gov/2022060349/2/Attachment/hmuFIS (accessed 06/12/24)

Roadway	Segment	Jurisdiction	Existing Configuration	LOS E Capacity[1]	Existing ADT [2]	V/C	LOS
Sterling Avenue	Base Line to 9th Street	H	4 Lanes Divided	40,000	13,368	0.334	A
	9th Street to 6th Street	H	4 Lanes Divided	40,000	10,609	0.265	A
	6th Street to 3rd Street	SB / H	4 Lanes Divided	40,000	6,984	0.185	A
Victoria Avenue	Highland Avenue to Pacific Street	H	4 Lanes Divided	40,000	12,184	0.305	A
	Pacific Street to Base Line	H	4 Lanes Divided	40,000	14,431	0.361	A
	Base Line to 9th Street	H	4 Lanes Undivided	30,000	11,210	0.374	A
	9th Street to 6th Street	H	4 Lanes Undivided	30,000	8,368	0.279	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	8,368	0.279	A
6th Street	Tippecanoe Avenue to Del Rosa Drive	SB / H	2 Lanes Undivided	10,000	3,249	0.325	A
	Del Rosa Drive to Sterling Avenue	H	2 Lanes Undivided	10,000	4,714	0.471	A
	Sterling Avenue to Victoria Avenue	SB / H	2 Lanes Undivided	10,000	3,519	0.352	A
	Victoria Avenue to Central Avenue	H	2 Lanes Undivided	10,000	4,047	0.405	A
5th Street	I-215 NB Ramps to E Street	SB	4 Lanes Divided	40,000	30,975	0.774	C
	E Street to Waterman Avenue	SB	4 Lanes Divided	40,000	20,083	0.502	A
	Waterman Avenue to Tippecanoe Avenue	SB	2 Lanes Undivided	15,000	9,167	0.611	B
	Tippecanoe Avenue to Del Rosa Drive	H	2 Lanes Undivided	15,000	8,725	0.582	A
	Del Rosa Drive to Sterling Avenue	SB / H	4 Lanes Undivided	40,000	5,595	0.140	A
	Sterling Avenue to Victoria Avenue	SB / H	2 Lanes Undivided	15,000	3,911	0.261	A
	Victoria Avenue to Central Avenue	H	4 Lane Divided	40,000	9,939	0.248	A
	Central Avenue to Palm Avenue	H	4 Lane Divided	40,000	9,939	0.248	A
	Palm Avenue to SR-210 EB Ramps	H	4 Lanes Divided	40,000	26,098	0.652	B
3rd Street	Waterman Avenue to Tippecanoe Avenue	SB	4 Lanes Divided	40,000	10,460	0.262	A
	Tippecanoe Avenue to Del Rosa Drive	SB / H	4 Lanes Divided	40,000	15,620	0.391	A
	Del Rosa Drive to Sterling Avenue	SB / H	4 Lanes Divided	40,000	18,143	0.454	A
	Sterling Avenue to Victoria Avenue	SB	4 Lanes Undivided	40,000	13,457	0.336	A
	Victoria Avenue to Palm Avenue	SB / H	4 Lanes Divided	40,000	10,714	0.268	A

Roadway	Segment	Jurisdiction	Existing Configuration	LOS E Capacity[1]	Existing ADT [2]	V/C	LOS

Notes: [1] Source: City of San Bernardino General Plan Update (2005)
[2] Existing daily traffic volumes include passenger car equivalent (PCE) factors for trucks: 2-axle - 2.0; 3-axle - 2.5; 4+-axle - 3.0

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity

Jurisdiction: SB = San Bernardino, H = Highland, SB / H = Portions of the roadway segment are in both cities

4.18.4 Thresholds of Significance

Transportation issues have recently undergone a major change under the CEQA evaluation process. Instead of focusing on Levels of Service (LOS, see Sub-section 4.18.2.2 for definitions used in this document) the State CEQA Guidelines are focusing vehicle miles traveled (VMT) as the focus of future transportation analysis. As such, a Vehicle Miles Traveled Analysis has been prepared for the IVIC by Urban Crossroads. The VMT Analysis is provided as Appendix 11 of Volume 2 of this DEIR. Accordingly, a project would have a potentially significant impact if it would:

TRAN-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

TRAN-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

TRAN-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

TRAN-4 Result in inadequate emergency access?

4.18.5 Methodology

The methodology utilized in this Subchapter of the DEIR is based on preparing a Vehicle Miles Traveled (VMT) impact forecast to comply with State requirements. The VMT Analysis was prepared by Urban Crossroads and is provided as Appendix 11 in Volume 2 of this document.

4.18.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The issues of **TRAN-2 and TRAN-3** are analyzed through the lens of the whole of the IVIC. Under issue **TRAN-1 and TRAN-4** below, proposed Project activities are categorized into two groups. The first category, the **City Creek Bypass Channel, Roadway Improvements & Sewer Installation**, includes facilities proposed under the IVIC Project that occur within existing rights-of-way. In this case, the rights-of-way (ROW) include the channel ROW and the road ROW within and adjacent to which the roadway improvements would occur, and within which the sewer improvements would occur. The second category is the **EVWD Well Development and Reservoir**, which would require installation of these facilities outside of the channel and roadway corridors within parcels of land in EVWD's lower and intermediate zones. Thus, these two categories are analyzed separately as the impacts from the facilities therein can be characterized as similar and comparable based on the types of facilities proposed.

TRAN-1 Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: The construction of the proposed conveyance systems and ancillary facilities would require a maximum of 70 workers per day, generating about 140 one-way vehicle trips (assuming each worker commuted in their own private vehicle. It is estimated that up to 60 one-way truck trips per day could occur. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roadways throughout the IVIC Project area. In addition to the increased traffic on area roadways, the installation of the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would temporarily reduce the capacity of roadways along the Project alignment(s) due to open-trenching, and roadway demolition within existing roadway ROWs and the resulting temporary lane closures on the affected roadways. Project construction could result in other short-term circulation effects such as temporary alteration of the movement and circulation of roadway vehicles, public transit, bicycles, and/or pedestrians within the project area, as lane and/or road closures could be required where water conveyance pipelines and any lateral connecting pipelines would be installed in public roadway rights-of-way and construction disturbance could traverse under existing transit, bicycle, and/or pedestrian thoroughfares. The impact of the lane closures would vary based on the number of lanes needed to be closed and the width (number of lanes) of the affected roads. Multi-lane roads (four or more lanes) would be better able to accommodate two-way traffic than two-lane roadways. Two lane roads would likely require active traffic control (flaggers) to allow alternate one way traffic flow on the available road width. As a result, construction-related transportation circulation system impacts could be potentially significant. Implementation of **MM TRAN-1**, which includes development and implementation of a Construction Transportation Management Plan, would be required to reduce impacts to a less than significant level.

Operation: Operation and maintenance of the proposed infrastructure would be anticipated to be provided primarily by existing City of Highland, City of San Bernardino, IVDA, SBIAAA, San Bernardino County Flood Control, and other local agency personnel, with no new permanent employees anticipated to support overall IVIC infrastructure operations. Maintenance vehicles would continue to be utilized as needed by the City of Highland, City of San Bernardino, IVDA, SBIAAA, San Bernardino County Flood Control, and other local agency personnel agencies to access and maintain the IVIC Project facilities. Once infrastructure is installed, operations would not require visits to the facilities unless unforeseen circumstances arise that would require maintenance or repair of IVIC Project facilities. These trips would occur as needed and are anticipated to require one trip per maintenance event, with an anticipated two maintenance trips per month.

Public roadway ROW and portions of the IVIC Project area's circulation system impacted during construction would be returned to pre-construction conditions upon completion of installation of each given infrastructure project. The proposed IVIC Project would enhance overall circulation in the Project area because it would expand the area roadways to accommodate the growth anticipated by the City of Highland and City of San Bernardino General Plans. Furthermore, pedestrian facilities, including sidewalks, have been incorporated into the proposed IVIC Project and would be enhanced to current City standards, including American Disabilities Act (ADA) standards, concurrent with roadway expansion and improvements.

Additionally, transit service to the Project area is provided by OmniTrans, and currently only Route 15 travels on any of the streets within the Project area. The OmniTrans bus stops located closest to the Project area are as follows: Tippecanoe Avenue at 3rd Street; Del Rosa Drive at 3rd Street; Del Rosa Drive at 6th Street; Central Avenue at 5th Street; and Palm Avenue at 5th Street. These bus stops may be modified by the enhanced infrastructure proposed by the IVIC, most likely though required improvements along the frontage of future projects including sidewalks, improved bus stops, and development of frontage roadways to buildout condition, which would further the City of Highland's ability to meet General Plan Circulation Element Goal 3.1, Policy 10, and Goal 3.5, Policies 1-8, and would further the City of San Bernardino's ability to meet General Plan Circulation Element Goal 6.6, and Policies 6.6.1 through 6.6.6, 6.6.8 through 6.6.10, and 6.9.2. The provision of the above bus stops would enhance IVIC access to alternative modes of transportation, particularly by providing connectivity to the San Bernardino Transit Center, where passengers can transfer to other OmniTrans routes, as well as to RTA, Mountain Transit, Pass Transit and VVTA routes, or to Metrolink, which connects to much of Southern California.

The IVIC Project area contains existing bike lanes at several locations within the planning area. However, bikeway connectivity could be improved to enable bicycle circulation within the IVIC Project area, enabling both the Cities of Highland and San Bernardino to meet the goals and policies set forth for Bicycle Circulation in their respective General Plans *(San Bernardino General Plan Circulation Element Goals 6.1 and 6.6, Policies 6.1.1 and 6.6.6; San Bernardino General Plan Parks, Recreation, and Trails Element Goals 8.3 and 8.4 and Policies 8.3.4, 8.3.5, 8.3.7, 8.3.9, 8.3.12, and 8.4.7; City of Highland General Plan Circulation Element Goal 3.2, Policy 1, Goal 3.4, Policy 7, Goal 3.7 Policy 1, 3, 4, and 5)*. Similar to the discussion of pedestrian access and transit route availability above, bikeways would be enhanced by development infrastructure under the IVIC, most likely though required improvements along the frontage of future projects including sidewalks, improved bus stops, bikeways where planned but not yet installed, and development of frontage roadways to buildout condition.

Based on the discussion above, the proposed Project would not physically interfere with the transportation circulation system during operation. Operational impacts would be less than significant.

EVWD Well Development and Reservoir

Construction: The construction of the proposed EVWD Well and Reservoir would require a maximum of 17 workers per day, generating up to 34 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that a maximum of 60 one-way truck trips would be generated per day. The EVWD Well and Reservoir construction workers are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roadways within the IVIC Project area that would provide access to the locations of the EVWD Well and Reservoir. Where construction of either individual project would generate greater than 50 construction trips per day, which is not anticipated to occur as a result of either the Well development or Reservoir construction, mitigation would be required. The proposed EVWD Well Development and Reservoir would be contained within the boundaries of their specific sites which would not encroach on adjacent roadways. Implementation of **MM TRAN-1**, which includes development and implementation of a Construction Transportation Management Plan, would be required to reduce impacts from construction of these facilities where greater than 50 construction trips are anticipated, to a less than significant level. Otherwise, as these individual facilities would not be likely to require 50 construction trips per day, impacts would be less than significant and implementation of **MM TRAN-1** would not be required.

Operation: Once installed, the proposed EVWD Well and Reservoir facilities may require future maintenance visits (one trip per week estimated) or future repairs which would not normally require implementation of **MM TRAN-1** because these facilities are not anticipated to encroach into ROWs. Operation and maintenance of the proposed infrastructure would be anticipated to be provided primarily by existing EVWD personnel, with no new permanent employees anticipated to support overall IVIC infrastructure operations. This would result in only a nominal increase in area roadways, and thus, this operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation.

Mitigation Measures:

TRAN-1: ***Prepare and Implement Construction Transportation Management Plan (TMP)***
A construction TMP shall be developed and implemented by the implementing agency, in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.

Damage Repair: ***The TMP shall include the following requirements to minimize damage to the existing roadway network:***

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water Conveyance Pipelines.***
- ***The roadway network along the proposed City Creek Bypass Channel, Roadway Improvements & Sewer shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the implementing agency or its contractors shall repair all damage.***

Coordination with Emergency Services: ***The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public ROW if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.***

Coordination with Active Transportation Facilities: ***The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.***

Coordination with SBCTA: ***If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with Mountain Transit.***

Coordination with Caltrans: ***If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.***

Coordination with Nearby Construction Sites: ***The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:***

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures;***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips; and***
- ***The implementing agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

Transportation Control and Safety: ***The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.***

Plan Approval: ***The TMP shall be submitted to SBCTA for review and approval.***

Level of Significance After Mitigation: Less than Significant

MM TRAN-1 would require, for projects that would potentially impact circulation (construction of OBMPU facilities that generate greater than 50 construction [PCE] or operational trips per day, or where the facility would encroach within road rights-of-way) implementation of designated construction roadway vehicle routes, damage repair procedures, and transportation control measures to minimize potential impacts to the movement and circulation of vehicles, public transit, bicycles, and/or pedestrians within the project area due to construction roadway vehicle volumes and lane and/or road closures during project construction. In addition, **MM TRAN-1** would require coordination with SBCTA and designation of alternative bicycle and pedestrian routes during project construction to compensate for impacts to transit stops and bicycle and pedestrian facilities. As a result, implementation of **MM TRAN-1** would reduce construction transportation circulation system impacts to a less than significant level.

TRAN-2 Would the project conflict or be inconsistent with CEQA Guidelines para. 15064., subdivision (b)?

Construction: A VMT calculation is typically conducted on a daily or annual basis, for long-range planning purposes. As discussed under Response (a) above, construction vehicles on local roadways would be temporarily increased during project construction due to the presence of construction vehicles and equipment. Increases in VMT from construction would be short-term, minimal, and temporary. The duration of the potential significant impacts would be limited to the period of time needed to construct individual projects. As such, VMT standards, which are intended to monitor and address long-term transportation impacts resulting from future development, do not apply to temporary impacts associated with construction activities. Therefore, no construction impact associated with VMT per CEQA Guidelines Section 15064.3 would occur.

Operation: Vehicle Miles Traveled Screening, Senate Bill 743 mandates that CEQA guidelines be amended to provide an alternative to Level of Service for evaluating transportation impacts. The amended CEQA guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Traveled (VMT) for transportation impact evaluation. The State of California Governor's Office of Planning and Research (OPR) has provided guidance through their Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory). This VMT analysis has been developed based on OPR's Technical Advisory. The Technical Advisory notes that "if a project would likely lead to a measurable and substantial increase in vehicle travel, the lead agency should conduct an analysis assessing the amount of vehicle travel the project will induce." Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include:

- Addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes or lanes through grade separated interchanges.

Consistent with the Technical Advisory, as the Project includes roadway widening through the addition of a single travel lane in each direction along certain designated highways over approximately 10 linear lane miles within the Project area (see **Figure 4.18-3**), an assessment is required to determine if the Project leads to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel".

Analysis Methodology

While CEQA does not require perfection, it is important to make a reasonably accurate estimate of transportations projects' effects on vehicle travel in order to make a reasonably accurate estimates of greenhouse gas emissions, air quality emissions, energy impacts and noise impacts1. Because a roadway expansion project can induce VMT, incorporating quantitative estimates of induced VMT is critical to calculating both transportation and other impacts of these projects. The effect of a transportation project on vehicle travel should be estimated using the "change in total VMT" method as described in the Technical Advisory in Appendix 11. As described in the Technical Advisory, "This means that an assessment of total VMT without the project and an assessment of total VMT with the project should be made; the difference between the two is the amount of VMT attributable to the project. The assessment should cover the full area in which driving patterns are expected to change. As with other types of projects, the VMT estimation should not be truncated at a modeling or jurisdictional boundary for convenience of analysis when travel behavior is substantially affected beyond the boundary."

Traffic Modeling Methodology

The Technical Advisory states that travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT. To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives. When using models and tools for those various purposes, agencies should use comparable data and methods, in order to set up an "apples-to-apples" comparison between thresholds, VMT estimates, and VMT mitigation estimates.

The SBCTA has identified for projects within San Bernardino County, that the SBTAM as the appropriate tool for conducting VMT analysis for transportation projects in their respective jurisdictions. SBTAM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment and roadway network topography. SBTAM is a travel forecasting model that represents a sub-area (San Bernardino County) of the SCAG regional traffic model. SBTAM was designed to provide a greater level of detail and sensitivity in the San Bernardino County area as compared to the regional SCAG model.

VMT Analysis Methodology

For this analysis, total VMT within the study area (i.e., Project area or other designated boundary) has been estimated using the Boundary Method. The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary. The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. This method also captures the effect of cut-through and/or displaced traffic. For the purposes of this assessment, boundary method calculations have been prepared for both the Project Area (see **Figure 4.18-3**) and a ten-mile radius surrounding the Project area has also been selected to provide a thorough accounting of the changes in travel patterns resulting from the additional roadway capacity provided by the Project.

VMT Estimates

The Project's proposed lane additions were coded to the SBTAM model network to represent "With Project" conditions and the model was run inclusive of the new lane additions. Additionally, the SBTAM model was run without the proposed lane additions to represent the "No Project" condition. Table 4.18-2 presents VMT estimates within the study area boundary and a 10-mile boundary for both No Project and With Project conditions, along with the 'net change' in total VMT between No Project and With Project conditions. As presented in Table 4.18-2, the With Project condition results in a net increase in total VMT of 0.04%. The 10-Mile boundary is found to increase by 0.03%.

Table 4.18-2
IVIC PROJECT BOUNDARY VMT

	Project Area		10-Mile Boundary	
Scenario	No Project	With Project	No Project	With Project
Boundary VMT	4,994,138	4,996,358	19,858,864	19,865,737
Change in Boundary VMT	2,220		6,873	
Significant?	YES		YES	

Total daily VMT within the study area was found to increase under 'with project' conditions for the Project Area and 10-Mile boundary. The IVIC Project is considered to have a significant VMT impact.

VMT Reduction Strategies

The draft CalTrans SB 743 Program Mitigation Playbook (July 2022) (Playbook) has been utilized to determine trip reduction measures that may be applicable to the Project. The Playbook describes methods to quantify reductions of transportation measures and the associated reductions to VMT for a transportation type project.

Active Transportation
Providing complete streets or dedicated active transportation facilities is an integral part of reducing VMT. Safe and convenient walking and biking environments should be provided regardless of the need for VMT mitigation. When mitigation funds are used for active transportation, the active transportation improvement must reduce motor vehicle use. For example, a new or improved AT facility that garners only recreational use would not serve as mitigation (though it may be worthwhile for other reasons).

The Project will be constructing roadway improvements consistent with the jurisdictional agencies' General Plans and Active Transportation Plans. VMT reductions associated with these improvements will reduce VMT of the Project.

The localities surrounding the Project area can assist in reduction to the Projects VMT by:

- Promoting increased residential density and affordability to the surrounding land uses.
- Promoting increased employment density to assist in shortening trips and reducing VMT.
- Implementing a TDM program.

- Transit service improvements to replace auto trips, but over time it can foster transit-oriented development (TOD), which provides low-VMT housing, employment, retail, and other land uses. TOD may be developed intentionally around transit service, or it may occur organically as land uses adapt with features such as higher densities (accomplished in part by parking reductions), walkability and public-area amenities, and a mixture of land uses in proximity.
- Reduce available parking applied at multifamily residential or employment land uses, in the form of parking charges or capacity limitations to discourage driving.

Conclusion

The Project proposes to construct approximately 20-lane miles of lane addition. Consistent with the Technical Advisory, potential induced vehicle travel was evaluated to determine if the roadway capacity enhancements would result in an increase in total VMT. Consistent with guidance provided by the Technical Advisory, the proposed Project would result in a potential VMT impact if the "With Project" condition would result in a net increase in total VMT as compared to the "No Project" condition. As such, the Project is found to result in a net increase in total VMT and would therefore result in a significant and unavoidable VMT impact. As IVDA does not have land use authority to enforce transportation reduction strategies, these strategies will be recommended to be incorporated by the Cities of Highland and San Bernardino and the County of San Bernardino. Furthermore, no VMT reduction strategy would be sufficient to offset the additional VMT that would be generated by the roadway capacity expansion that would occur as a result of the land additions by the proposed IVIC.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

TRAN-3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction: During construction, the proposed project could temporarily change the built configuration of intersections and roadways within the project area. Lane and/or road detours or closures may be required where the City Creek Bypass Channel, Roadway Improvements, and Sewer Installation require encroachment within public rights-of-way. The EVWD Well Development and Reservoir are not anticipated to require encroachment within public rights-of-way. Construction equipment and materials may be staged temporarily within the public rights-of-way. Lane detours or closures have the potential to increase conflicts between vehicles, bicyclists, and pedestrians; however, implementation of existing regulations and policies for road closures and lane detours within the Cities of Highland and San Bernardino, and San Bernardino County or along CalTrans facilities would reduce the potential for project construction to increase hazards in the project area. However, although construction of the IVIC Project facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change in the mix of vehicles would stop when project construction is completed. The potential conflicts between construction trucks and automobiles on local roadways are considered a less than significant impact through implementation of **MM TRAN-1**.

Operation: The proposed project would not include alterations to existing roadway alignments, but it would expand the number of lanes to the general plan build out configurations, thereby

expanding the road widths and capacities. Furthermore, as a result of the expansion of the existing roadway alignments, intersections within the IVIC Project area would be modified to accommodate the additional roadway widths. The roadways would be designed in accordance with CalTrans and County standards. Therefore, due to the nature of the IVIC components that consist of roadway modifications, as a roadway improvement project, implementation will not substantially increase hazards due to a design feature or incompatible uses. The Project would not include sharp curves or unsafe designs that would increase transportation-related hazards. The proposed facilities may include new driveway access points; however, design of such driveways would be required to comply with local codes and standards for ingress and egress for the Cities of Highland and San Bernardino, and San Bernardino County. Design of driveways, internal roadways, and intersections will be based on City Code, which sets the standard for such design. All roadway improvements and internal project improvements will be designed in a manner as to not create conflicts for motorists, pedestrians, or bicyclists traveling within and around each individual project site, which will ensure that future development under the IVIC will comply with both the Cities of Highland and San Bernardino General Plan goals and policies set forth for development compatibility with circulation *(San Bernardino General Plan Circulation Element Goals 6.2, 6.3, 6.4, 6.5, 6.6, 6.9, and 6.9, Policies 6.2.1, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.4.8, 6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.6.4, 6.8.2, 6.9.1, 6.9.5 and 6.9.6 and City of Highland General Plan Circulation Element Goal 3.1, Policies 3-6, Goal 3.4, Policies 2, 3, 4, 6, 7, 8, 11, 12, and 13, Goal 3.4, Policy 8, Goal 3.6 Policies 1, 2, 4, and 5)*. As such, the proposed project would not create a hazardous condition that currently does not exist for motorists, transit riders, pedestrians, or bicyclists nor would it include incompatible uses for the project area. As the project would facilitate the implementation of full buildout of the roadways in accordance with the City of Highland and City of San Bernardino General Plans and as the opportunities for alternative modes of transportation continue to be enhanced, a minimal potential exists to increase hazards on the existing circulation system within the IVIC Project area.

*Mitigation Measures: Implementation of **MM TRAN-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved Construction Transportation Management Plan. As a result, implementation of **MM TRAN-1** would reduce construction transportation circulation system impacts to a less than significant level.

TRAN-4 Would the project result in inadequate emergency access?

City Creek Bypass Channel, Roadway Improvements & Sewer Installation

Construction: The City Creek Bypass Channel, Roadway Improvements & Sewer would require construction adjacent to or within public roadways and could interfere with emergency access. The City Creek Bypass Channel is located adjacent to road rights of way, but is unlikely that it would be required substantial encroachment onto the adjacent road rights of way. The Roadway Improvements and Sewer Improvements would require construction within road rights-of-way. The San Bernardino Countywide Plan identifies SR-210 in the vicinity of the IVIC Project area as emergency evacuation routes, this is illustrated on **Figure 4.10-6**, the San Bernardino Countywide Plan Evacuation Route Map. Though the proposed Project would not include activities that would

encroach into the rights-of-way of this evacuation route, it could potentially limit access to the evacuation route as construction within 5th Street could require lane closure or other limits on access for emergency vehicles and persons traveling through the Project area. The construction-related impacts, although temporary, could potentially impair emergency access. Impacts could be potentially significant. **MM TRAN-1** would be required to minimize construction related impacts under this issue to a level of less than significant.

Operation: Following construction, operation of the City Creek Bypass Channel, Roadway Improvements & Sewer would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as the sewer would operate belowground, and therefore would have no conflicts with aboveground emergency access. As these facilities would enable transport of cars and trucks on roadways, stormwater, and wastewater, with no facilities that would be installed above-grade beyond new and existing signage and signals along the IVIC area roadways, conflicts with emergency access would not be anticipated. Furthermore, these facilities would continue to function in a similar manner to that which occurs under present conditions, and in the instance of the roadways, the roadway and adjacent sidewalk improvements would facilitate better traffic circulation, thereby resulting in improved emergency access. Thus, operation of the City Creek Bypass Channel, Roadway Improvements & Sewer would not impair emergency access; adequate emergency access will continue under the operational conditions as part of implementation of the IVIC. Impacts would be less than significant.

EVWD Well Development and Reservoir

Construction: The proposed EVWD Well Development and Reservoir would be contained within the boundaries of their specific sites which would not encroach on adjacent roadways. It is not anticipated that the installation of pipelines or other facilities would encroach within road rights-of-way that surround the EVWD Well Development and Reservoir sites, making the possibility of interfering with emergency access highly unlikely. The truck trips associated with construction activities would not require closure of any roadways and would only temporarily slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impact related to an emergency evacuation plan would occur during the construction of the EVWD Well Development and Reservoir.

Operation: Operation of the proposed EVWD Well Development and Reservoir would not impair or physically interfere with emergency access. The EVWD Well Development and Reservoir infrastructure would not interfere with traffic flows during operation. However, aboveground facilities would require periodic maintenance. Maintenance activities would be intermittent and require minimal trips on surrounding roadways. Impacts related to adequate emergency access would be less than significant during operation.

*Mitigation Measures: Implementation of **MM TRAN-1** is required to achieve a less than significant impact.*

Level of Significance: Less Than Significant

MM TRAN-1 would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of **MM**

TRAN-1 would reduce construction impacts related to emergency access to a less than significant level.

4.18.7 Mitigation Measures

There is only one mitigation measure that must be implemented to offset potentially significant impacts from the buildout of the IVIC. The basis for implementing these measures is provided in the text of the preceding Project Impact analysis.

TRAN-1: ***Prepare and Implement Construction Transportation Management Plan (TMP)***
A construction TMP shall be developed and implemented by the implementing agency, in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: ***The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.***

Damage Repair: ***The TMP shall include the following requirements to minimize damage to the existing roadway network:***

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water Conveyance Pipelines.***
- ***The roadway network along the proposed City Creek Bypass Channel, Roadway Improvements & Sewer shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the implementing agency or its contractors shall repair all damage.***

Coordination with Emergency Services: ***The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public ROW if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.***

Coordination with Active Transportation Facilities: ***The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.***

Coordination with SBCTA: ***If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with Mountain Transit.***

Coordination with Caltrans: ***If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.***

Coordination with Nearby Construction Sites: ***The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:***

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures;***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips; and***
- ***The implementing agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

Transportation Control and Safety: ***The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.***

Plan Approval: ***The TMP shall be submitted to SBCTA for review and approval.***

4.18.8 Cumulative Impacts

Construction: Overlapping cumulative construction activities, simultaneous lane/road closures, and simultaneous staging of construction equipment and materials in public rights-of-way could result in cumulative construction impacts related to transportation circulation patterns in the Project area, transit stops, bicycle and pedestrian facilities, and/or emergency access. Cumulative construction activities are expected to increase construction vehicles traveling on the roadways. While individual emergency vehicles could be slowed if traveling behind a slow-moving truck, vehicle codes require vehicles to yield to emergency vehicles using a siren and red lights. As such, cumulative impacts related to construction transportation circulation and emergency access within Chino Basin would be potentially significant. However, the proposed project would be required to implement **MM TRAN-1**, which requires coordination with other active construction projects within 0.25 mile of project construction sites to minimize simultaneous lane and/or road closures, major deliveries, and haul truck trips. **MM TRAN-1** also requires designating alternate detour routes and construction transportation routes that avoid these projects to the maximum extent practicable. Therefore, with mitigation incorporated, the proposed project would not have a cumulatively considerable contribution to the significant cumulative impact related to construction transportation circulation and emergency access.

Operation: Operations related to buildout of cumulative development within the project area, including the projects assumed under buildout of the various jurisdictions' general plans within the IVIC Project area, would increase cumulative operational roadway vehicle volumes on local roadways. The traffic impacts from the proposed project have been weighed against the cumulative total vehicle miles traveled as part of the VMT Analysis that was prepared for the

Project (Appendix 11). Cumulative VMT within the IVIC based on the general plan buildout roadway configuration has been determined to be significant (the With Project condition results in a net increase in total VMT of 0.04% and the 10-Mile boundary is found to increase by 0.03%). When these VMT are placed on the already existing circulation system, the IVIC would contribute significant vehicle miles travelled. The VMT analysis is also inherently cumulative as it analyzes the impacts of vehicle miles travelled in the context of the cumulative vehicle miles travelled in the Cities and region within which a given project is located. As such, given that the project would exceed the VMT threshold identified under issue TRAN-2, above, the IVIC would contribute significant cumulative vehicle miles travelled within the project area and region. Thus, the proposed project is forecast to make a substantial contribution to cumulative circulation or transportation systems within the City and surrounding communities.

4.18.9 Unavoidable Adverse Impacts

Development associated with implementation of the proposed IVIC and cumulative development would result in unavoidable significant VMT transportation or circulation system impacts. All other transportation or circulation system impacts are either less than significant or can be reduced to a less than significant impact with implementation of mitigation measures.

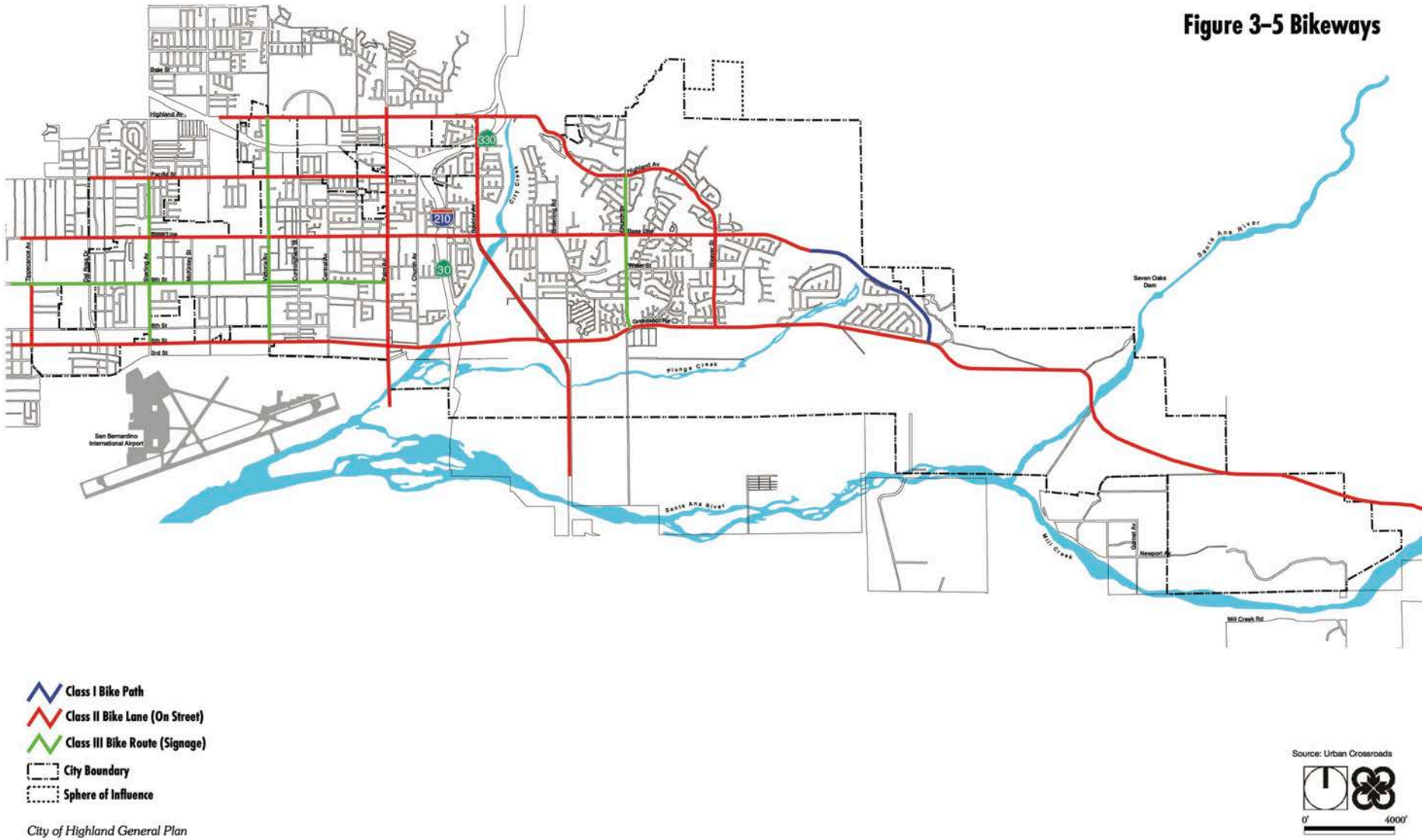


FIGURE 4.18-1

Tom Dodson & Associates
Environmental Consultants

City of Highland Bikeways

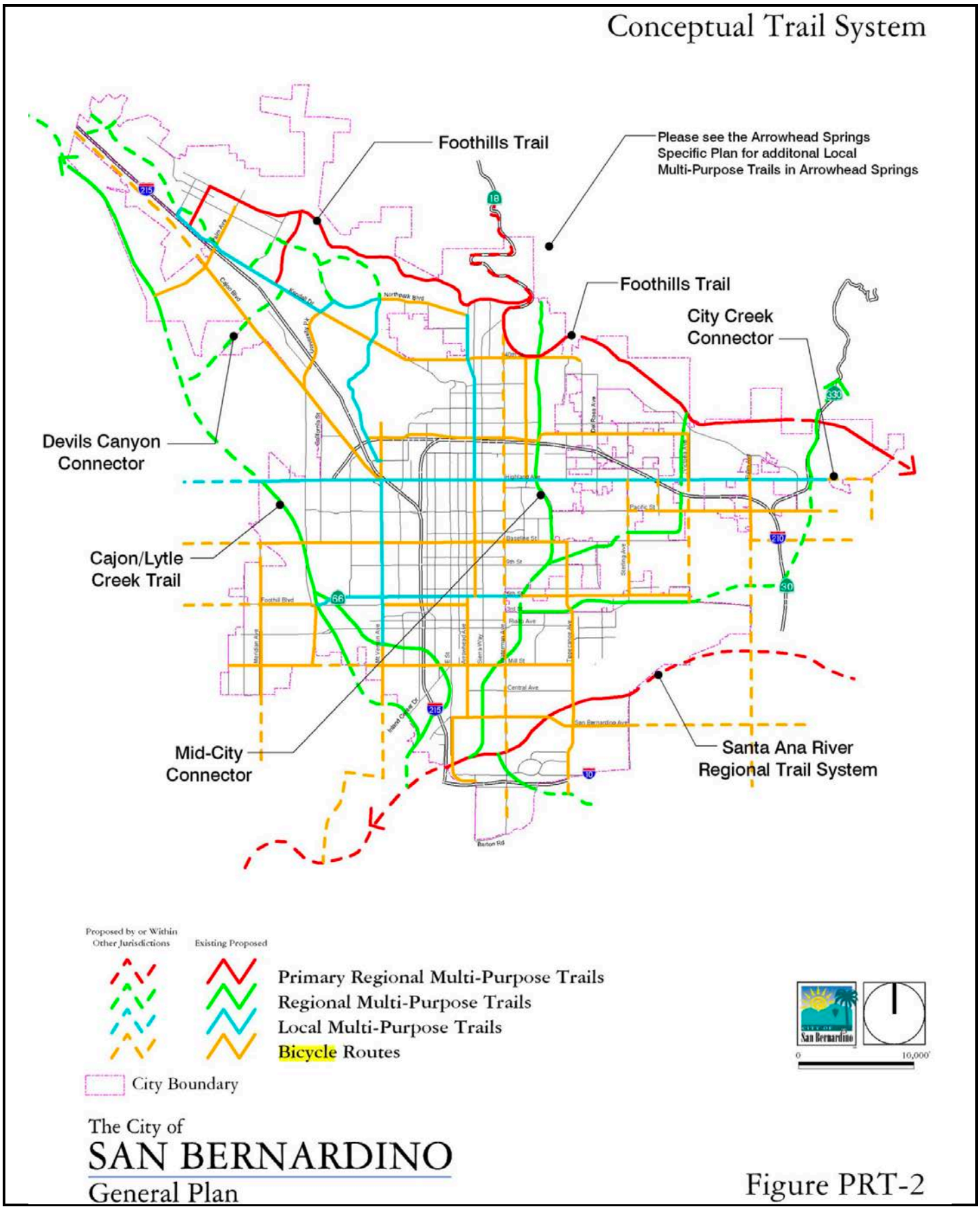


FIGURE 4.18-2

Tom Dodson & Associates
Environmental Consultants

Bike Lands and Trails

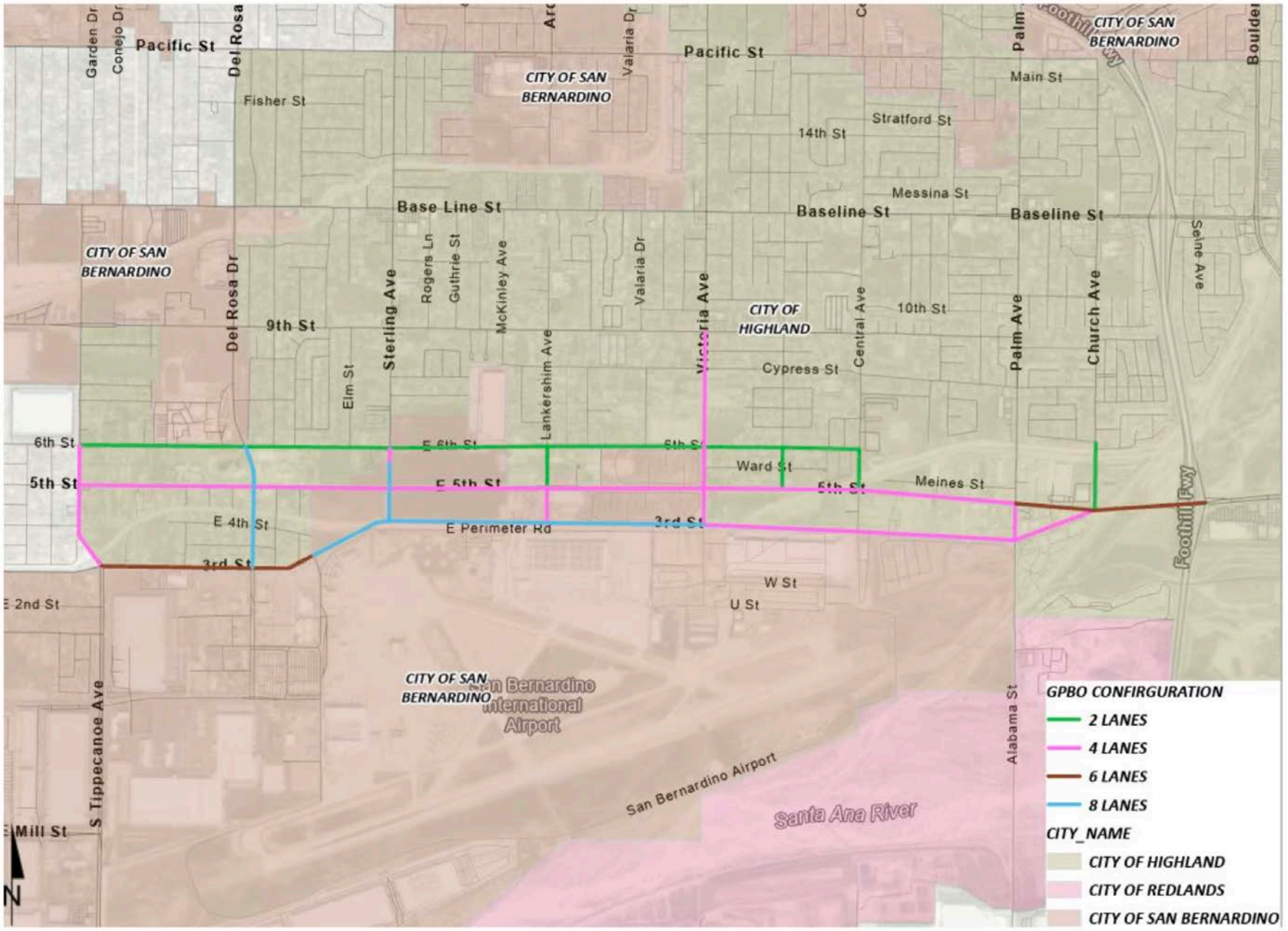


FIGURE 4.18-2

Tom Dodson & Associates
Environmental Consultants

General Plan Build Out Roadway Configurations

4.19 TRIBAL CULTURAL RESOURCES

4.19.1 Introduction

This subchapter evaluates the potential environmental impacts to tribal cultural resources from implementation of the proposed project. In compliance with the Assembly Bill (AB) 52 consultation initiated on April 3, 2024, three Tribes were notified Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation) requested consultation. IVDA Staff initiated consultation and reached agreement with the tribes that responded within the appropriate 30-day consultation period—Morongo Band of Mission Indians and Yuhaaviatam of San Manuel Nation (YSMN)—to incorporate mitigation to address implementation of specific projects under the IVIC as they are proposed for site-specific implementation. The Tribes requested updated archaeological evaluations at the time individual project components move forward in line with current standards and requested the opportunity to participate in updated evaluations as well as an opportunity to monitor ground-disturbing activities on native soil in site-specific circumstances.

These issues will be discussed below as set in the following framework:

- Introduction
- Regulatory Setting
- Environmental Setting: Tribal Cultural Resources
- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts
- Significant and Unavoidable Impacts

References utilized for this section include:

- CRM TECH, June 30, 2024. *Update to Cultural Resources Survey Inland Valley Infrastructure Corridor Project Cities of San Bernardino and Highland, San Bernardino County, California*, (Appendix 4 to Volume 2 of this DEIR)
- San Bernardino County, 2020. *San Bernardino Countywide Plan Environmental Impact Report.* http://countywideplan.com/eir/ (accessed 07/03/24)

One comment letter regarding tribal cultural resources issues was raised as part of the Notice of Preparation.

NOP Comment Letter #2 Morongo Band of Mission Indians: The Comment Letter requests consultation under AB 52 and requests a number of materials to ensure meaningful consultation with the MBMI. The Comment Letter requests continued consultation with the MBMI.

Response: The IVDA initiated AB 52 on April 3, 2024 with MBMI and the other two tribes that requested consultation under AB 52. The materials requested in the Comment Letter have been provided to MBMI to the extent that the materials are available for the IVIC Project.

4.19.2 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.19.2.1 Federal Regulations

Archaeological Resources Protection Act
The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites which are on Federal lands and Indian lands.

Native American Graves Protection and Repatriation Act
The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990 that provides a process for museums and Federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes.

4.19.2.2 State

Public Resources Code
Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

- California Public Resources Code 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

  > No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine…except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres.

Health and Safety Code
The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states that:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to… provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they

are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Senate Bill 18

Prior to the enactment of Senate Bill 18 (SB 18; California Government Code Sections 65352.3 et seq.) related to traditional tribal cultural places (TTCP) in 2004, state law provided limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

SB 18 placed new requirements upon local governments for developments within or near TTCP. SB 18 requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Tribal Guidelines recommends that the NAHC provide written information as soon as possible but no later than 30 days to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to if they want to consult with the local government to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation or it may not. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, it would be included in the project's EIR. If both the lead agency and the tribe agree that adequate mitigation or preservation measures cannot be taken, then neither party is obligated to take action.

SB 18 requires a city or county to consult with the NAHC and any appropriate Native American tribe prior to the adoption, revision, amendment, or update of a city's or county's general plan. In addition, SB 18 provides a new definition of TTCP that requires a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities. In addition, SB 18 law amended Civil Code § 815.3 and added California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCR) into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation of an EIR or Notice of Intent to adopt a ND or MND on or after July 1st are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact, requiring feasible mitigation measures.

TCRs must have certain characteristics:

1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either

included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (PRC § 21074(a)(1))

2) The lead agency, supported by substantial evidence, chooses to treat the resource as a TCR. (PRC § 21074(a)(2))

The first category requires that the TCR qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource—under the conditions that it support its determination with substantial evidence and consider the resource's significance to a California tribe. The following is a brief outline of the process (PRC §§ 21080.3.1–3.3).

1) A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3) A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4) The lead agency must initiate consultation within 30 days of receiving the request from the tribe.

5) Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6) Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCRs and discuss feasible alternatives or mitigation that avoid or lessen the impact.

4.19.3 Environmental Setting: Tribal Cultural Resources

Native American History

Serrano[1]

"Serrano" is a term that the Spanish gave this group of people (from the Spanish word "sierra" for mountain). But in their own language, they called themselves "Yuhaviatum" or "people of the pines." Tribal members now refer to themselves using both of these terms. The Serrano people once occupied the Mountain, North Desert, and East Desert Regions of the County. The Vanyume lived along the Mojave River and associated Mojave Desert areas and are also referred to as the Desert Serrano. The Vanyume were friendly with the Chemehuevi and Mohave to the east, whereas other Serrano maintained animosity with these groups. The area of combined

[1] This section has been abstracted from the San Bernardino Countywide Plan EIR Subchapter on Tribal Cultural Resources.
San Bernardino County, 2020. *San Bernardino Countywide Plan Environmental Impact Report.* http://countywideplan.com/eir/ (accessed 07/03/24)

Serrano/Vanyume occupation—the San Bernardino Mountains, the southwestern portions of the Mojave Desert, and the Mojave River area—has become known as the Serrano area.

Most Serrano lived in small villages near water sources. The fundamental economy of the Serrano was based on subsistence hunting, fishing, and collecting plant goods. Especially important was the Serrano practice of moving seasonally to best acquire resources or making "seasonal rounds." Serrano territory was a trade nexus between inland tribes and coastal tribes, and trade and exchange were an important aspect of the Serrano economy.

A variety of materials were used for hunting, gathering, and processing food; many of the same materials were also used for shelter, clothing, and ceremonial items. Shell, wood, bone, horn, stone, plant materials, animal skins, and feathers were used for making baskets, blankets, mats, nets, and bags. Shell was also used as money. The Serrano were excellent basket makers and could weave baskets so tightly they were waterproof. Animal tallow was also used to line the insides of some baskets for this purpose. The Serrano made pottery and used it daily to carry and store water or food; ceramics were also used as ceremonial objects. The Serrano also made awls, sinew-backed bows, arrows, arrow straighteners, throwing sticks (for hunting), traps, fire drills, stone pipes, toys, musical instruments of various types (rattles, rasps, bull-roarers, and whistles), yucca fiber cordage for snares, yucca sandals, nets, carrying bags, and clothing. Prior to Spanish occupation of their lands, the Serrano practiced cremation of the body and the deceased's possessions.

Mainly due to the inland territory that the Serrano occupied beyond Cajon Pass, contact between Serrano and Europeans was relatively minimal prior to the early 1800s. As early as 1790, however, the Serrano began to be drawn into mission life. More Serrano were relocated to the Mission San Gabriel in 1811 after a failed indigenous attack on that mission. Another attack occurred at San Gabriel's outpost, the Asistencia, which is now within Redlands city limits, at which 14 "neophytes" were killed. In the 1860s, a smallpox epidemic decimated many indigenous southern Californians, including the Serrano. Oral history accounts of a massacre in the 1860s at Twentynine Palms that may have been part of a larger American military campaign that lasted 32 days. During the Mexican era, missions were secularized, and those people living in the missions were left to fend for themselves.

Surviving Serrano sought shelter at Morongo with their Cahuilla neighbors; Morongo later became a reservation. Other survivors followed the Serrano leader Santos Manuel down from the mountains and toward the valley floors, and eventually settled what later became the San Manuel Band of Mission Indians Reservation. This reservation was established in 1891.

Very little is known of the Desert Serrano (also Vanyume) people because the Spanish missionaries greatly disrupted the group between the early 1820s and 1834. By the 1900s, the group was considered extinct. However, recent genealogical research combined with mitochondrial DNA analysis indicates that three lineages from the Fort Tejon area were originally from the village of Topipabit downstream from Victorville. These lineages are currently part of the San Fernando Band of Mission Indians in Newhall. This group, which includes Kitanemuk, Inland Chumash, Tataviam, and Vanyume, has applied for federal recognition.

Gabrieleño

The westernmost portion of San Bernardino County lies mostly within the traditional territory of the Gabrieleño, a Native American group believed to have been the most populous and most powerful ethnic nationality in aboriginal Southern California. Gabrieleño territory was centered in

the Los Angeles Basin, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The Gabrieleño's territorial claim in the Riverside-San Bernardino County portion of the planning area overlapped another prominent Native American group, the Serrano, whose traditional homeland was centered in the San Bernardino Mountains, including the slopes and lowlands on the northern and southern flanks of the mountains and extended eastward as far as present-day Twentynine Palms.

Depending on the natural environment in which they were located, native groups adopted different types of subsistence economies, although they were all based on gathering, hunting, and/or fishing. As a result, ancient occupation sites in valleys and foothills often contain portable mortars and pestles along with large projectile points, suggesting a reliance on fleshy nut foods and, to a lesser extent, large game animals. Sites found in the more arid areas in inland Southern California often contain fragments of flat slab metates and plano-convex scrapers along with numerous projectile points, suggesting a reliance on seed resources, plant pulp, and smaller game animals. Temporary use sites tended to be clustered around bay/estuary environments and intermontane drainages such as the Santa Ana River.

The Gabrieleño came into contact with the Spanish as early as 1542, during the expedition of Juan Rodríguez Cabrillo. In the early Spanish period, several Indian villages or rancherías were known to be present amid the foothills and valleys on the southern slopes of the San Gabriel and San Bernardino Mountains. Beginning in 1769, the Spaniards took steps to colonize Gabrieleño territory. In the process, most of the Gabrieleño people were incorporated into Mission San Gabriel and other missions in Southern California.

Due to their location further inland and mostly at higher elevations, Spanish influence on Serrano lifeways was minimal until the 1810s, when an assistencia affiliated with Mission San Gabriel was established in present-day Loma Linda, on the southern edge of the Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the San Bernardino Mountains were also moved to the nearby missions.

Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrieleño and Serrano populations dwindled rapidly. By 1900, the Gabrieleño had almost ceased to exist as a culturally identifiable group, according to the leading ethnohistoric accounts. The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations. In modern times, there has been a renaissance of Native American activism and cultural revitalization among the Gabrieleño and the Serrano. Tribal members today are keenly aware of archaeological sites and places of special cultural significance and maintain a high level of interest in how these sites are managed.

Native American Input

On March 27, 2024, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for an update to the Sacred Lands File search completed during the 2017 study. In response, the NAHC stated in a letter dated April 15 that the Sacred Lands File identified unspecified Native American cultural resources in the general vicinity of the project area (see Attachment C of Appendix 4, Volume 2). The NAHC recommended that the San Manuel Band of Mission Indians and other local Native American groups be consulted for further information and provided a referral list of potential contacts for that purpose.

Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to the San Manuel Band as well as the Morongo Band of Mission Indians, another local tribe of Serrano

heritage, on April 15, 2024. While the Morongo Band has not responded to the inquiry, Raylene Borrego, Cultural Resources Technician for the San Manuel Band, replied by e-mail on the same day and stated that "there are multiple sections [of the project alignments] that are near known culturally significant areas." Therefore, the San Manuel Band requested further consultation regarding this project. The responses from the NAHC and the San Manuel Band are attached to this report in Attachment C of Appendix 4, Volume 2 for reference by the IVDA in future government-to-government consultations with the pertinent tribal groups.

4.19.4 Thresholds of Significance

According to Appendix G, Section XVIII, of the CEQA Guidelines, a project would have a significant effect on the environment if the project would cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

4.19.5 Environmental Impacts

This subchapter evaluates the level of adverse impact to the TCRs that are forecast to occur if the CBP is implemented as proposed.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

The Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation (YSMN) were contacted by IVDA under AB 52 on April 4, 2024. The YSMN requested continued participation with the IVIC Project CEQA process and future projects implemented under the IVIC Project during the AB 52 consultation period. The Morongo Band of Mission Indians (MBMI) also requested consultation under AB 52. Each of these

two tribes requested the implementation of several mitigation measures intended to protect tribal cultural resources that could be uncovered as a result of the construction and implementation of future projects under the IVIC Project. Note that the Gabrieleño Band of Mission Indians - Kizh Nation (Kizh Nation) contacted IVDA outside of the consultation window on June 7, 2024. As a result, IVDA has not entered into consultation with this tribe. Historically, the San Bernardino Valley would fall within ancestral territory of the Serrano people. As both MBMI and YSMN have ancestral ties to the Serrano people, the involvement of these Tribes in AB 52 consultation process, and the mitigation measures that will be implemented as a result of the AB 52 consultation for projects under the IVIC will ensure that tribal cultural resources are protected as future individual IVIC projects are implemented over the 20 year horizon of the IVIC Project.

According to the findings in the cultural resources study (**Subchapter 4.6**; Appendix 4), the proposed IVIC Project has a modest potential to impact (alter or destroy) a TCR. Based on the research results summarized above and direct experience with the YSMN and MBMI tribes, many of the IVIC infrastructure projects have a potential to expose subsurface resources. Mitigation is identified below that will be implemented by future individual IVIC projects. These measures are intended to address concerns expressed by the YSMN and MBMI, which responded to IVDA's AB 52 consultation process. Therefore, potentially significant impacts may affect TCRs, but with implementation of the mitigation identified below, such potential impacts can be mitigated to a less than significant impact level.

The potential impacts from construction are discussed in detail above. No operational impacts are anticipated, as once the IVIC Project infrastructure is installed, no potential to impact a tribal cultural resource exists.

Mitigation Measures:

TRC-1: ***The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CR-1, of any pre-contact and/or historic-era cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.***

TRC-2: ***Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Implementing Agency for dissemination to YSMN. The Implementing Agency shall, in good faith, consult with YSMN throughout the life of the project.***

TCR-3: ***Prior to the issuance of grading permits, the applicant shall enter into a Tribal Monitoring Services Agreement with the Morongo Band of Mission Indians (MBMI) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.***

TCR-4: ***Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a Qualified Archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The Archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The Archaeologist will conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session will focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.***

TCR-5: ***Prior to any ground-disturbing activities the project Archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the project site. This Plan shall be written in consultation with the consulting Tribe[s] and shall include the following: approved Mitigation Measures (MMs), contact information for all pertinent parties, parties' responsibilities, procedures for each MM, and an overview of the project schedule.***

TCR-6: ***The retained Qualified Archeologist and Consulting Tribe[s] representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.***

TCR-7 ***During all ground-disturbing activities the Qualified Archaeologist and the Tribal Monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and Tribal Monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The Qualified Archaeologist, in consultation with the Tribal Monitor, shall be responsible for determining the duration and frequency of monitoring.***

TCR-8: ***In the event that previously unidentified cultural resources are unearthed during construction, the Qualified Archaeologist and the Tribal Monitor shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.***

If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the Qualified Archaeologist and Tribal Monitor[s]. The Archaeologist shall notify the Implementing Agency and consulting Tribe[s] of said discovery. The Qualified Archaeologist, in consultation with the Implementing Agency, the consulting Tribe[s], and the Tribal Monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the Qualified Archaeologist in consultation with the Tribe[s] and the Tribal Monitor[s] and be submitted to the Implementing Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference:
A. Full avoidance.

B. If avoidance is not feasible, Preservation in place.
C. If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction.
D. If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1).

TCR-9: The Morongo Band of Mission Indians requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the consulting Tribe[s].
A. Should human remains and/or cremations be encountered on the surface or during any and all ground- disturbing activities (i.e., clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98.
B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5.
C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98
D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial will not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations will be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the Implementing Agency.

TCR-10: The final report[s] created as a part of the project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the Implementing Agency and Consulting Tribe[s] for review and comment. After approval of all parties, the final reports are to be submitted to the Eastern Information Center, and the Consulting Tribe[s].

Level of Significance After Mitigation: Less Than Significant

In consultation with the YSMN, it was requested that the following **MMs TCR-1 and TCR-2** be implemented to protect tribal cultural resources. **MM TCR-1** would require notification of YSMN in the event of a TCR discovery, and would allow YSMN to coordinate the implementation of its own Cultural Resources Monitoring and Treatment Plan that would enable a monitor to be present representing YSMN onsite thereafter. This would ensure that TCRs that may be discovered that fall under YSMN's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. **MM TCR-2** would require that

documentation of any discovered resources and other such reports pertaining to archaeological and tribal resources are communicated to the YSMN for its records.

In consultation with the MBMI, it was requested that the following **MMs TCR-3 and TCR-10** be implemented to protect tribal cultural resources. These mitigation measures would accomplish the following: retaining a tribal and archaeological monitor to develop and implement a Cultural Resource Management Plan (CRMP) that would ensure close attention to ground disturbing activities that might uncover or otherwise impact TCRs. These measures would ensure that TCRs that may be discovered that fall under MBMI's purview are protected and handled in a manner acceptable to the tribe such that no significant adverse impacts to the resource(s) would occur. Thus, through the implementation of the above mitigation measures, impacts would be less than significant.

4.19.6 Mitigation Measures

To minimize future impacts on TCRs, the following mitigation measures will be implemented:

TRC-1: ***The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CR-1, of any pre-contact and/or historic-era cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.***

TRC-2: ***Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Implementing Agency for dissemination to YSMN. The Implementing Agency shall, in good faith, consult with YSMN throughout the life of the project.***

TCR-3: ***Prior to the issuance of grading permits, the applicant shall enter into a Tribal Monitoring Services Agreement with the Morongo Band of Mission Indians (MBMI) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.***

TCR-4: ***Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a Qualified Archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The Archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The Archaeologist will conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session will focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.***

TCR-5: ***Prior to any ground-disturbing activities the project Archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the project site. This Plan shall be written in consultation with the consulting Tribe[s] and shall include the following: approved Mitigation Measures (MMs), contact information for all pertinent parties, parties' responsibilities, procedures for each MM, and an overview of the project schedule.***

TCR-6: ***The retained Qualified Archeologist and Consulting Tribe[s] representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.***

TCR-7 ***During all ground-disturbing activities the Qualified Archaeologist and the Tribal Monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and Tribal Monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The Qualified Archaeologist, in consultation with the Tribal Monitor, shall be responsible for determining the duration and frequency of monitoring.***

TCR-8: ***In the event that previously unidentified cultural resources are unearthed during construction, the Qualified Archaeologist and the Tribal Monitor shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.***

If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the Qualified Archaeologist and Tribal Monitor[s]. The Archaeologist shall notify the Implementing Agency and consulting Tribe[s] of said discovery. The Qualified Archaeologist, in consultation with the Implementing Agency, the consulting Tribe[s], and the Tribal Monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the Qualified Archaeologist in consultation with the Tribe[s] and the Tribal Monitor[s] and be submitted to the Implementing Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference:

- ***A. Full avoidance.***
- ***B. If avoidance is not feasible, Preservation in place.***
- ***C. If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction.***
- ***D. If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1).***

TCR-9: ***The Morongo Band of Mission Indians requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the consulting Tribe[s].***

A. Should human remains and/or cremations be encountered on the surface or during any and all ground- disturbing activities (i.e., clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98.

B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5.

C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98

D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial will not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations will be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the Implementing Agency.

TCR-10: The final report[s] created as a part of the project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the Implementing Agency and Consulting Tribe[s] for review and comment. After approval of all parties, the final reports are to be submitted to the Eastern Information Center, and the Consulting Tribe[s].

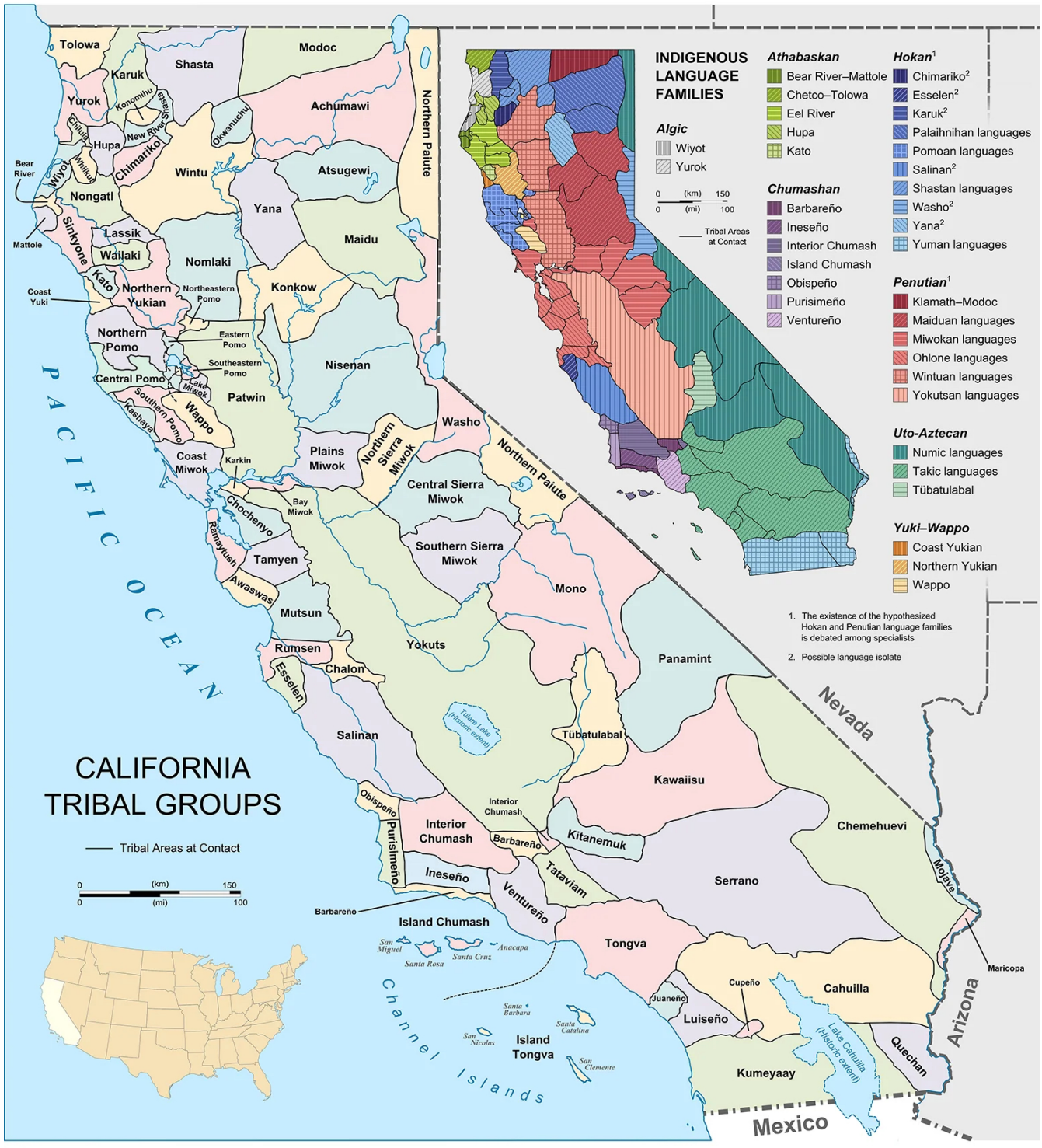
4.19.7 Cumulative Impacts

As determined above, IVIC Project implementation can proceed without causing any unavoidable significant adverse impacts to TCRs. Implementation of the proposed project is not forecast to cause any direct, significant adverse impact to any site specific TCRs following implementation of identified mitigation measures, and as a result the proposed project has no potential to make a cumulatively considerable contribution to TCR impacts in the project area. This is because impacts to individual TCRs at specific sites would be mitigated and site specific as such, the proposed IVIC Project's contribution to cumulative impacts, whether significant or mitigated below significance thresholds, would not be cumulatively considerable. Any TCRs discovered on a Project site that would be adversely impacted by proposed future projects would be mitigated by implementing one or more of the three mitigation measures listed above. With implementation of the appropriate measures, the IVIC Project is not forecast to cause or contribute to cumulatively considerable tribal cultural resource impacts.

4.19.8 Significant and Unavoidable Impacts

As determined above, no significant and unavoidable impacts to TCRs will occur as a result of implementing the proposed Project, and the Project's potential impacts on tribal cultural resources will be less than significant.

Tribal Groups of California



References:
Survey of California and Other Indian Languages, University of California, Berkeley.
Golla, Victor (2011). California Indian Languages. Berkeley, CA: University of California Press 978-0-520-26667-4.

INDIGENOUS PEOPLES RESOURCES
IndigenousPeoplesResources.com

FIGURE 4.19-1

Tom Dodson & Associates
Environmental Consultants

Tribal Groups of California

4.20 UTILITIES AND SERVICE SYSTEMS

4.20.1 Introduction

This section addresses utility services within the IVIC Project area and provides an analysis of potential impacts associated with implementation of the IVIC in the context future build-out of the Project area under the existing General Plans of the cities. This Subchapter will evaluate the environmental impacts to the issue area of utilities—including wastewater, sewer, electricity, natural gas, stormwater drainage, telecommunication, and solid waste collection systems—from implementation of the proposed Inland Valley Infrastructure Corridor Project. The current status of these systems and the potential future impacts are discussed in the following text.

This document is a full-scope DEIR for the above-described IVIC Project and all of the standard issues related to Utilities and Service Systems identified in Appendix G of the CEQA Guidelines. Analysis of these issues will determine whether implementation of the IVIC could: require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years; result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's forecast demand in addition to the provider's existing commitments; generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

These issues pertaining to utilities and service systems will be discussed below as set in the following framework:

The following reference documents were used in preparing this section of the DEIR.

- EVWD, 2019. Water Supply Master Plan (WSMP). https://www.eastvalley.org/DocumentCenter/View/2125/2019-WSMP-Final
- CalRecycle, 2022. 2021 Facility-Based Waste Characterization of Solid Waste in California https://www2.calrecycle.ca.gov/Docs/Web/122544 (accessed 07/14/24)
- CalRecycle, 2024. Jurisdictional Review Reports https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports (accessed 04/25/24)
- City of Highland, March 2006. General Plan
- City of San Bernardino, November 1, 2005. General Plan.
- San Bernardino County, 2024. County of San Bernardino Construction & Demolition Waste Recycling Guide https://www.sbcounty.gov/uploads/DPW/docs/RecyclingGuide-2021.pdf (accessed 04/25/24)

- San Bernardino Valley Municipal Water District (SBVMWD), 2021. Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan. https://www.sbmwd.org/DocumentCenter/View/7864/2020-IRUWMP-Executive-Summary_FINAL?bidId= (accessed 04/25/24)
- Santa Ana Regional Board, 2023. Stormwater Program. https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/ (08/04/23)
- County of Santa Clara, 2023. Understand Senate Bill (SB) 1383. https://reducewaste.sccgov.org/food-recovery/understand-senate-bill-sb-1383#3925188384-318395615 (accessed 04/20/24)
- SWRCB, 2023. National Pollutant Discharge Elimination System (NPDES) General Permit For Stormwater Discharges Associated with Construction and Land Disturbance (General Permit) Order WQ 2022-0057-DWQNPDES No. CAS000002 https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwq-with-attachments/cgp2022_order.pdf (accessed 08/03/23)

No comments from the public regarding utilities and service systems were received during the NOP comment period.

4.20.2 Regulatory Setting

Federal

Clean Water Act

Pursuant to Section 404 of the CWA, the USACE regulates discharges of dredged and/or fill material into waters of the U.S. "Waters of the United States" are defined in USACE regulations at 33 C.F.R. Part 328.3(a). Navigable Waters of the U.S. are those Waters of the U.S. that are navigable in the traditional sense. Waters of the U.S. is a broader term than navigable Waters of the U.S. and includes adjacent wetlands and tributaries to navigable Waters of the U.S. and other waters where the degradation or destruction of which could affect interstate or foreign commerce.

The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

The CWA and the State Porter-Cologne Act, require basin-wide planning. Additionally, the NPDES empowers the RWQCBs to set discharge standards, and encourages the development of new approaches to water quality management. As part of the NPDES program, a SWPPP must be prepared for construction activities affecting greater than one acre because the discharge of stormwater during construction is considered a non-point source of water pollution.

The Stanfield Marsh/Big Bear Lake and the Bear Valley Basin are located in the Santa Ana Regional Board jurisdiction. The LV Site Discharge Reduction falls within the Colorado Regional Board jurisdiction.

In 1972, the CWA was amended to prohibit the discharge of pollutants to Waters of the United States unless the discharge complies with a NPDES permit. The CWA focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial storm water discharges. In November 1990, the EPA published final regulations

that establish requirements for specific categories of industries, including construction projects that encompass certain acreage, currently projects of one acre or larger.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the federal law that protects drinking water supplies and applies to every public water system in the United States. The law requires many actions to protect drinking water including source water protection, treatment, distribution system integrity, and public information. Source water may include rivers, lakes, reservoirs, springs, and ground water wells. The SDWA authorizes the U.S. EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The National Primary Drinking Water Regulations set enforceable maximum contaminant levels (MCLs) for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved.

National Pollutant Discharge Elimination System Program

As stated above, the NPDES permit program is administered in the State of California by the SWRCB and RWQCBs under the delegated authority of the EPA pursuant to the CWA to control water pollution by regulating point sources that discharge pollutants into Waters of the U.S. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General WDRs under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The CGP NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002) regulates discharges of pollutants in stormwater associated with construction activity to Waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. Note that the CGP was updated and a new version takes effect on September 1, 2023 (Order WQ 2022-0057-DWQ; NPDES NO. CAS000002).[1] The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation;

[1] SWRCB, 2023. National Pollutant Discharge Elimination System (NPDES) General Permit For Stormwater Discharges Associated with Construction and Land Disturbance (General Permit) Order WQ 2022-0057-DWQ NPDES No. CAS000002 https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwq-with-attachments/cgp2022_order.pdf (accessed 08/03/23)

construction of buildings; and LUP, including installation of water pipelines and other utility lines.

The CGP requires the development and implementation of a SWPPP that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit (IGP)
The IGP became effective July 1, 2020 as amended in 2015 and 2018 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one MGD or more, or are required to have an approved pretreatment program under 40 CFR Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting
The State's Municipal Stormwater Permitting Program regulates stormwater discharges from MS4s. MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop CBRP. An MS4 Permit was issued to San Bernardino County (Order No. R8-2010-0036, NPDES Permit No. CAS618036).[2]

Resource Conservation and Recovery Act
The Resource Conservation and Recovery Act (RCRA) (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. EPA has delegated the enforcement responsibility to the State of California.

Title 40 of the Code of Federal Regulations Part 503
The Federal biosolids regulations are contained in Title 40 CFR Part 503 as Standards for the Use or Disposal of Sewage Sludge. Known as the Part 503 Rule, or Part 503, these regulations govern the use and disposal of biosolids. Part 503 established requirements for the final use or disposal of biosolids when biosolids are:

- Applied to land to condition the soil or fertilize crops or other vegetation;
- Placed on a surface disposal site for final disposal; or

[2] Santa Ana Regional Board, 2023. Stormwater Program. https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/ (08/04/23)

- Fired in a biosolids incinerator.

Part 503 permits are issued by the EPA and are required for all biosolids generators. Part 503 requirements can be incorporated into the NPDES permits that also are issued to publicly-owned treatment works.

California Energy Action Plan II

The California Energy Action Plan II is the State's principal energy planning and policy document (California Energy Commission, 2005, 2008). The plan identifies statewide energy goals, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy and capacity needs, clean and efficient fossil-fired generation is supported. In 2002, California established its RPS program,[3] with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent by 2017. The CEC subsequently accelerated that goal to 2010, and further recommended increasing the target to 33 percent by 2020. Because much of electricity demand growth is expected to be met by increases in natural-gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are significant elements of plans to reduce natural gas demand.

California's Green Building Standards Code (CALGreen)

Effective January 1, 2011, California's Green Building Standards Code (CALGreen Code) requires the diversion of at least 50 percent of the construction waste generated during most "new construction" projects (CALGreen Code Sections 4.408 and 5.408). Subsequent amendments have expanded upon what types of construction are covered. In all jurisdictions, including those without a Construction and Debris (C&D) ordinance requiring the diversion of 50 percent of construction waste, the owners/builder of construction projects within the occupancies subject to this requirement must divert 50 percent of the construction waste materials generated during the project. The 50 percent C&D diversion rate can be met through three methods: 1) develop and submit a waste management plan to the jurisdiction's enforcement agency which identifies materials and facilities to be used and document diversion; 2) use a waste management company, approved by the enforcing agency, that can document 50 percent diversion; or 3) use the disposal reduction alternative, as appropriate for the type of project. If the waste management plan option is used, the plan should be developed before construction begins, and project managers should use the project's planning phase to estimate materials that will be generated and identify diversion strategies for those materials. All covered projects should be able to divert 50 percent non-hazardous waste.

California Assembly Bill 341

In 2012, AB 341 was signed into law in California to help reduce GHG emissions and set a statewide goal to recycle, compost, or source reduce 75 percent of all solid waste generated in

[3] The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country. By increasing the required minimum amount over time, the Renewable Portfolio Standard puts the electricity industry on a path toward increasing sustainability.

California by 2020. This legislation requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week, to implement a recycling program.

Resource Conservation and Recovery Act

RCRA (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the EPA has delegated the enforcement responsibility to the State of California.

Integrated Energy Policy Report

SB 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (California Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 IEPR was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast.

California Code Title 24, Part 6, Energy Efficiency Standards

CCR Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and went into effect on January 1, 2020. The 2019 Title 24 standards went into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53% less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30% less energy due to lighting upgrades.

Resource Conservation and Recovery Act

RCRA (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval

of solid waste landfills meet the requirements of Subtitle D, the EPA has delegated the enforcement responsibility to the State of California.

Title 40 of the Code of Federal Regulations Part 503

The Federal biosolids regulations are contained in Title 40 CFR Part 503 as Standards for the Use or Disposal of Sewage Sludge. Known as the Part 503 Rule, or Part 503, these regulations govern the use and disposal of biosolids. Part 503 established requirements for the final use or disposal of biosolids when biosolids are:

- Applied to land to condition the soil or fertilize crops or other vegetation;
- Placed on a surface disposal site for final disposal; or
- Fired in a biosolids incinerator.

Part 503 permits are issued by the EPA and are required for all biosolids generators. Part 503 requirements can be incorporated into the NPDES permits that also are issued to publicly-owned treatment works.

State

State Water Resources Control Board Division of Drinking Water

The EPA has granted the State of California the authority to implement SDWA within its jurisdiction. The SWRCB *Division of Drinking Water* regulates public drinking water systems and is responsible for making sure water systems test for contaminants, reviewing plans for water system improvements, conducting on-site inspections and sanitary surveys, providing training and technical assistance, and taking action against water systems not meeting standards.

The SWRCB's *Safe Drinking Water Plan* provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The plan, which is updated every five years, represents the SWRCB's assessment of the overall quality of the State's drinking water, the identification of specific water quality problems, an analysis of the known and potential health risks that may be associated with drinking water contamination in California, and recommendations to improve drinking water quality. The plan also identifies and evaluates existing and proposed statewide water demand management and water supply augmentation programs and projects to address the State's water needs. The plan provides resource management strategies and recommendations to strengthen integrated regional water management. These strategies can reduce water demand, improve operational efficiency, increase water supply, improve water quality, practice resource stewardship, and improve flood management.

California Code of Regulations

Pursuant to California Code of Regulations Title 23, Division 3, Article 2 (Waste Classification and Management) and Article 3 (Waste Unit Classification and Siting), Class III (municipal solid waste) landfills are sited in accordance with criteria that are similar to those found in Subtitle D of RCRA. California Code of Regulations Title 27 includes various regulations pertaining to siting, design, construction, and operation of solid waste landfills.

California Code of Regulations Title 22, Division 4, Sections 60301 through 60355 (Articles 1 through 9), includes descriptions of overall allowable sources of and uses for recycled water, as well as specific use descriptions depending on treatments. Title 22 also includes specific treatment pathways including disinfection procedures, oxidation, soils and bed filter media, and

requirements for impoundments. It covers use area requirements, water testing and analysis, and plant design and operational requirements.

Protection of Underground Infrastructure

The California Government Code Sections 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or DigAlert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call DigAlert, the regional notification center for Southern California.

DigAlert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Health and Safety Code

California Health and Safety Code Section 116815 requires all pipes carrying recycled water to be colored purple or wrapped in purple tape. This requirement stems from a concern in cross-contamination and potential public health risks similar to those discussed for Title 17, Sections 7583-7586 and 7601-7605 of the California Code of Regulations. It is also discussed in the California Health Laws Related to Recycled Water.

Regional Water Quality Control Board (RWQCB)

The primary responsibility for the protection of water quality in California rests with the SWRCB) and nine RWQCBs. The SWRCB sets statewide policy for the implementation of State and Federal laws and regulations. The RWQCBs adopt and implement WQCP (I.e., Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The Program Area is within the jurisdiction of the Santa Ana Regional Board. However, the Program would maintain its discharge permit to the LV Site, which is within the jurisdiction of the Colorado Regional Board.

California Department of Water Resources (DWR)

The DWR is a department within the California Resources Agency. The DWR is responsible for the State's management and regulation of water usage.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

SB 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection.

California Code of Regulations

Pursuant to California Code of Regulations Title 23, Division 3, Article 2 (Waste Classification and Management), and Article 3 (Waste Unit Classification and Siting), Class III (municipal solid waste) landfills are sited in accordance with criteria that are similar to those found in Subtitle D of

RCRA. California Code of Regulations Title 27 includes various regulations pertaining to siting, design, construction, and operation of solid waste landfills.

California Code of Regulations Title 22, Division 4, Sections 60301 through 60355 (Articles 1 through 9), include descriptions of overall allowable sources of and uses for recycled water, as well as specific use descriptions depending on treatments. Title 22 also includes specific treatment pathways including disinfection procedures, oxidation, soils, and bed filter media, and requirements for impoundments. It covers use area requirements, water testing and analysis, and plant design and operational requirements.

California Department of Resources Recycling and Recovery (CalRecycle)

CalRecycle, formally known as CIWMB, is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the CalEPA. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. CalRecycle works jointly with local governments to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (California Public Resources Code Section 40050 et seq. or AB 939, codified in California Public Resources Code Section 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the State. AB 939 was adopted in an effort to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste landfilled by 1995 and 50 percent by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation.

Assembly Bill 341

AB 341 (Chesbro, Chapter 476, Statutes of 2011) sets forth the requirements of the statewide mandatory commercial recycling program. California requires all businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units to recycle.

California Solid Waste Reuse and Recycling Act of 1991

Other State statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires the local jurisdiction to require adequate areas for collecting and loading recyclable materials within a development project for commercial, institutional, marina, and residential buildings with five units or more.

California's Short-Lived Climate Pollutant Reduction Regulations

SB 1383, California's Short-Lived Climate Pollutant Reduction Regulations, which establishes methane reduction targets for California. SB 1383 sets goals to reduce disposal of organic waste in landfills, including edible food.[4] The bill's purpose is to reduce greenhouse gas emissions, such as methane, and address food insecurity in California. This requires jurisdictions to implement mandatory organic waste collection and recycling in a statewide effort to divert organic waste from landfills with goals to:

- Reduce organic waste disposal 50% by 2020 and 75% by 2025, and
- Recover at least 20% of currently disposed surplus edible food by 2025.

California Green Building Standards Code

Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the 2022 CALGreen Code (Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

California Energy Action Plan II

The California Energy Action Plan II is the State's principal energy planning and policy document (California Energy Commission, 2005, 2008). The plan identifies statewide energy goals, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy and capacity needs, clean and efficient fossil-fired generation is supported. In 2002, California established its RPS program,[5] with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent by 2017. The CEC subsequently accelerated that goal to 2010, and further recommended increasing the target to 33 percent by 2020. Because much of electricity demand growth is expected to be met by increases in natural-gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are significant elements of plans to reduce natural gas demand.

California's Green Building Standards Code (CALGreen)

Effective January 1, 2011, California's Green Building Standards Code (CALGreen Code) requires the diversion of at least 50 percent of the construction waste generated during most "new construction" projects (CALGreen Code Sections 4.408 and 5.408). Subsequent amendments have expanded upon what types of construction are covered. In all jurisdictions, including those without a Construction and Debris (C&D) ordinance requiring the diversion of 50 percent of construction waste, the owners/builder of construction projects within the occupancies subject to this requirement must divert 50 percent of the construction waste materials generated during the project. The 50 percent C&D diversion rate can be met through three methods: 1) develop and submit a waste management plan to the jurisdiction's enforcement agency which identifies

[4] County of Santa Clara, 2023. Understand Senate Bill (SB) 1383. https://reducewaste.sccgov.org/food-recovery/understand-senate-bill-sb-1383#3925188384-318395615 (accessed 04/20/24)

[5] The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country. By increasing the required minimum amount over time, the Renewable Portfolio Standard puts the electricity industry on a path toward increasing sustainability.

materials and facilities to be used and document diversion; 2) use a waste management company, approved by the enforcing agency, that can document 50 percent diversion; or 3) use the disposal reduction alternative, as appropriate for the type of project. If the waste management plan option is used, the plan should be developed before construction begins, and project managers should use the project's planning phase to estimate materials that will be generated and identify diversion strategies for those materials. All covered projects should be able to divert 50 percent non-hazardous waste.

California Assembly Bill 341

In 2012, AB 341 was signed into law in California to help reduce GHG emissions and set a statewide goal to recycle, compost, or source reduce 75 percent of all solid waste generated in California by 2020. This legislation requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week, to implement a recycling program.

Resource Conservation and Recovery Act

RCRA (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the EPA has delegated the enforcement responsibility to the State of California.

Integrated Energy Policy Report

SB 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (California Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 IEPR was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast.

California Code Title 24, Part 6, Energy Efficiency Standards

CCR Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and went into effect on January 1, 2020. The 2019 Title 24 standards went into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential

buildings, and update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53% less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30% less energy due to lighting upgrades.

Local

City of Highland Public Services & Facilities Element

The City of Highland General Plan offers the following Public Services and Facilities Goals and Policies regarding utilities and service systems:

Public Services and Facilities Element: Goal 4.1
Coordinate and balance the provision of public services with development activity to eliminate service gaps, maximize the use of public facilities, provide efficient and economical public services, achieve the equitable and legally defensible sharing of costs of such services and facilities, and maintain adequate service systems capable of meeting the needs of Highland residents.

Public Services and Facilities Element: Policy 1
Prior to permitting, ensure that all major extensions of services, facilities and utilities are comprehensively reviewed for related social, economic and environmental impacts and identify mitigation measures as appropriate.

Public Services and Facilities Element: Policy 2
Ensure that proposed development, which requires the extension of public services and facilities, will generate sufficient municipal income to pay for the operations, maintenance and replacement of those services and facilities by the City.

Public Services and Facilities Element: Policy 3
Ensure that existing residents and businesses are not burdened with the cost of financing infrastructure aimed at supporting new development or the intensification of existing development.

Public Services and Facilities Element: Policy 4
Continue to ensure that public water, sewer, drainage and other facilities needed for a project phase are constructed prior to or concurrent with initial development within that phase, unless otherwise approved by the City.

Public Services and Facilities Element: Policy 5
Continue to make the project sponsor of a proposed development ultimately responsible for ensuring the timely availability of all infrastructure improvements (including system- wide improvements) needed to support the development.

Public Services and Facilities Element: Policy 6
Continue to require that deficiencies in existing public services and facilities are corrected prior to or concurrent with proposed development.

Public Services and Facilities Element: Policy 7
Continue to coordinate with public service and utility companies to assure the long-term provision of services including water, wastewater, solid waste, electricity, natural gas and other private utilities (e.g., cable, Internet, telephone) for City residents.

Public Services and Facilities Element: Policy 8
Continue to direct future growth to areas with adequate existing facilities and services, or areas with adequate facilities and services committed, or areas where public services and facilities can be economically extended.

Public Services and Facilities Element: Policy 9
Develop a public facility assessment reporting system as part of the Capital Improvement Program and in accordance with AB 1600 to monitor the capacity of existing facilities to ensure that new developments do not overwhelm existing facilities. The following are guidelines for developing the reporting system:

- Identify and understand the demands for services that will be placed on Highland by regional demographic and economic changes.
- Monitor the progress of current local development projects, and ensure that public service and facility plans, as well as their forecasts and funding mechanisms, reflect changing conditions.
- Track the status of capital improvement program implementation.
- Develop a community survey to identify public facility deficiencies and usage.

Public Services and Facilities Element: Policy 10
Conduct and maintain an inventory of the availability and adequacy of public services and facilities in coordination with the County and service agencies in the area. Use the information to coordinate capital improvement programs and to make determinations on the adequacy of community facilities.

Public Services and Facilities Element: Policy 11
Continue to follow the procedures established for the regular exchange of information regarding proposed development and availability and adequacy of public services and facilities.

Public Services and Facilities Element: Policy 12
Continue to utilize a proactive approach to assuring that the flow of information between service agencies is maintained.

Public Services and Facilities Element: Policy 13
Utilize performance standards to determine the adequacy of public services and facilities and to establish requirements, fees and exactions provided by new development in the City.

Public Services and Facilities Element: Policy 14
Maintain a development review process that places the ultimate responsibility on the project sponsor for ensuring that necessary infrastructure improvements (including system-wide improvements) needed to support new development are, in fact, available at the time they are needed.

Public Services and Facilities Element: Policy 15
Require the construction of public facilities as a condition of approval for a proposed development if the development exceeds the capacity of existing public facilities to support such development.

Public Services and Facilities Element: Policy 16
Continue to require that project applicants provide sufficient information in the application process so that the City may comprehensively determine the potential impacts and/or the need for improvements to existing services and facilities to support project buildout consistent with the City's performance.

Public Services and Facilities Element: Policy 17
Continue to require that all new development pay the applicable Development Impact Fees established by the City Council.

Public Services and Facilities Element: Policy 18
Maintain flexibility in the collection and application of Development Impact Fees to permit the construction of master planned facilities in lieu of fees when the City determines that it is in the public interest to do so.

Public Services and Facilities Element: Policy 19
Continue to require the construction of public facilities as a condition of approval where the value of the services and facilities needed to support buildout of a proposed development exceed established Development Impact Fees, as consistent with the City's performance standards. Require an agreement with the developer for reimbursement from future development fees for the excess costs. Such reimbursements shall be from future fees collected for the specific excess facilities, which the initial developer was required to construct.

Public Services and Facilities Element: Policy 20
In the event that the performance standards for public services and facilities are not being met, the following conditions shall apply:

- Where the performance standards are not being met due to needs created by existing development, the City Council shall adopt in its Capital Improvement Plan a program to ensure that the performance criteria will be met at the earliest possible date.
- In instances where the performance standards are being exceeded prior to approval of a proposed development as the result of existing development, require that the proposed development provide such facilities as are necessary to ensure that performance criteria are met for new public facilities and services provided to the development, and that existing public services and facilities are not further downgraded.

Public Services and Facilities Element: Policy 21
Review the development fee structure, user charges, and mitigation fees every five years in accordance with the provisions of AB 1600 to ensure that the charges are consistent with the costs of improvement and maintenance and that public services and facilities are being expanded in a cost-efficient manner. Utilize the City's performance standards for public services and facilities as the basis for this review.

Public Services and Facilities Element: Policy 22
Continue to require that planned communities participate in the development of public infrastructure, in addition to the payment of development impact fees, through the following methods:

- An approved development agreement for all new specific plan or planned unit development projects that specifies the timing of infrastructure improvements in relation to project development.
- An annual review of improvements conducted for all new specific plans and an annual report in a format that can be easily included in the City's infrastructure assessment and reporting system.

Public Services and Facilities Element: Policy 23
Continue to proactively monitor and review development proposals in surrounding areas to protect City interests and minimize impacts on the community.

Public Services and Facilities Element: Policy 24
Continue to work with the County on a system of requiring appropriate mitigation to ensure that new unincorporated development will not impact services and facilities in the City.

Public Services and Facilities Element: Policy 25
Continue to support an assessment district alternative to development impact fees for large-scale developments undergoing urbanization when a single owner or small number of owners is involved, and when it is in the public interest to do so.

Public Services and Facilities Element: Policy 26
Continue to allow new development and the intensification of existing development only where and when adequate public services and facilities can be provided.

Public Services and Facilities Element: Goal 4.2

Provide a water system that produces high quality water, sufficient water pressure and necessary quantities of water to meet domestic demands.

Public Services and Facilities Element: Policy 1
Continue to work with the East Valley Water District to provide an efficient and economic distribution of adequate water supply and pressure to the District's service areas in Highland.

Public Services and Facilities Element: Policy 2
Ensure a high-quality water supply that meets or exceeds state and federal health standards.

Public Services and Facilities Element: Policy 3
Work with the East Valley Water District and local elected representatives to better define the future availability of water for the Highland community.

Public Services and Facilities Element: Policy 4
Work with the East Valley Water District to promote water conservation and education programs, such as public education programs available through the Environmental Learning Center in Highland.

Public Services and Facilities Element: Goal 4.3

Provide a safe and effective sewer system that meets the needs of Highland residents, businesses and visitors.

Public Services and Facilities Element: Policy 1
Continue an ongoing dialogue with the East Valley Water District regarding funding and scheduling of any additional sewage facilities needed to serve the City.

Public Services and Facilities Element: Policy 2
Work with relevant agencies to determine the long-term supply of reclaimed wastewater and service to potential future uses within the City.

Public Services and Facilities Element: Policy 3
Encourage Grey Water Recycling, especially for residential use irrigation.

Public Services and Facilities Element: Goal 4.4

Maintain an effective drainage system that protects people and property from overflows and flood disasters.

Public Services and Facilities Element: Policy 1
Continue to improve any deficiencies in the City's drainage system and address the long-term needs associated with future development to minimize flood damage and adequately direct rainfall and subsequent runoff.

Public Services and Facilities Element: Policy 2
Minimize the impact of development on the City's drainage system by reducing the amount of impervious surface associated with new development and encouraging site design features or landscaping that capture runoff. Encourage on-site retention of stormwater and compliance with requirements of the National Pollutant Discharge Elimination System.

Public Services and Facilities Element: Goal 4.5

Minimize, recycle, and dispose of solid waste in an efficient and environmentally sound manner.

Public Services and Facilities Element: Policy 1
Ensure that solid waste generated within the City is collected and transported in a cost-effective manner and protects the public's health and safety.

Public Services and Facilities Element: Policy 2
Continue to support an ongoing dialogue with the County Solid Waste Management on the rail haul access and other regional solutions for long-term limits on local landfill capacity.

Public Services and Facilities Element: Policy 3
Reduce the volume of solid waste material sent to landfills by continuing source reduction, recycling and composting programs in compliance with State law and encouraging the participation of all residents and businesses in these programs.

Public Services and Facilities Element: Policy 4
Increase the price paid for recycling glass and plastic from private vendors.

Public Services and Facilities Element: Goal 4.6

Coordinate with private utility companies to ensure the adequate provision of electricity, natural gas and telecommunication infrastructure to existing and new development.

Public Services and Facilities Element: Policy 1
Continue to coordinate with the local gas and electric companies on the location and timing of additional energy facilities needed within the City.

Public Services and Facilities Element: Policy 2
Coordinate with private utilities to provide Highland residents, schools and businesses with an efficient telecommunications infrastructure, including telephone, cable and high-speed services, such as high-speed Internet.

City of San Bernardino Public Services & Facilities Element

The City of San Bernardino General Plan offers the following Public Services and Facilities Goals and Policies regarding utilities and service systems:

Utilities Element: Goal 9.1

Coordinate and balance the provision of public services with development activity to eliminate service gaps, maximize the use of public facilities, provide efficient and economical public services, achieve the equitable and legally defensible sharing of costs of such services and facilities, and maintain adequate service systems capable of meeting the needs of Highland residents.

Utilities Element: Policy 9.1.1
Provide for the construction of upgraded and expanded wastewater collection and treatment improvements to support existing and new development, and to meet usage requirements and maximize cost efficiency, especially in areas where existing systems are deficient.

Utilities Element: Policy 9.1.2
Maintain and replace existing wastewater collection and treatment facilities as necessary.

Utilities Element: Policy 9.1.3
Require new development to connect to a master planned sanitary sewer system in accordance with the Department of Public Works' "Sewer Policy and Procedures". Where construction of master planned facilities is not feasible, the Mayor and Common Council may permit the construction of interim facilities sufficient to serve the present and short- term future needs.

Utilities Element: Policy 9.1.43
Evaluate the City's Sewer Collection System Master Plan and the Board of Water Commissioner's Master Plan for Wastewater Treatment Facilities as necessary to accurately determine which collection and treatment facilities will be needed to serve present and future growth in the City.

Utilities Element: Policy 9.1.5
Review development proposals for projects within the City's Sphere of Influence and request the County to disapprove any project that cannot be served with adequate public wastewater collection and treatment facilities. (U-1)

Utilities Element: Policy 9.1.6
Ensure that any proposed septic systems comply with the Santa Ana Regional Water Quality Control Board's minimum lot size requirements, which are one-half acre as of 2005. (LU-1)

Utilities Element: Goal 9.2

Ensure that all wastewater collection and treatment facilities are operated to maximize public safety.

Utilities Element: Policy 9.2.1
Provide for the monitoring of toxic or potentially toxic businesses to prevent contamination of water and wastewater.

Utilities Element: Policy 9.2.2
Require, when necessary, pre-treatment of wastewater from industrial sources prior to treatment at the Water Reclamation Facility.

Utilities Element: Goal 9.3

Ensure that all wastewater collection and treatment facilities are operated to maximize public safety.

Utilities Element: Policy 9.3.1
Provide for the construction of upgraded and expanded water supply, transmission, distribution, storage, and treatment facilities to support existing and new development. (LU-1 and U-4)

Utilities Element: Policy 9.3.2
Maintain and replace existing water supply, transmission, distribution, storage systems, and treatment facilities as necessary. (U-4)

Utilities Element: Policy 9.3.3
Require adequate water supply, transmission, distribution, storage, and treatment facilities to be operational prior to the issuance of certificates of occupancy. (LU-1)

Utilities Element: Policy 9.3.4
Monitor the demands on the water system and, as necessary, manage development to mitigate impacts and/or facilitate improvements.

Utilities Element: Policy 9.3.5 Impose limits on new water hook-ups, if necessary, to comply with available domestic water supply.

Utilities Element: Policy 9.3.6
Request the Board of Water Commissioners to evaluate the Water System Master Plan, as necessary, to accurately determine which water facilities will be needed to serve present and future growth in the City.

Utilities Element: Goal 9.4

Provide appropriate storm drain and flood control facilities where necessary.

Utilities Element: Policy 9.4.1
Ensure that adequate storm drain and flood control facilities are provided in a timely manner to protect life and property from flood hazards.

Utilities Element: Policy 9.4.2
Upgrade and expand storm drain and flood control facilities to eliminate deficiencies and protect existing and new development.

Utilities Element: Policy 9.4.3
Maintain existing storm drain and flood control facilities.

Utilities Element: Policy 9.4.4
Require that adequate storm drain and flood control facilities be in place prior to the issuance of certificates of occupancy. Where construction of master planned facilities is not feasible, the Mayor and Common Council may permit the construction of interim facilities sufficient to protect present and short-term future needs. (LU-1)

Utilities Element: Policy 9.4.5
Implement flood control improvements that maintain the integrity of significant riparian and other environmental habitats.

Utilities Element: Policy 9.4.6
Minimize the disturbance of natural water bodies and natural drainage systems. (LU-1)

Utilities Element: Policy 9.4.7
Develop San Bernardino's flood control system for multi- purpose uses, whenever practical and financially feasible.

Utilities Element: Policy 9.4.8
Minimize the amount of impervious surfaces in conjunction with new development. (LU-1)

Utilities Element: Policy 9.4.9
Develop and implement policies for adopting Sustainable Stormwater Management approaches that rely on infiltration of stormwater into soils over detention basins or channels. Sustainable Stormwater Management techniques include use of pervious pavements, garden roofs, and bioswales to treat stormwater, and reusing stormwater for non-potable water uses such as landscape irrigation and toilet/urinal flushing. (LU-1)

Utilities Element: Policy 9.4.10
Ensure compliance with the Federal Clean Water Act requirements for National Pollutant Discharge Elimination System (NPDES) permits, including requiring the development of Water Quality Management Plans, Erosion and Sediment Control Plans, and Storm Water Pollution Prevention Plans for all qualifying public and private development and significant redevelopment in the City. (LU-1)

Utilities Element: Policy 9.4.11
Implement an urban runoff reduction program consistent with regional and federal requirements, which includes requiring and encouraging the following examples of Best Management Practices (BMPs) in all developments:

- Increase permeable areas, utilize pervious materials, install filtration controls (including grass lined swales and gravel beds), and divert flow to these permeable areas to allow more percolation of runoff into the ground;
- Replanting and hydroseeding of native vegetation to reduce slope erosion, filter runoff, and provide habitat;
- Use of porous pavement systems with an underlying stone reservoir in parking areas;
- Use natural drainage, detention ponds, or infiltration pits to collect and filter runoff;
- Prevent rainfall from entering material and waste storage areas and pollution-laden surfaces; and
- Require new development and significant redevelopment to utilize site preparation, grading, and other BMPs that provide erosion and sediment control to prevent construction-related contaminants from leaving the site and polluting waterways. (LU-1)

Utilities Element: Goal 9.5

Provide an adequate and orderly system for the collection and disposal of solid waste to meet the demands of new and existing developments in the City.

Utilities Element: Policy 9.5.1
Install and maintain public trash receptacles along incorporated City streets in commercial areas and along major arterials.

Utilities Element: Policy 9.5.2
Provide regular street sweeping.

Utilities Element: Policy 9.5.3
Continue to reduce the amount of solid waste that must be disposed of in area landfills, to conserve energy resources, and be consistent with the County Solid Waste Management Plan and State law.

Utilities Element: Policy 9.5.4
Continue to support implementation of regional recycling programs through participation in the County Solid Waste Advisory Committee, the County Solid Waste Management Plan, and appropriate State programs.

Utilities Element: Policy 9.5.5
Develop and participate in local recycling programs.

Utilities Element: Policy 9.5.6
Develop and implement a program of public education regarding the benefits of recycling.

Utilities Element: Goal 9.6

Ensure an adequate, safe, and orderly supply of electrical energy is available to support existing and future land uses within the City on a project level.

Utilities Element: Policy 9.6.1
Require that approval of new development be contingent upon the ability to be served with adequate electrical facilities. (LU-1)

Utilities Element: Policy 9.6.2
Underground utilities, including on-site electrical utilities and connections to distribution facilities, unless such undergrounding is proven infeasible. (U-2)

Utilities Element: Policy 9.6.3
Provide adequate illumination of all streets, alleys (under special conditions), and public areas; upgrading areas that are deficient and maintaining lighting fixtures in good working order.

Utilities Element: Policy 9.6.4
Require improvements to the existing street light system and/or new street light systems necessitated by a new development proposal be funded by that development.

Utilities Element: Policy 9.6.5
Encourage and promote the use of energy-efficient (U.S. Department of Energy "Energy Star" or equivalent) lighting fixtures, light bulbs, and compact fluorescent bulbs in residences, commercial, and public buildings, as well as in traffic signals and signs where feasible. (LU-1)

Utilities Element: Goal 9.7
Ensure an adequate supply of natural gas is available to support existing and future land uses within the City at a project level.

Utilities Element: Policy 9.7.1
Work with the Southern California Gas Company to ensure that adequate natural gas facilities are available to meet the demands of existing and new developments.

Utilities Element: Policy 9.7.2
Require that all new development served by natural gas install on-site pipeline connections to distribution facilities underground, unless such undergrounding is infeasible due to significant environmental or other constraints. (U-2)

Utilities Element: Goal 9.8
Ensure the operation and maintenance of telecommunications systems to support existing and future land uses within the City.

Utilities Element: Policy 9.8.1
Provide for the continued development and expansion of telecommunications systems including cable and, as feasible, fiber optics, for entertainment, education, culture, information access, two-way communication between government and residents and businesses, and other similar purposes.

Utilities Element: Policy 9.8.2
Require that all new developments underground telecommunication facilities, unless such undergrounding is infeasible due to significant environmental or other constraints. (U-2)

Utilities Element: Policy 9.8.3
Cooperate with, and encourage public utilities to provide a fiber optics network in the City that is linked to regional systems.

Utilities Element: Goal 9.9
Use the City's available geothermal resources as an alternative to natural gas and electricity.

Utilities Element: Policy 9.9.1
Provide for the continued development and expansion of geothermal energy distribution lines. (U-3)
Provide public funding to expand the existing geothermal production and distribution system. (U-3)

Utilities Element: Policy 9.9.2
Promote the use of geothermal resources particularly in the South San Bernardino Area.

Utilities Element: Goal 9.10
Ensure that the costs of infrastructure improvements are borne by those who benefit.

Utilities Element: Policy 9.10.1
Require that new development proposals bear the cost to improve wastewater collection and treatment facilities, water supply transmission, distribution, storage, and treatment facilities, and storm drain and flood control facilities as necessitated by the proposed project. This shall be accomplished either through the payment of fees, or by the actual construction of the improvements. (LU-1)

Utilities Element: Policy 9.10.2
Collect adequate amounts of fees and charges to fund the operation/maintenance of existing facilities and to construct new facilities.

Utilities Element: Policy 9.10.3
Review utility, capacity, and infrastructure fees, as well as development, acquisition of service, and monthly service charges on an annual basis to ensure that adequate amounts of fees and charges are collected to fund the operation/ maintenance of existing facilities and to construct new facilities.

Utilities Element: Policy 9.10.4
Provide public funding support for expansion and upgrading of public utilities and infrastructure when improvements will provide substantial public benefit to the City.

Utilities Element: Policy 9.10.5
Allow the formation of benefit assessment districts and community facilities districts, where appropriate, in which those who benefit from specific improvements pay a pro rata share of the costs.

San Bernardino County Construction and Demolition Solid Waste Management Plan

San Bernardino County requires the preparation of construction and demolition solid waste management plans (waste management plans) for all new construction projects. The waste management plan's goal is to ensure a minimum of 50 percent diversion of construction building materials and demolition debris from landfills and compliance with State law which states that 50 percent of non-hazardous construction and demolition debris be recycled and/or salvaged for reuse in order to extend the life of landfills. Information provided in the waste management plan includes how the waste will be managed, hauler identification, and anticipated material wastes.

4.20.3 Environmental Setting: Utilities and Service Systems

4.20.3.1 Wastewater

This section identifies the wastewater management system that serves the Cities of San Bernardino and Highland within the IVIC Project area and provides an analysis of potential impacts associated with implementation of the IVIC. This section is based upon information from the Cities of Highland and San Bernardino General Plans, and East Valley Water District.

The existing sewer system consists of approximately 213 miles of pipeline, 4,500 sewer manholes, 7 siphons, and 5 diversion structures. The existing sewer system conveys flows into the East Trunk Sewer which presently discharges to the San Bernardino Water Reclamation Plant (SBWRP) until the Sterling Natural Resources Center (SNRC) is in operation. The existing sewer system, including transmission and collection pipeline, siphons, and manholes has been evaluated. The evaluation included existing and future conditions for deficiencies and to identify areas for improvements.

EVWD's sewer pipeline network includes approximately 213 miles of pipeline ranging in size from 4 inches to 24 inches in diameter. The East Trunk Sewer is approximately 9 miles long ranging in size from 8 inches to 54 inches in diameter. EVWD's system, including the East Trunk Sewer, encompasses nine siphons to convey flows under creeks and flood control channels. EVWD has five diversion structures in its sewer collection system. Diversion structures are generally installed in manholes to divert flows along a specific route in case of a blockage in the system or during

times of high flow. EVWD's sewer system does not include any lift stations or force mains. All flow is conveyed by gravity into the East Trunk Sewer.

EVWD maintains all of the sewer pipes in the IVIC Project area, which are gravity collection system pipelines of a variety of sizes made mostly of vitrified clay pipe (VCP). The majority of the pipelines were built between 1960 and 1980. A few segments were built at a later date. The backbone wastewater system in the IVIC Project area includes:

- A 24-inch VCP located in 6th Street traverses the length from Tippecanoe Street to Elm Street.
- A 21-inch VCP located in 6th Street traverses the length from Elm Street to Victoria Avenue.
- A 10-inch VCP located in 6th Street traverses the length from Victoria Avenue to Cunningham Street.
- An 8-inch VCP located in 6th Street traverses the length from Cunningham Street to Central Avenue.
- An 8-inch VCP located in 5th Street starting at Marlyn Avenue to 214 feet east of Shirley Avenue.
- A 21-inch VCP located in 5th Street traverses the length from Victoria Avenue to Cunningham Street.
- A 24-inch VCP located in 5th Street traverses the length from Cunningham Street to Route 10
- An 8-inch VCP located in 4th Street starting at Marlyn Avenue to 214 feet east of Shirley Avenue.
- There are new sewer pipes in 3rd Street.

4.20.3.2 Water

This section identifies the existing water supply and distribution system that serves the Cities of San Bernardino and Highland within the IVIC Project area and provides an analysis of potential impacts associated with implementation of the IVIC. This section is based upon information from the Cities of Highland and San Bernardino General Plans, and East Valley Water District.

Potable Water

Potable water will be provided to the IVIC Project area by East Valley Water District (EVWD). EVWD's existing supply sources consist of local groundwater, surface water from the Santa Ana River obtained through the North Fork Water Company delivery system, and imported water from the State Water Project (SWP). The IVIC Project area is located within a portion of EVWD's Lower Zone but mostly the Project is in EVWD's Intermediate Zone. There is enough supply to meet existing demands under maximum day demand (MDD) conditions. The largest single source analysis from EVWD's 2019 Water Supply Master Plan (WSMP) indicates there are supply deficits in the Lower Zone and Intermediate Zone if the largest single source is out of service during MDD conditions. However, the ability to transfer water from other zones would allow these supply deficits to be mitigated in the unlikely event that these overlapping conditions occur.

EVWD operates existing water distribution infrastructure located throughout the IVIC Project area with major east-west pipelines in 6th Street, some pipelines in 5th Street and some pipelines in 3rd Street. Within the Project area there are six (6) active wells and four (4) pump stations all within the Lower and Intermediate Zones. The Lower Zone is west of Sterling Avenue and the Intermediate Zone is east of Sterling Avenue to Palm Avenue. The backbone water system in the IVIC Project area includes:

- A 12-inch cement line and coated water main located in 6th Street traverses the length from Tippecanoe Street to Sterling Street.
- A 36-inch ductile iron line starting at Indian Springs High School located along 6th Street and the pipeline traverses east to Grape Street. As part of the SNRC Project, the segment of this ductile iron line west of Sterling Avenue will be converted to a recycled water line.
- An 8-inch ductile iron line located in 6th Street from Victoria Avenue to Alabama Avenue.
- A 6-inch ACP line located in 6th Street from Victoria Avenue to Alabama Avenue.
- A 12-inch ductile iron line located in 5th Street traverses the length from Tippecanoe Street to 1,000 feet east of Del Rosa Drive.
- A 6 5/8-inch cement line and coated water main located in 5th Street immediately north of San Bernardino Airport supplied by Plant 141.
- A combination of 8-inch and 16-inch ductile iron line located in 4th Street transverses the length from Tippecanoe Street to the termination at San Bernardino International Airport.
- A 12-inch ductile iron line located in 3rd Street traverses the length from Tippecanoe Street to Shirley Avenue.
- A 16-inch ductile iron line located in 3rd Street immediately north of San Bernardino Airport supplied by Plant 141.
- An 8-inch ACP and ductile iron line located in 3rd Street from Victoria Avenue to Alabama Avenue.

The City of San Bernardino Municipal Water Department (SBMWD) does not supply water within the City of Highland; however, SBMWD supplies water to portions of the City of San Bernardino and unincorporated areas of the San Bernardino County including infrastructure within the 3rd Street and 5th Street IVIC Project area. At the intersection of Tippecanoe Avenue and 3rd Street there is an intertie with the IVIC Project area via a 12-inch pipeline. The 12-inch pipeline continues east on 3rd Street and terminates east of Del Rosa Drive. This 12-inch pipeline supplies the distribution system south of 3rd Street, specifically for the San Bernardino International Airport.

The existing water infrastructure system is shown in **Figure 3-5** and existing water pipelines by diameters are shown in **Figure 3-6**.

Recycled Water

EVWD is currently nearing completion of constructing the SNRC which will be a state-of-the-art water recycling facility in the City of Highland, that will provide a sustainable new water supply to boost the region's water resilience. The SNRC was constructed on a 14-acre parcel of land located at North Del Rosa Drive between East 5th Street and East 6th Street. The SNRC Treatment Facility would be located on the eastern property while a community and administration center would be located on the western parcel. The recycled water conveyance pipelines are proposed to be constructed along the existing rights-of-way within 6th Street, or other east-west major street, SNRC will be capable of treating up to 10 million gallons a day. The SNRC is being implemented to recharge the local Bunker Hill Groundwater Basin and will provide community education, training space, neighborhood improvements, and new habitat for the Santa Ana sucker, a listed species of fish in the Santa Ana River. The SNRC will produce Title 22 quality recycled water but this recycled water is not intended to be a source to serve the IVIC Project area, since all of the recycled water produced at the SNRC is intended to go to upstream groundwater recharge.

4.20.3.3 Stormwater / Drainage

The existing drainage system in the Project area is fairly rudimentary. Figure 3-8 identifies the Specific Plan Area, the overall watershed area of the Project improvements, existing storm drain systems, proposed storm drain systems and infrastructure storm drain systems identified by Comprehensive Storm Drain Plan #6 (CSDP #6) prepared by San Bernardino County Flood Control District. Storm water runoff within the area flows to the south over a very shallow grade. The following information is abstracted from a study of the area hydrology by JLC Engineering & Consulting, Inc, titled "Preliminary Hydrology and Channel Design for City Creek By-Pass Channel," April 20, 2020. The City Creek Bypass Channel is located along 3rd and 5th Streets and extends from the Warm Creek Channel on the west (terminus) and on the east intercepts the existing natural City Creek Channel just northwest of the State Route 30 (SR-210) and 5th Street Interchange. Refer to aerial photo in **Figure 3-8** for a depiction of the Bypass Channel alignment. Additionally, the watershed area has existing storm drains that collect runoff from the watershed area located within Palm Avenue and Central Avenue. The existing storm drains collect surface runoff and convey the runoff into either City Creek or City Creek Bypass.

Coordination with local agencies has resulted in the identification of a proposed storm drain system that is located within/adjacent to Victoria Avenue. The storm drain system is currently under a Plan, Specification, and Estimate (PS&E) process with the City of Highland. The intent of the PS&E process is to develop a package that obtains CEQA clearances, design approvals, and a construction estimate to allow the Project to be constructed.

The study describes the existing channel and concludes that downstream of the Victoria Avenue, City Creek Bypass Channel is insufficient to convey the 100-year flood flows in its current configuration. The study includes a new channel design (two alternatives) that will need to be installed to have sufficient capacity to convey the 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Warm/Twin Creek Channel. **Figure 3-9** shows the alternative channel designs and acknowledges that these designs are preliminary, not approved, and not ready for construction. The channel alternatives are defined in limited detail in the study. For planning and impact forecast purposes it is assumed that a maximum of one-half mile of new channel will be installed in any given year. Moreover, **Figure 3-8** has identified the storm drain infrastructure that will be required to provide flood protection for the surrounding IVIC Project area based on the CSDP #6. The purpose of the storm drain infrastructure is to provide flood protection and to meet the street design policies within the City of San Bernardino and the City of Highland. The following CSDP #6 system components that protect the Project area are as follows:

- 6-C1-01 which is a storm drain system that varies in diameter from 36-inches to 48-inches in diameter. The system extends along Tippecanoe Avenue to 5th Street.
- 6-C1-03 which is a storm drain that varies in diameter from 42-inches to 81-inches in diameter. The storm drain extends to Sterling Avenue and 6th Street.

It should be noted that 6-WA-03, located within 6th Street, is adjacent to the northerly boundary of the Specific Plan Area. Based on the topographic contours for the watershed area, the runoff flows to the west towards Warm Creek. The Specific Plan Area will not require this system to ensure flood protection since 6th Street collects and conveys the runoff to Warm Creek Channel.

Finally, it should be noted that the CSDP #6 is a conceptual design that identifies regional infrastructure required within an area. The conceptual design provides a potential solution that would provide flood protection for an area and where the runoff from the watershed area needs

to be directed. During final engineering, the solution provided by the CSDP #6 may not be viable due to constraints associated with utilities, rights-of-way, topography or other unknown constraints. As a result, future projects may provide an alternative solution that meets the intent of the CDSP #6 design concept with concurrence of each City's engineer.

4.20.3.4 Electricity

Electricity for the IVIC Project area is currently being served by Southern California Edison (SCE). SCE's power plants are capable of supplying 100 percent of the City of Highland, City of San Bernardino and unincorporated areas of San Bernardino County electricity needs within the IVIC.

Because the IVIC Project area is linked to the state power grid, the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County had its share of power interruptions during the peak energy crisis in 2001. Under an agreement with the California Independent System Operator (Cal ISO), SCE must reduce its load if instructed to do so by the ISO during a Stage III power emergency. Such an emergency occurred most recently in March 2001, requiring SCE to temporarily interrupt electric service to some of its customers. AS determined below, implementation of the IVIC is not forecast to have a significant impact on availability of energy resources in the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County.

4.20.3.5 Natural Gas

Natural gas for the IVIC Project area is currently being served by the Southern California Gas Company (SoCal Gas). SoCal Gas has a number of underground pipelines in the Project area including:

- An 8-inch pipeline located in 6th Street traverses east the length from Tippecanoe Street to Victoria Avenue.
- A 3-inch pipeline located in 6th Street traverses east the length from Cunningham to Central Avenue.
- A 2-inch pipeline located in 5th Street traverses east the length from Tippecanoe Street to Roberts.
- A 2-inch pipeline located in 5th Street traverses east the length from Victoria Avenue to 500 feet from Central Avenue.
- A 2-inch pipeline located in 5th Street traverses east the length from Central Avenue to Palm Avenue.
- A 4-inch pipeline located in 5th Street traverses east from Church Avenue to Route 210.
- A 2-inch pipeline located in 4th Street traverses east the length from Tippecanoe Street to the termination of 4th Street.
- A 2-inch pipeline located in 3rd Street traverses the length from Tippecanoe Street to Sterling Street.
- An 8-inch pipeline located in 3rd Street traverses east the length from Victoria Avenue to Alabama Street.
- A 6-inch pipeline located in 3rd Street traverses east the length from Alabama Street/Palm Avenue to Church Avenue/5th Street intersection.

4.20.3.6 Telecommunication

Cable TV / Internet

Time Warner has above and underground utilities in 6th Street from Tippecanoe Street to Sterling Avenue as well as above ground utilities in 5th Street from Tippecanoe Street to residences located between Del Rosa Drive and Sterling Avenue. Time Warner has above ground utilities in 6th Street from Lankershim Avenue to Central Avenue. MCI (Verizon) and Terradex have no above or underground utilities in the IVIC Project area.

Telephone / Internet

AT&T has above ground utilities (via cables) and underground utilities in conduits within the IVIC Project area located in 3rd Street, 5th Street and 6th Street. Both above ground and underground utilities are located in 6th Street from Tippecanoe Street to Victoria Avenue as well as conduit located in 5th Street starting at Victoria Avenue traversing east terminating before Cunningham. Conduit is located within Central Avenue and Palm Avenue from 6th Street to 4th Street. Conduit and underground utilities are located in 5th Street from Church Avenue to Route 210. Conduit is also located in 3rd Street starting at Victoria Avenue and terminates at Palm Avenue.

Dry utility services throughout the IVIC Project area will be provided through the existing backbone systems. Dry utilities are generally constructed in a common trench within the street right-of-way or an adjacent easement. The final layout and design of the IVIC Project area will need to accommodate the linear dry utilities, as well as ancillary features such as junction boxes, transformers, etc.

4.20.3.7 Solid Waste

The City of San Bernardino Department of Public Works, Street Maintenance and Integrated Waste Management Division (Division) has contracted with Burrtec Waste Industries (Burrtec) to be responsible for solid waste collection and disposal. The City of Highland has also contracted with Burrtec. The contractors from both the Division and the City of Highland are responsible for the solid waste collection and disposal from all residential properties within each respective City within the IVIC Project area and competes with private haulers for commercial collection services. The Division and City of Highland also manage a curbside recycling program, which includes collection of paper and cardboard, cans/aluminum, plastic, and glass. The recyclable materials are taken to number of recycling facilities that are contracted with the Division, City of Highland and unincorporated areas of the County.

The San Bernardino County operates the Mid-Valley Sanitary Landfill in Rialto, and the San Timoteo Sanitary Landfill in Redlands.

Table 4.20-1
LANDFILLS IN PROXIMITY TO THE IVIC PROJECT AREA

Facility Name	Address	Closure Date	Daily Permitted Capacity (tons/day)	Remaining Permitted Capacity (cubic yards)
Mid-Valley Sanitary Landfill[1]	2390 Alder Ave, Rialto, CA 92377	4/1/2045	7,500	61,219,377 as of 06/2019
San Timoteo Sanitary Landfill[2]	San Timoteo Canyon Road Redlands, CA 92373	12/1/2039	2,000	12,360,396 as of 4/2019

Facility Name	Address	Closure Date	Daily Permitted Capacity (tons/day)	Remaining Permitted Capacity (cubic yards)
SOURCE: California Department of Resources Recycling and Recovery, 2024. *Solid Waste Information System (SWIS)* [1] https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1880?siteID=2662 (accessed 04/25/24) [2] https://www2.calrecycle.ca.gov/SolidWaste/Site/Details/2688 (accessed 04/25/24)				

4.20.3.8 Other Utilities

Although just beginning, there are other utilities that are becoming important for southern California in general. At present one utility that is becoming important is "electric charging stations," (ECS), and their availability for the community. This utility service is currently comprised of a mix of private ECS and public ECS. According to the City of Highland the only known public chargers are located at Highland City Hall, with other locations (Walmart, Highland Avenue) providing private ECS facilities. The goal is to identify this scope of this utility service to meet the demands of the electric and hybrid vehicle needs.

4.20.4 Thresholds of Significance

As stated in the preceding section, the standard issues related to population and housing resources identified in the Standard Environmental Checklist Form provided in Appendix G of the State CEQA Guidelines are analyzed in this DEIR. Accordingly, utilities impacts resulting from the implementation of the proposed IVIC Project may be considered significant if they would result in the following:

UTIL-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

UTIL-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

UTIL-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

UTIL-4 Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

UTIL-5 Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

Based on these significance thresholds and criteria, the proposed IVIC's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts where feasible. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable adverse environmental impact.

4.20.5 Methodology

The preparation of this subchapter relied on several different methods. Specific investigation of utility services was reviewed by a civil engineer that supplied the above information, except for the hydrology/drainage data. The information for the drainage system was also provided by a civil engineer with a specialization in evaluation and design of drainage systems. Finally, the literature prepared by the agencies themselves regarding water, wastewater, energy utilities, communication services, and solid waste were used to evaluate the current status and future capacity of the various utility systems.

4.20.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.20.6.1 Impact Analysis

UTIL-1 Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

Within the IVIC Project area, EVWD provides potable water service. The Project area is served by existing transmission systems as described above under 4.20.3.2 Water. Based on the 2019 EVWD's 2019 WSMP Build-Out Water System Improvements outlined in Chapter 8, there are no stand-alone transmission pipeline recommendations applicable to the provision of water service to the Project area. However, based on the 2019 WSMP build-out evaluation, there are two water system improvements within the IVIC Project area as follows:

- **Project 1** - 3.5 MG storage reservoir located in the Lower Zone;
- **Project 2 -** New Well 01 in the Intermediate Zone.

These recommended improvements to the existing EVWD system will need to be installed to enhance the existing robust distribution system to meet modern industry standards, including fire flow. Also, connecting pipelines from the two water infrastructure facilities to the EVWD distribution system are anticipated to be installed. As such, the proposed Project would require or result in the relocation or construction of new or expanded water facilities over the 20-year life of the Project. Based on the analysis presented in the DEIR, the construction and operation of the EVWD Well and Reservoir can be accomplished without causing significant adverse environmental effects.

EVWD would be responsible for selecting the future EVWD Well and Reservoir sites to support the water system in the IVIC Project area. Historically, EVWD has been successful with installation of new reservoir(s) and well(s) without causing unavoidable significant adverse environmental impacts. EVWD can rely on this evaluation if the site selected meets the requirement to not cause any significant impact, but would be required to perform its own CEQA evaluation if the location selected cause impacts that fall outside the analysis and findings in this DEIR once the EVWD Well and Reservoir sites have been selected. Impacts under this issue would be less than significant through the implementation of the mitigation identified throughout the DEIR to minimize impacts from implementation of the proposed IVIC Project.

Wastewater

Within the IVIC Project area, EVWD provides wastewater collection services. EVWD Sewer System Master Plan (SSMP) was updated in early 2019. The Project area is served by existing collection systems as described above under Subsection 4.20.3.1 Wastewater. Within the SSMP, a comprehensive 20-year Capital Improvement Plan (CIP) was developed that recommends both capacity- and condition-related capital projects and recommendations on further studies. **Figure 3-7** outlines the Recommended Capacity Projects addressed in the 2019 EVWD Sewer Master Plan and Chapter 6 of the SSMP describes how the new interceptor sewer that will direct flows to the SNRC will relieve flows from the pipelines associated with the projects outlined under Chapter 7 of the SSMP. As such, the existing wastewater transmission system, as well as the previously analyzed and planned for transmission system associated with the development of the SNRC, for which implementation is in progress, are anticipated to require construction of approximately 5,000 linear feet of new sewer over the 20 year implementation period (maximum estimate 2,500 lineal feet per year. Given that the proposed IVIC will not require or result in the relocation or construction of new or expanded wastewater treatment facilities, no significant impacts thereof are anticipated.

Stormwater

The IVIC Project area is served by existing stormwater runoff collection systems as described above under 4.20.3.3 Stormwater. These systems may underperform as the intensity of the development (increase in impervious surfaces) in the IVIC Project area and surrounding area increases. Coordination with local agencies has resulted in the identification of a proposed storm drain system that is located within Victoria Avenue. The storm drain system is currently under a Plan, Specification, and Estimate (PS&E) process with the City of Highland. The intent of the PS&E process is to develop a package that obtains CEQA clearances, design approvals and construction estimate to allow the Project to be constructed.

The existing City Creek Bypass Channel study concludes that, downstream of the Victoria Avenue-City Creek Bypass Channel, it is insufficient to convey the 100-year flood flows at build out, in its current configuration. The study includes a new channel design (two alternatives) that could be installed to have sufficient capacity to convey the 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Warm/Twin Creek Channel, located just east of Waterman Avenue. A preliminary design for the City Creek By-Pass Channel has been developed and is discussed as par to the "Preliminary Hydrology & Channel Design for City Creek By-Pass Channel" prepared by JLC Engineering & Consulting, dated April 2020 (Appendix 8, Volume 2). The proposed solution will implement a trapezoidal channel with a soft bottom with a base width of 36 feet. There are two alternatives that are proposed two line the channel side slopes with Concrete or Rip-Rap, see sections below.

Exhibit 4.11-1
SECTION A-A: CONCRETED LINED SIDE SLOPES AND EARTHEN BOTTOM

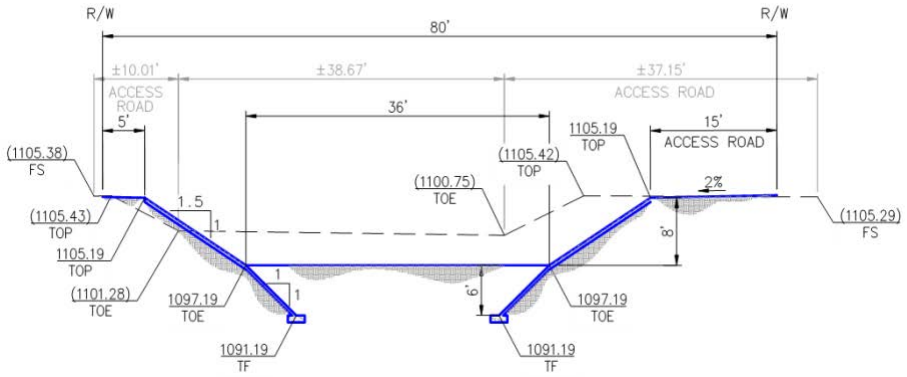
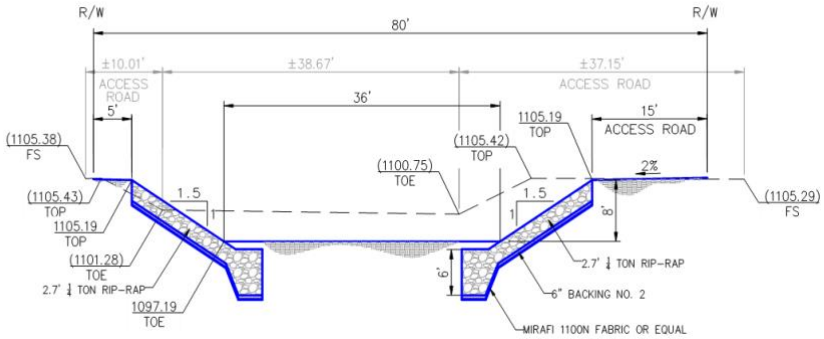


Exhibit 4.11-2
SECTION B-B: RIP-RAP LINED SIDE SLOPES AND EARTHEN BOTTOM



The City Creek By-Pass Channel has a total length of approximately 14,500 from the existing Warm Creek Concrete Channel to Victoria Avenue. The proposed project is recommended to phase the improvements into 3 phases of work. The construction of the channel must commence at the downstream end, at Warm Creek Concrete Channel, and continue upstream towards Victoria Avenue. The progression of work is important since the facility along the downstream reaches must have capacity to accept the flow rates identified by the CSPD #6. The phases of work are shown in **Figure 4.11-5**. The following is a description of each phase:

City Creek By-Pass Phase 1 (Warm Creek Channel to Tippecanoe)
City Creek By-Pass Phase 1 will include 3 culvert crossings and 4,000 feet of channel improvements. The Phase 1 project must be the first stage of construction work to ensure the system has the capacity to intercept the 100 year flows. At this time the existing culverts do not have capacity.

City Creek By-Pass Phase 2 (Tippecanoe to Sterling)
City Creek By-Pass Phase 2 will include 3 culvert crossings and 5,000 feet of channel improvements. The Phase 2 project will be a secondary stage of work after Phase 2 is completed. The major construction challenge is the culvert crossing 3rd Street , just west of Sterling Avenue.

City Creek By-Pass Phase 3 (Sterling to Victoria)
City Creek By-Pass Phase 3 will 5,400 feet of channel improvements. Within Phase 3, a future bridge is proposed to space the City Creek By-Pass Channel at the intersection of 3rd Street and Sterling Avenue. The Phase 3 project will be the final stage of work after Phase 2.
Once the 3 Phases of City Creek By-Pass Channel are completed, the channel will be in compliance with County of San Bernardino Comprehensive Storm Drain Plan Number 6 which is the master drainage plan for the regional area.

Moreover, **Figures 3-11a through 3-11d** have identified the storm drain infrastructure that will be required to provide flood protection for the surrounding IVIC Project area based on the Comprehensive Storm Drain Plan #6 (CSDP #6). The purpose of the storm drain infrastructure is to provide flood protection and to meet the street design policies within the City of San Bernardino and the City of Highland. The following CSDP #6 system that protects the IVIC Project area are as follows:

- 6-C1-01 which is a storm drain system that varies in diameter from 36-inches to 48-inches in diameter. The system extends along Tippecanoe Avenue to 5th Street.
- 6-C1-03 which is a storm drain that varies in diameter from 42-inches to 81-inches in diameter. The storm drain extends Sterling Avenue and 6th Street.

Finally, CSDP #6 is a conceptual design that identifies regional infrastructure required within an area. The conceptual design provides a potential solution that would provide flood protection for an area and where the runoff from the watershed area needs to be transported. During final engineering, the solution provided by the CSDP #6 may not be viable due to constraints associated with utilities, right-of-way, topography or other unknown variables. As a result, future projects may provide an alternative solution that meets the intent of the CSDP #6 design concept and is acceptable to each City Engineer and County of San Bernardino Flood Control.

Based on the discussion above, additional/expanded stormwater collection is necessary to develop the IVIC as envisioned within each City's General Plan. In addition, as individual development projects occur within the IVIC Project area, they will be required to meet current WQMP design and Low Impact Development (LID) requirements. This will minimize increases in runoff due to new impervious surfaces associated with future development. Further, as part of the IVIC Project, the cultural and biological resource studies included the City Creek Bypass Channel west of Sterling to the channel's confluence with Warm/Twin Creek. The development of the new Channel is anticipated to occur gradually, which would lessen impacts; however, the overall development associated with the proposed IVIC Project is forecast to cause a less than significant adverse impact for all issues evaluated in this DEIR. The proposed IVIC Project would require or result in the relocation or construction of new or expanded stormwater facilities, but the construction or relocation of which would not result in significant adverse impact. Impacts under

this issue would be less than significant through the implementation of the mitigation identified throughout the DEIR to minimize impacts from implementation of the proposed IVIC Project.

Electricity

Within the IVIC Project area, SCE is the electricity provider. The IVIC Project area is served by the existing electrical grid as described above under Subsection 4.20.3.4 Electricity. Because the IVIC Project area is linked to the state power grid, the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County had its share of power interruptions during the peak energy crisis in 2001. Under an agreement with the California Independent System Operator (ISO), SCE must reduce its load if instructed to do so by the ISO during a Stage III power emergency. Such an emergency occurred most recently in March 2001, requiring SCE to temporarily interrupt electric service to some of its customers. Full development of the infrastructure proposed as part of the IVIC Project area will not have a significant impact on availability of energy resources in the City of Highland, City of San Bernardino and unincorporated areas of the San Bernardino County. This is based on the ability of SCE to expand it generation capacity incrementally as the IVIC develops. Should energy supply fall behind demand in the IVIC Project area, future environmental documents will identify inadequate electricity capacity as a significant impact and each City can pause development until adequate capacity is available in the electricity supply system. As such, while individual projects—namely the EVWD Well and Reservoir—may require extension of electrical service to a given site within the IVIC Project area, the whole of the area is forecast to be served by comprehensive existing electrical systems. Note that as part of future development, electric distribution lines may be placed underground to meet system expansion. Therefore, with the implementation of **MM UTIL-1**, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded electrical facilities, the construction or relocation of which is not forecast to cause significant environmental effects.

Natural Gas

Natural gas for the IVIC Project area is currently being served by the Southern California Gas Company (SoCalGas). SoCalGas has a number of underground pipelines in the Project area that currently deliver natural gas to customers in the area. Given the availability of natural gas within the Project area, while individual projects may require extension of natural gas services to a given site within the area, the whole of the IVIC is served by existing natural gas pipelines; therefore, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects.

Telecommunication

Time Warner has above and underground utilities in 6th Street from Tippecanoe Street to Sterling Avenue as well as above ground utilities in 5th Street from Tippecanoe Street to residences located between Del Rosa Drive and Sterling Avenue. Time Warner has above ground utilities in 6th Street from Lankershim Avenue to Central Avenue.

AT&T has above ground utilities (via cables) and underground utilities within conduits within the AGSP Planning Area located in 3rd Street, 5th Street and 6th Street. Both aboveground and underground utilities are located in 6th Street from Tippecanoe Street to Victoria Avenue as well as conduit located in 5th Street starting at Victoria Avenue traversing east terminating before

Cunningham. Conduit is located within Central Avenue and Palm Street from 6th Street to 4th Street. Conduit and underground utilities are located in 5th Street from Church Avenue to Route 210. Conduit is located in 3rd Street starting at Victoria Avenue and terminates at Palm Avenue.

It appears that the whole of the IVIC Project is served by existing telecommunication facilities; therefore, the proposed Project would have a less than significant potential to require or result in the relocation or construction of new or expanded facilities, the construction or relocation of which could cause significant environmental effects.

Other Utilities

The proposed IVIC Project does not include the installation of any new ECS facilities, just recognition that such facilities may be needed as part of future infrastructure within the IVIC Project area in the future. No adverse impacts related the infrastructure category has been identified.

Conclusion

Infrastructure facilities throughout the IVIC Project area will be provided by expanding the existing backbone systems. Dry utilities are generally constructed in a common trench within the street right-of-way or an adjacent easement. The final layout and design of the IVIC Project area infrastructure will need to accommodate the linear dry utilities as well as ancillary features such as junction boxes, transformers, etc. Given the above, the proposed IVIC Project would have a less than significant potential to require or result in the relocation or construction of new or expanded telecommunication facilities, the construction or relocation of which could cause significant environmental effects.

Mitigation Measures:

UTIL-1: For future IVIC infrastructure projects that do not have access to electrical or natural gas connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet electricity needs at a future IVIC infrastructure site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical infrastructure.

Level of Significance After Mitigation: Less Than Significant

Because it is not known exactly where the EVWD Well and Reservoir will be installed, there may be locations in which electricity services are not available within the immediate vicinity of a given Program site. As such, **MM UTIL-1** would ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated.

UTIL-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The IVIC Project area is served by EVWD. Water demand from IVIC-related infrastructure will be for landscaping associated with upgraded roadways, the EVWD Reservoir and Well sites. Additionally, the proposed project will develop a well to supply water to the District's service area. The construction and operation of the new water storage reservoir will not create a greater demand for water at this site than that which presently exists, as the new reservoir will connect to

the existing water system providing service to the District's service area and would store water for future use by the District.

EVWD's water supply consists primarily of groundwater from wells in the western portion of the service area. These wells, in the San Bernardino Basin (SBB), supply approximately 80% of the total water supply. In addition to groundwater, EVWD provides treated surface water from the Santa Ana River and the SWP by way of Plant 134, an 8-million gallon per day (MGD) water treatment plant. Per the Western-San Bernardino Judgement, EVWD is not limited in the amount of groundwater it can produce from SBB. In 2018, EVWD and other local agencies voluntarily formed the SBB Groundwater Council to coordinate and implement groundwater management activities in the Bunker Hill Sub-basin (part of SBB) and achieve groundwater sustainability throughout the basin.[6] Thus, as EVWD does not have a limited amount of water that it can produce, the addition of a new production well is anticipated to be served with adequate groundwater supply. Based on this information, it is anticipated that there will be available water supply within the SBB to support the District's new well pumping operations. Therefore, the proposed Project is anticipated to have sufficient water supplies available to serve the IVIC Project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. No mitigation is required.

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant Impact

UTIL-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The IVIC Project area is served by EVWD for wastewater collection. EVWD's sewer pipeline network includes approximately 213 miles of pipeline ranging in size from 4 inches to 24 inches in diameter, and EVWD's sewer system includes 4,500 sewer manholes, 7 siphons, and 5 diversion structures. The existing sewer system conveys flows into the East Trunk Sewer which presently discharge to the San Bernardino Water Reclamation Plant (WRP) until the SNRC is fully operational. None of the proposed infrastructure facilities will generate wastewater and given that the SNRC would be developed and ready to accept sewer flow from EVWD's service area, the potential impact from the IVIC Project is a no impact finding.

Mitigation Measures: None Required

Level of Significance After Mitigation: No Impact

UTIL-4 Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

and

UTIL-5 Would the project comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

[6] San Bernardino Valley Municipal Water District (SBVMWD), 2021. Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan.

Construction Waste

Development of the IVIC would involve construction waste from demolition of existing facilities as development associated with the IVIC replaces the existing infrastructure within the Project area. Construction waste would include building materials, such as removal of asphalt, concrete, wood, plaster, and similar materials. It is assumed that a conservative estimate of the total existing infrastructure (roads), weed vegetation and excavation in support of the channel improvements that would be implemented in support of future IVIC infrastructure construction is about 1/8 million cubic yards (CY). Given that the IVIC is anticipated to be implemented over a 20-year horizon, it is anticipated that a conservative estimate of the amount of construction and demolition waste that would be generated in a given year would be about 50,000 CY. As such, it is assumed that about 3,300 15-yard dump trucks or dumpsters would be required in a given year in support of the construction and demolition efforts anticipated to be required to develop the IVIC.

According to the most recent Facility-Based Waste Characterization of Solid Waste in California (2021)[7], referenced on the California Department of Resources Recycling and Recovery (CalRecycle) website, inert materials and others made up 12% of California's self-hauled waste stream. The prevalent material types in overall disposed waste were nearly all construction related materials, equaling 4,770,238 estimated tons. The prevalent material types include Wood and Wood Waste, Remainder/Composite/Inerts and others, Rock, Solid and Fines, Asphalt Roofing, Gypsum Board, Concrete, and Prunings and Trimmings. Many of these materials can be reused or recycled, thus prolonging our supply of natural resources and potentially saving money in the process.

In accordance with CALGreen code 5.408.4, 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing must be reused or recycled. As this is a mandatory requirement, no mitigation is required to ensure compliance by future construction activities for this proposed Project.

Based on the fact that demolition is expected to be required to install much of the IVIC infrastructure, construction waste and demolition material reduction/diversion would be the focus of recycling/reuse. Because of increased construction recycling efforts resulting from CalGreen and other regulations, opportunities for construction recycling are becoming easier to find. According to the San Bernardino County Construction & Demolition Waste Recycling Guide & Directory[8], there are several facilities in the vicinity of the IVIC Project area that accept C&D waste (appliances, asphalt, block rock, brick, cardboard, carpet and padding, concrete, concrete with rebar, dry wall, electrical, furniture, gravel, metals, mixed loads, organics, plumbing, rock, roof tile, sand, soil, stucco, tile, and wood). The Agua Mansa MRF in Riverside, CA (about 12 miles southwest of the IVIC Project area) accepts appliances, asphalt, brick, cardboard, concrete, concrete with rebar, metals, mixed loads, rock, roof tile, and wood, while the West Valley MRF in Fontana, CA (about 15 miles west of the AGSP Planning Area) accepts appliances, asphalt, brick, cardboard, concrete, concrete with rebar, metals, mixed loads, rock, roof tile, and wood. There are several other facilities located within a 10- to 15-mile radius of the IVIC Project area, accepting a variety of materials (refer to the list of facilities provided within the San Bernardino County Construction & Demolition Waste Recycling Guide & Directory).

[7] CalRecycle, 2022. 2021 Facility-Based Waste Characterization of Solid Waste in California https://www2.calrecycle.ca.gov/Docs/Web/122544 (accessed 07/14/24)
[8] San Bernardino County, 2024. County of San Bernardino Construction & Demolition Waste Recycling Guide https://www.sbcounty.gov/uploads/DPW/docs/RecyclingGuide-2021.pdf (accessed 04/25/24)

The San Timoteo Sanitary Landfill (located in Redlands about 10 miles south of the IVIC Project area and Mid-Valley Sanitary Landfill (located in Rialto about 13 miles northwest of the Project area serve Highland and San Bernardino. These landfills, as shown in **Table 4.20-1,** have a combined 9,500 ton per day throughput. According to Jurisdiction Landfill Tonnage Reports from the City of San Bernardino, 221,345 total tons of solid waste was hauled to area landfills in 2022. According to Jurisdiction Landfill Tonnage Reports from the City of Highland, 34,416 total tons of solid waste was hauled to area landfills in 2022.[9]

Both landfills permit thousands of tons of waste per day, which is beyond what the expected amount of waste that would be generated by the proposed IVIC Project over the 20-year horizon within which the IVIC Project infrastructure will be developed. The facilities that accept C&D materials, combined with the landfills in the surrounding area, have adequate capacity to serve the proposed construction of the proposed IVIC Project. Further, these landfills have adequate permitted remaining capacity of 73,579,773 CY.

Over the planning horizon, IVIC Project infrastructure facilities may generate organic waste, and much of the organic waste produced by future operations under IVIC Project in future will be required to be diverted from landfills, and as such, the amount of waste generated by development under the IVIC Project that would end up in landfills is even further reduced.

Because future construction developed under the IVIC Project will be regulated by waste reduction and diversion from landfill programs, the construction of the IVIC Project, particularly given that development will occur gradually over a 20-year horizon, would not result in a substantial increase in demand in excess of capacity for local solid waste disposal facilities and regional landfill capacity. IVIC Project infrastructure development would be required, through the implementation of **MM UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. The IVIC Project will be required to ultimately divert up 75 percent of solid waste from landfills as a result of AB 341. Furthermore, **MM UTIL-3** would require further diversion through the recycling of soils where possible for future IVIC Project infrastructure.

Operational Waste

IVIC Project infrastructure will generate minimal and random quantities of solid waste when in operations. Roadway waste will be generated from new roads and green waste will be collected from sites occupied by infrastructure facilities. According to CalRecycle, these landfills typically receive below the maximum permitted daily disposal volume; thus, solid waste generated by the IVIC Project would not cause nearby landfills to exceed maximum daily permitted disposal volumes.

Compliance with Statutes and Regulations

The proposed IVIC Project would comply with all City of Highland, City of San Bernardino, and County construction requirements during construction of the proposed infrastructure as described above in the regulatory setting, including the Cities' waste reduction programs, recycling and other diversion programs to reduce the amount of solid waste deposited in landfills.

[9] CalRecycle, 2024. Jurisdictional Review Reports
https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports (accessed 04/25/24)

Any hazardous materials collected within the IVIC Project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. Furthermore, through the implementation of mitigation, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Thus, impacts would be less than significant through the implementation of the mitigation identified below.

Mitigation Measures:

UTIL-2 ***The contract with demolition and construction contractors for each future proposed infrastructure facility within the IVIC Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, asphalt, and demolition materials. The contractor shall submit a recycling plan to the local jurisdiction for review and approval prior to the start of demolition/construction activities to accomplish this objective.***

UTIL-3 ***The contract with demolition and construction contractors for a given IVIC Project infrastructure shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused onsite to balance soil import/export.***

Level of Significance After Mitigation: Less Than Significant

Implementation of **MM UTIL-2** will ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for IVIC Project infrastructure to generate waste in excess of local landfill capacities. Similarly, **MM UTIL-3** will ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. This too will minimize the potential for the IVIC Project to generate waste in excess of local landfill capacities, thereby minimizing impacts to a level of less than significant. Furthermore, through the implementation of mitigation, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

4.20.7 Mitigation Measures

Three mitigation measures shall be implemented within the IVIC Project area to impacts to the lowest achievable level for the five utility systems evaluated in this Subchapter. The measures include the following.

UTIL-1 ***For future IVIC infrastructure projects that do not have access to electrical or natural gas connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet electricity needs at a future IVIC infrastructure site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical infrastructure.***

UTIL-2 ***The contract with demolition and construction contractors for each future proposed infrastructure facility within the IVIC Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, asphalt, and demolition materials. The contractor shall submit a recycling plan to the local jurisdiction for review and approval prior to the start of demolition/construction activities to accomplish this objective.***

UTIL-3 ***The contract with demolition and construction contractors for a given IVIC Project infrastructure shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused onsite to balance soil import/export.***

4.20.8 Cumulative Impacts

Water

Infrastructure development associated with the proposed IVIC Project would create limited additional demand on water services within EVWD's service area. However, given the analysis and data provided herein and within EVWD and regional planning documents, the water demand by development under the IVIC Project would be well within planned demand and supply of water within the EVWD service area over the long term. Furthermore, the IVIC Project incorporates the development of the water-related infrastructure identified and therefore required to serve future development proposed under the cities' General Plans. As such, the development of the IVIC Project would accommodate cumulative infrastructure development required to meet water demanded not only by future IVIC Project uses, but also other uses within EVWD's service area. Thus, the IVIC Project's contribution to cumulative impacts is considered less than cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Wastewater

Future cumulative development could exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board and result in potential significant cumulative impacts. Given that the IVIC Project area would be served with wastewater services by EVWD's SNRC and that the SNRC is anticipated have appropriate capacities to accommodate development associated with the IVIC Project as well as future development within EVWD's service area, the Project's contribution to cumulative wastewater capacity impacts is not considered cumulatively considerable, particularly given the excess capacity at the nearby San Bernardino Municipal Water Department's WRP would be freed up to accommodate cumulative development in the area. Therefore, implementation of the IVIC Project would result in a less than significant cumulative impact related to wastewater treatment capacities and compliance with the RWQCB.

Stormwater

Future cumulative development within the IVIC Project area would result in the removal of pervious surfaces and in an increase in impervious surfaces. Increases in impervious surfaces would increase stormwater volume. This increase could cumulatively affect drainage patterns as well as drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. This cumulative need for the construction of new and/or expanded stormwater drainage facilities is not forecast to result in significant environmental effects. Additional/expanded stormwater collection is necessary to develop the IVIC Project as envisioned

in the cities' General Plans. The development of the new City Creek Bypass channel would occur gradually, which would contribute to minimizing impacts on the stormwater system from cumulative development within the area that would generate runoff that would be received by the new stormwater collection system. Cumulative drainage impacts are considered a less than considerable/significant impact.

Electricity/Natural Gas

The IVIC Project would contribute to the cumulative use of energy primarily electricity the IVIC Project area. The region is anticipating population growth and associated housing, commercial, and industrial developments, including those infrastructure facilities that would be developed under the IVIC Project, that would cumulatively increase the demand for energy. However, no new energy facilities would be required to be developed to serve the IVIC Project area, particularly given that the IVIC Project area is currently served by energy infrastructure.

Telecommunications

Future cumulative development within the IVIC Project would require telecommunication facility connections. While it is anticipated that the dry utility services throughout the IVIC Project area will be provided through the existing backbone system, cumulative development may require additional telecommunication facilities to be developed over time. However, given that the whole of the IVIC Project area is anticipated to be served the existing facilities, any future expansion, relocation, or construction of telecommunication facilities is not anticipated to result in cumulatively considerable impacts thereof.

Solid Waste

Project impacts to landfill capacity from construction and demolition debris were found to be less than significant based on the information and analysis provided above. Mitigation addresses construction debris recycling and reuse to achieve a reduction in waste beyond State requirements. Implementation of this measure would reduce the construction waste from the proposed IVIC Project at a higher level than required by the State. Therefore, because the proposed IVIC Project will exceed those requirements with implementation of one mitigation measures outlined above, the Project increment of construction-related solid waste for cumulative projects in the area will be less than cumulatively considerable/significant. Furthermore, compared to landfill capacity—the Mid Valley and San Timoteo landfills have a permitted remaining capacity of 73,579,773 CY—and available daily intake capacity at both landfills, the limited volume of construction waste generated per day by build-out of the IVIC Project infrastructure would correspond to a very small volume of the combined maximum daily permitted intake capacities of both landfills. As such, cumulative impacts to landfill capacity will be less than significant due to the IVIC Project construction debris and operational waste generation representing a less than substantial cumulative increment with mitigation.

Other Infrastructure

The purpose of identifying other potential infrastructure requirements in the future is to note the growth in demand by electric and hybrid vehicles for ECSs. A combination of public and private fast-charging stations will be needed within the IVIC Project area. For the time being, the required ECS infrastructure is not being developed as fast as the marketing and purchase of electric

vehicles is proceeding. It is anticipated that this deficiency will be rectified by a mix of public and private construction of new ECS facilities to meet demand in the future.

4.20.9 Unavoidable Adverse Impacts

The foregoing evaluation demonstrates that though the IVIC Project infrastructure would cause a less than significant mitigatable change or increase in generation of solid waste, demand for waste, wastewater, stormwater, electricity, natural gas, and telecommunication facilities within the area. This increase in generation of solid waste and demand for the referenced utilities would not cause an unavoidable significant impact to utilities through implementation of the IVIC Project. Thus, utilities and service systems impacts are thus concluded to be less than significant. Thus, the finding is that no significant adverse utility system impact will result from installing the additional infrastructure required to support to the IVIC Project area.

4.21 WILDFIRE

4.21.1 Introduction

This subchapter evaluates the environmental impacts related to wildfire hazards from implementation of the Inland Valley Infrastructure Corridor Project (IVIC). The following topics address whether the proposed Project is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, impair an adopted emergency plan, exacerbate the spread of a wildfire, require fire prevention infrastructure that may exacerbate the spread of wildfire, or expose people or structures to downstream flooding or landslides as a result of post-fire instability. The purpose of the wildfire component of this Draft Environmental Impact Report (DEIR) is to identify and provide analysis and assessment of the potential for wildfire hazards to exist within the IVIC Project area or the sensitivity for such a threat to be encountered at a future specific project site so that essential fire protection measures can be incorporated into the planning process for future infrastructure development considerations.

These issues will be discussed below as set in the following framework:

4.21.1 Introduction
4.21.2 Regulatory Setting
4.21.3 Environmental Setting
4.21.4 Thresholds of Significance
4.21.5 Methodology
4.21.6 Environmental Impacts
4.21.7 Mitigation Measures
4.21.8 Cumulative Impacts
4.21.9 Significant and Unavoidable Impacts

References utilized for this section include:

- California Public Utilities Commission, 2024. *Fire Threat Map* https://files.cpuc.ca.gov/safety/fire-threat_map/2021/CPUC%20Fire%20Threat%20Map_v.3_08.19.2021.Poster%20Size.pdf (accessed 04/25/24)
- CAL FIRE, 2024. California Fire Hazard Severity Zone Viewer. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008 (accessed 04/25/24)
- CAL FIRE, 2024. Wildfire Activity Statistics Redbooks (Redbooks). https://www.fire.ca.gov/our-impact/statistics (accessed 04/25/24)
- City of Highland, March 2006. *General Plan*
- City of Highland, January 2021. *General Plan Updated Public Health and Environmental Justice Element.*
- City of San Bernardino, November 1, 2005. *General Plan*.

No comments pertaining to wildfire threats were received in response to the Notice of Preparation for the IVIC Project.

4.21.2 Regulatory Setting

The wildfire resources component of this DEIR is prepared to address implementation of the IVIC if and when it is approved and implemented in the future. The location of potential projects range between well-defined (roadways) to relatively uncertain at this time (new potable water well and water storage reservoir), but the various components will occur within existing commercial,

industrial, and residential designated areas in the communities within the Project area, the cities of Highland and San Bernardino.

The impact assessment presented below focuses on physical changes to the landscape at a Project site and any potential adverse impacts these changes may have on or due to any wildfire threats that exist within the Project area or as a result of future site-specific projects. For purposes of the impact forecast, it is assumed that over the next 20 years the whole IVIC Project area will be implemented in accordance with the existing General Plans of each city.

There are numerous State, federal and local regulations regarding wildfire planning, forest management, and wildfire responsibility. However, because the IVIC Project area is not located in an area where wildfire hazards or urban-interface hazards have been mapped, nor have historically occurred, only those regulations that relate to urban fires are identified in this section.

State

California Fire Code

The California Fire Code is a series of building, property, and lifeline codes outlined in Title 24, Chapter 9 in the California Code of Regulations. The California Fire Code is based on the International Fire Code, which is a collection of best practices agreed upon by professional fire agencies and organizations. The California Fire Code uses a hazards classification system to outline the measures to take to protect life and property. It also regulates hazardous materials at fixed facilities. The California Fire Code, along with the CBC, is updated every three years to incorporate recommendations by the International Code Council.

Senate Bill 1241 of 2012

SB 1241, enacted in 2012, amended California Government Code Section 65302 to address wildfire safety in general plans. SB 1241 requires that updates to general plan safety elements address wildfire risk in State Responsibility Areas and Very High FHSZs in Local Responsibility Areas.

Fire Responsibility Areas

CAL FIRE has designated three zones or responsibility areas, depending on the agency with primary financial responsibility for addressing the prevention, suppression, and postfire recovery of fire. These include Local Responsibility Areas, State Responsibility Areas, and Federal Responsibility Areas (FRA), defined as follows:

- Local responsibility areas (LRAs) are the areas of California where local jurisdictions (e.g., city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government) are responsible for the prevention and suppression of wildfires.
- State Responsibility Areas (SRAs) are the areas of California where the State of California is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries or in federal ownership.
- Federal Responsibility Areas (FRAs) are the areas of California where the federal government has the primary financial responsibility for preventing and suppressing fires. These lands are generally protected by a variety of federal agencies.

Local

City of San Bernardino General Plan

The following General Plan policies addressing wildland and urban fire hazards are applicable to the Project:

Safety: Goal 10.11
Protect people and property from urban and wildland fire hazards.

Safety Policy 10.11.1
Continue to conduct long-range fire safety planning efforts to minimize urban and wildland fires, including enforcement of stringent building, fire, subdivision and other Municipal Code standards, improved infrastructure, and mutual aid agreements with other public agencies and the private sector.

Safety Policy 10.11.2
Work with the U.S. Forest Service and private landowners to ensure that buildings are constructed, sites are developed, and vegetation and natural areas are managed to minimize wildfire risks in the foothill areas of the City.

Safety Policy 10.11.3
Require that development in the High Fire Hazard Area, as designated on the Fire Hazards Areas Map (Figure S-9) be subject to the provisions of the Hillside Management Overlay District (HMOD) and the Foothill Fire Zones Overlay.

Safety Policy 10.11.4
Study the potential acquisition of private lands for establishment of greenbelt buffers adjacent to existing development, where such buffers cannot be created by new subdivision.

Safety Policy 10.11.5
Continue to require that all new construction and the replacement of 50% and greater of the roofs of existing structures use fire retardant materials.

City of Highland General Plan
The following General Plan policies addressing wildland and urban fire hazards are applicable to the Project:

Public Health, Safety, and Environmental Justice Element: Goal 3
Minimize risks, such as loss of life, injury, property damage, and natural resource destruction from natural and human-caused hazards.

Public Health, Safety, and Environmental Justice Element: Policy 3.3
Implement programs and standards to mitigate wildfire risk in high wildfire hazard severity zones.

Action 3.3a: New Development. All development shall be required to meet the minimum standards for adequate fire protection. The most restrictive law, regulation, or ordinance regarding fire safety applicable to development in Highland will take precedence, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations if applicable. All perimeter development within the Very High Fire Hazard Severity Zone, adjacent to open space, shall construct perimeter fire roads in compliance with City policy.

Action 3.3b: New Residential Development in Areas Designated Very High Fire Hazard Severity Zone (VHFHSZ). Residential development within areas designated as VHFHSZs should be avoided or risks mitigated through compliance with applicable codes and standards, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction around Buildings and Structures Regulations. If residential development occurs within VHFHSZ, a Fire Protection Plan that describes

Action 3.3c: Home Improvements for Vulnerable Populations. For qualifying households, promote the use of local, county, and state rehabilitation programs and defensible space

assistance, and provide information to vulnerable residents to assist with efforts to improve fire safety.

Action 3.3d: Wildfire Retrofits. Encourage structural hardening retrofits for existing structures in the VHFHSZ, consistent with the current standards.

Action 3.3e: New and Existing Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the High Fire Hazard Area shall be retrofitted to be consistent with the current standards.

Action 3.3f: Maintain Emergency Evacuation Routes. Ensure that the entity charged with maintenance of the road complies with the requirements of the State Fire Code and San Bernardino Consolidated Fire Codes regarding street width, surface, grade, radius, turnarounds, turnouts, bridge construction, and lengths of fire apparatus access roads. All requirements and any deviations will be at the discretion of the Fire Code Official. Enforce these standards on new development in VHFHSZ through development review, and on existing development through code enforcement. Work with the City's Geographic Information Systems (GIS) mapping services to identify any residential areas that do not have at least two emergency evacuation routes or are otherwise inadequate due to access or timeliness of evacuation. Develop an evacuation route improvement plan upon identification of evacuation route inadequacies.

Action 3.3g: Recover from Large Fires Safely. Perform an evaluation of fire-related development standards should a major wildfire require large portions of the City be rebuilt to ensure that redevelopment standards are as fire-safe as reasonably possible.

Action 3.3h: Adequate Peakload Water Supply will be Supported. The City will coordinate with the East Valley Water District to maintain long-term integrity of peakload water supply for structural fire-fighting and wildland fire-fighting and ensure new construction is serviceable by water supply.

Public Health, Safety, and Environmental Justice Element: Policy 3.4
Ensure that public facilities and infrastructure have adequate capacity to respond to wildfires and other relevant hazard events.

Action 3.4a: Performance Standards. Apply fire unit deployment performance measures with future planning of fire stations.

Action 3.4b: Emergency Equipment. Consider the long-term maintenance needs of emergency equipment and facilities when developing the annual budget.

Action 3.4c: Storm Drain Capacity. Continue to ensure that existing and new storm drain and street capacities are adequate to manage a 100-year flood event.

Action 3.4d: New Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the VHFHSZ shall be retrofitted to be consistent with the current standards.

Public Health, Safety, and Environmental Justice Element: Goal 4
Maintain adequate emergency preparedness and response capabilities.

Public Health, Safety, and Environmental Justice Element: Policy 4.1
Create culturally appropriate hazard preparation and education.

Action 4.1a: Emergency Alerts for Air Pollution. Use the emergency alert systems and other standard City communications to alert the public when local air quality reaches "Very Unhealthy" levels.

Action 4.1b: Neighborhood-Based Preparedness. Convene and regularly train neighborhood-based emergency response teams (e.g., CERT) and explore incorporating climate change response and recovery. Ensure CERT recruiting includes a diverse set of community members and leaders.

Action 4.1c: Disaster Kits. Work with local places of worship and community organizations to provide disaster kits to vulnerable populations.

Public Health, Safety, and Environmental Justice Element: Policy 4.2
Create resilience centers throughout Highland.

Action 4.2a: Back Up Power. Continue to ensure that critical City facilities have back up energy sources such as battery storage. Prioritize clean energy sources, such as solar, where feasible.

Action 4.2b: Refrigeration. Install refrigerators at resilience centers, such as existing cooling centers and emergency shelter locations, to provide storage for medication in black out or other hazard events.

Action 4.2c: Audit Emergency Childcare. Work with non-profit organizations, such as the Red Cross, to offer emergency childcare for frontline workers in the event that schools are closed in a hazard event.

Action 4.2d: Food Distribution. Work with local foodbanks to distribute food and pop-up food pantries during hazard events.

Action 4.2e: Advertise Regional Programs. Include information on regional assistance programs in appropriate languages during a hazard event.

Public Health, Safety, and Environmental Justice Element: Policy 4.3
Prepare residential areas for flooding and wildfire.

Action 4.3a: Elevate and Anchor. Educate and encourage property owners in flood zones to elevate and anchor critical utilities, including electrical panels, propane tanks, sockets, wiring, appliances, and heating systems.

Action 4.3b: Sandbags. Implement a sandbag program available for residents in flood zones prior to heavy storms.

Action 4.3c: Fire Safe Communications. Prior to fire season, use outreach events and City communication resources to educate the public on how they can create a defensible space around their place of residence and evacuate in case of fire.

Action 4.3d: Require evacuation assessments on residential projects requiring an Environmental Impact Report in designated wildfire hazard severity zones.

Public Health, Safety, and Environmental Justice Element: Policy 4.4
Ensure the Emergency Operations Center (EOC) has adequate capacity to respond to hazard events.

Action 4.4a: EOC Technology. Continue to conduct a periodic review of technology used to support the EOC to ensure systems are updated and effective, including City GIS.

Action 4.4b: EOC Equipment. When feasible, update EOC equipment and supplies as necessary to ensure effectiveness.

Action 4.4c: Staff Training. Continue EOC training and exercise plan for the City staff with EOC responsibilities, and cross train city staff at various EOC positions.

Action 4.4d: Online Training. Expand staff training by conducting quarterly online WebEOC training for EOC staff. Include extended training formats as applicable.

Action 4.4e: Mutual Aid Participation. Continue to participate in Statewide Master Mutual Aid Agreements and local automatic aid agreements.

4.21.3 Environmental Setting: Wildfire

In general, various communities in the mountain and foothill areas in San Bernardino County are at a high risk for wildfire. According to the California Department of Forestry and Fire Protection (CAL FIRE) Wildfire Activity Statistics Redbooks (Redbooks) from the years 2014 to 2021[1], in San Bernardino and Riverside Counties there were 1,340 fires totaling 27,711 acres caused a number of injuries, and resulted in an estimated $109,361,223 in damages to property, crops, public facilities and infrastructure (averaging about $13,670,153 per year, with the greatest costs generally corresponding to the years with the greatest burn acreage). This is primarily due to location, vegetation, weather, seasonal Santa Ana Winds, and prolonged drought.

In urban areas, urban fires include fires within individual commercial, industrial, and residential structures, vehicles, and vacant lots. The effectiveness of responding to urban fires is generally based on the age of the structures, proximity of the nearest fire station, efficiency of circulation routes, and water availability to fight fires.

Wildland-urban interface fires occur in areas where urban/suburban development meets wildland areas. Wind-driven wildland-urban interface fires pose a significant threat to lives and have increased potential to cause significant damage to structures. In wildland and wildland-urban interface areas, cities and counties require the use of fire-resistant building materials, implementation of fuel modification zones, and maintenance of vegetation clearance around structures to protect development from wildland fires, thereby reducing the potential loss of life and property.

4.21.3.1 Project Location

The IVIC Project area is located within an urban area, immediately north of the San Bernardino International Airport. Neither the City of Highland nor the City of San Bernardino has identified the Project area as being within an area of high wildland fire severity, and neither the California Public Utilities Commission or CAL FIRE have designated the Project area as having any fire severity rating.

The IVIC Project area is also not considered located within an urban-wildfire interface. The Project area is located well within the urban limits of the urban areas of City of San Bernardino and the City of Highland. The closest foothills and the foothill communities with wildland fuel loads lie approximately 3-4 miles to the north and northeast, in the foothills of both cities.

[1] CAL FIRE, 2024. Wildfire Activity Statistics Redbooks. https://www.fire.ca.gov/our-impact/statistics (accessed 04/25/24)

The Public Utilities Commission fire map viewer identifies the Santa Ana River, located approximately 1.5 miles south of the Plan Area as a "Tier 2" fire threat, meaning there is an elevated risk from a utility associated wildfire within this area. The Project area is not in close proximity to the Santa Ana River floodplain.

4.21.3.2 Evacuation Routes

The City of Highland's General Plan cites that the San Bernardino County General Plan identifies potential evacuation routes in and around Highland. Major evacuation routes within the San Bernardino Valley include, but are not limited to, Interstate 10 and 215; State Highway 30; and numerous major and secondary highways.

4.21.4 Thresholds of Significance

The CEQA Guidelines, Appendix G, a project would normally have a significant effect on the environment if the project is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and:

WF-1 Substantially impair an adopted emergency response plan or emergency evacuation plan?

WF-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

WF-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

WF-4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

It should be noted for this assessment that the IVIC Project area is not located within or adjacent to any state responsibility areas or lands classified as very high fire hazard severity zones.

This section of Subchapter 4.21 evaluates the level of adverse impact due to the site's potential threat from wildfire that is forecast to occur if the Project is implemented as proposed. The level of significance is evaluated through the evaluation of the significance of the site's identified wildfire threat guidelines and the degree of change that will result from implementing the proposed Project.

4.21.5 Methodology

Using published maps from the State and data contained in the cities' General Plans, the boundaries of wildfire hazard areas were compared to the IVIC Project area and conclusions regarding potential wildfire impact were drawn.

4.21.6 Environmental Impacts

Project Summary

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

The following Topic categorizes the proposed Project activities as a whole because the impacts thereof can be characterized as similar and comparable based on issue being analyzed.

4.21.6.1 Impact Analysis

WF-1 If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The IVIC Project area is generally bounded by the following street network:

- Tippecanoe Avenue - west
- 6th Street – north. However, at Victoria Avenue, the northern boundary extends to 9th Street.
- 3rd Street – south
- State Route 210 (SR-210) - east

State Route 210 (SR-210) provides the most direct access to the plan area, being located adjacent to the IVIC's eastern boundary. SR-210 is oriented in a north-south direction adjacent to the Project area's eastern boundary, but turns in an east-west direction approximately 2.5 miles to the north of the IVIC Project area. Regional access is also provided primarily by Interstate 215 (I-215), located approximately 2 miles to the west of the IVIC Project area and Interstate 10 (I-10) is located approximately 3 miles to the south of the Project. I-10, a major east-west transportation corridor, can be accessed by both SR-210 and I-215.

The City Creek Bypass flood control channel flows east-west. It terminates at Twin Creek located just west of Waterman Avenue, after flowing under Tippecanoe Avenue and Del Rosa Drive, and generally parallels 3rd Street from Victoria Avenue west.

A majority of the streets in the IVIC Project area are major and minor arterials that are designed to handle large volumes of traffic. The Project will improve each of these arterials to support anticipated future traffic flow. Refer to Subsection 3.4.4.3 Future Street System in Chapter 3, the Project Description.

The EVWD Reservoir and Well Development would be contained within the boundaries of each individual facility's specific site, which is not anticipated to include any construction within roadways. Project-related vehicles would not block existing street access or use. Therefore no impacts related to emergency evacuation plans would occur from installation and operation of proposed EVWD Reservoir and Well Development. Operation of the proposed EVWD Reservoir and Well would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts related to an adopted emergency plan would be considered less than significant during EVWD Reservoir and Well operation.

The City Creek Bypass Channel, Roadway Improvements & Sewer would require construction adjacent to or within public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. The City Creek Bypass Channel is located adjacent to road rights of way, but is unlikely that it would be required substantial encroachment onto the adjacent road rights of way. The Roadway Improvements and Sewer Improvements would require construction within road rights-of-way. The San Bernardino Countywide Plan identifies SR-210 in the vicinity of the IVIC Project area as emergency evacuation routes, this is illustrated on **Figure 4.10-6**, the San Bernardino Countywide Plan Evacuation Route Map. These construction activities could potentially block access to roadways and driveways for emergency vehicles for short periods. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. Impacts could be potentially significant. **MM WF-1**, which requires consistency with the San Bernardino County Operational Area Emergency Response Plan (SBCOAE), as well as review and approval by the local agency with authority over construction within the public ROW, would be required to reduce these potential temporary significant impacts to a less than significant level. The SBCOAE provides wildfire mitigation efforts that include the goal of continuing to reduce fire hazards in the County, and generally coordinates evacuation in the event of an area emergency, which includes area wildfires.

As these facilities would enable transport of cars and trucks on roadways, stormwater, and wastewater, with no facilities that would be installed above-grade beyond new and existing signage and signals along the IVIC area roadways, conflicts with an adopted emergency response plan or emergency evacuation plan would not be anticipated. EVWD Reservoir and Well Development would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways, or significantly impact implementation of emergency response plans and/or emergency evacuation plans. Impacts related to adopted emergency plans and emergency evacuation plans would be considered less than significant during operation for the project-related conveyance facilities.

Mitigation Measures:

WF-1**: **Prior to initiating construction of proposed facilities within public rights-of-way (ROW), the Implementing Agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The Implementing Agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County

Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW.

Level of Significance After Mitigation: Less Than Significant

The implementation of **MM WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level.

WF-2 If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

The IVIC Project area is essentially flat (east and west and north and south) and entirely surrounded by urban uses. Based on the location of the IVIC Project area location, implementation of the proposed Project will not exacerbate wildfire risks in either city.

Santa Ana winds are common in the San Bernardino region. Smoke from wildfires that may occur in the Santa Ana Wash (located approximately 1.5 miles to the south) or the foothills and mountains to the north may generally impact air quality throughout the region, including existing and future businesses in the IVIC Project area. Santa Ana winds are generally from the north and the San Bernardino Valley (including the Project area) residents and employees could be exposed to the smoke plumes from a wildfire in the San Bernardino Mountains. However, the exposure would be short term and the same Santa Ana winds that could blow the plume towards the valley floor, including the Project area, can disperse the plume during and immediately after a wildfire is controlled. Due to the short-term exposure of the Project area to a wildfire plume, no significant adverse exposure is forecast to occur for future employees and residents within the IVIC Project area.

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

WF-3 If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

At this time no specific IVIC infrastructure project is proposed for areas designated as high or very high FHSZs on the Fire Hazard Severity Zone maps provided on **Figures 4.21-2 and 4.21-3**. The IVIC is located in an urban area. Installation or maintenance of associated infrastructure such as fuel breaks, emergency water sources, power lines, etc. that may exacerbate fire risks or result in temporary ongoing impacts to the environment is not required. Thus, the proposed Project will not result in any adverse wildfire impacts if implemented.
Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

WF-4 If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As described in the preceding evaluation, the proposed IVIC Project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, due to IVIC Project infrastructure locations outside of very high FHSZs in LRAs, i.e., urban areas. Additionally, while the natural City Creek Bypass Channel exists along the eastern portion of the IVIC Project area, the Channel is at the periphery of the Project area and discharges causing flow in this Channel have a low potential to adversely impact adjacent areas due to the distance of the area from the wildland fire hazard zone and the lack of future potential structures adjacent to the Channel. In addition, City Creek Bypass Channel is not identified in any local or state fire hazard mapping as a potential fire risk. Further, no construction other than channel improvements associated with the 5th Street bridge crossing improvements may occur across the City Creek Bypass Channel. Thus, no significant drainage changes will occur within the single area that may be exposed to indirect impacts from wildfire.

Mitigation Measures: None Required

Level of Significance After Mitigation: No Impact

4.21.7 Mitigation Measures

No mitigation is required under the Wildland environmental topic.

4.21.8 Cumulative Impacts

Because implementation of the IVIC Project would not result in impacts to any wildfire issues, the proposed Project would not contribute to any cumulative impacts thereof. Wildland fire hazards within the two cities and foothill and mountain areas may be considered significant, but as indicated, future IVIC Project infrastructure development in the will not contribute to cumulative wildland hazards.

4.21.9 Significant and Unavoidable Impacts

As determined above, no significant and/or unavoidable adverse impacts as a result of wildfire threats will occur as a result of the proposed IVIC Project.

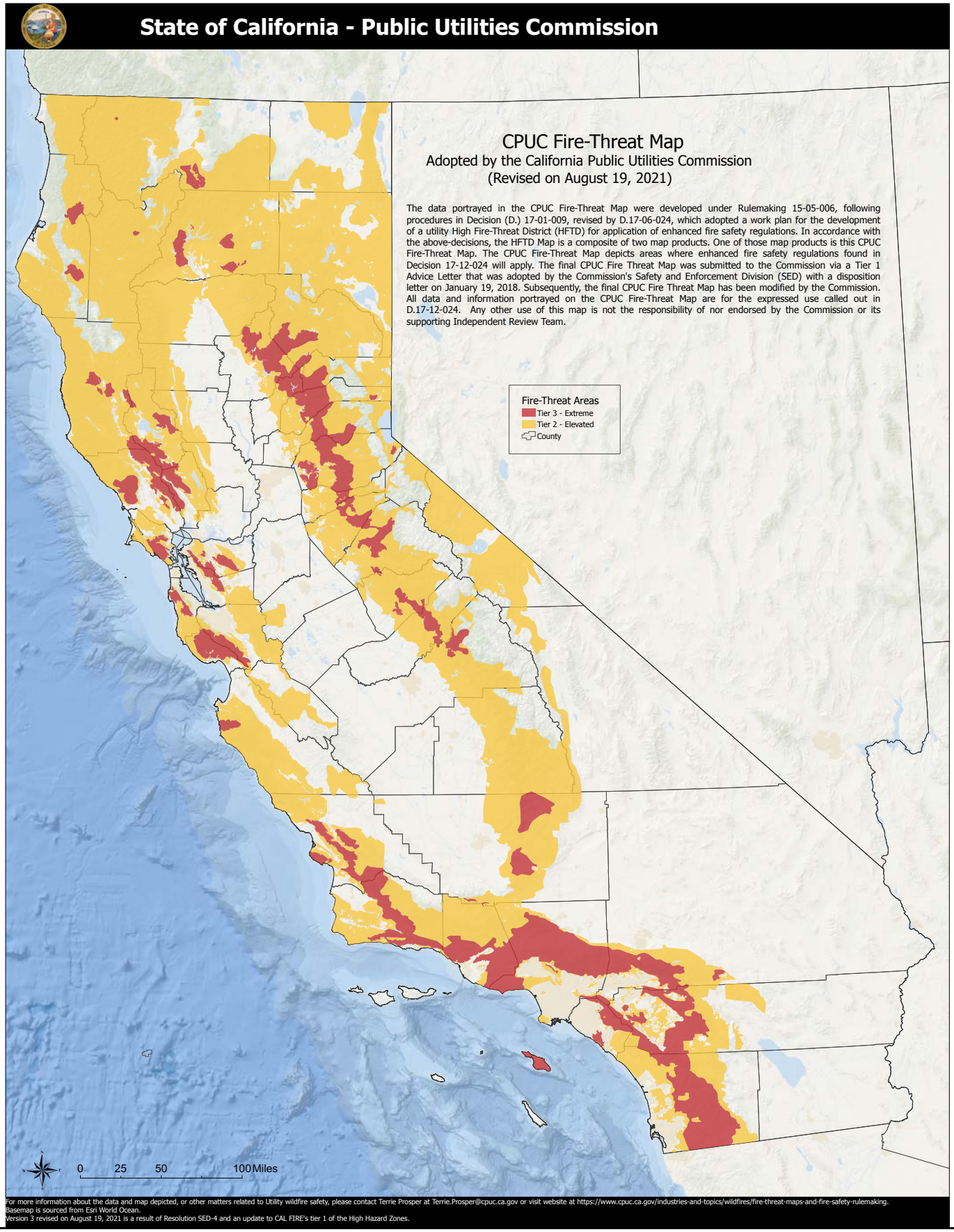


FIGURE 4.21-1

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CPUC Fire Threat Map

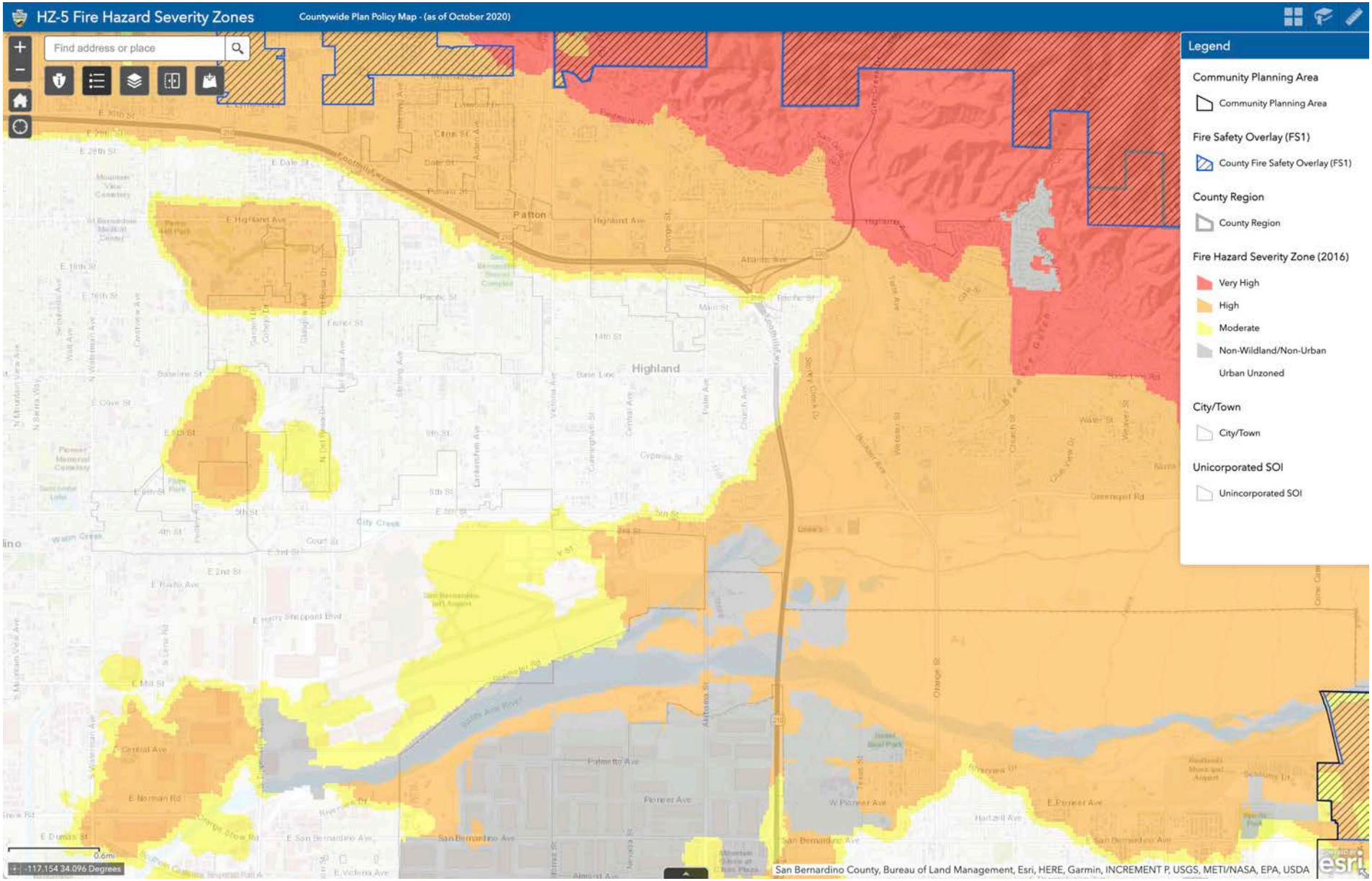

FIGURE 4.21-2

Tom Dodson & Associates
Environmental Consultants

Fire Hazard Severity Zones

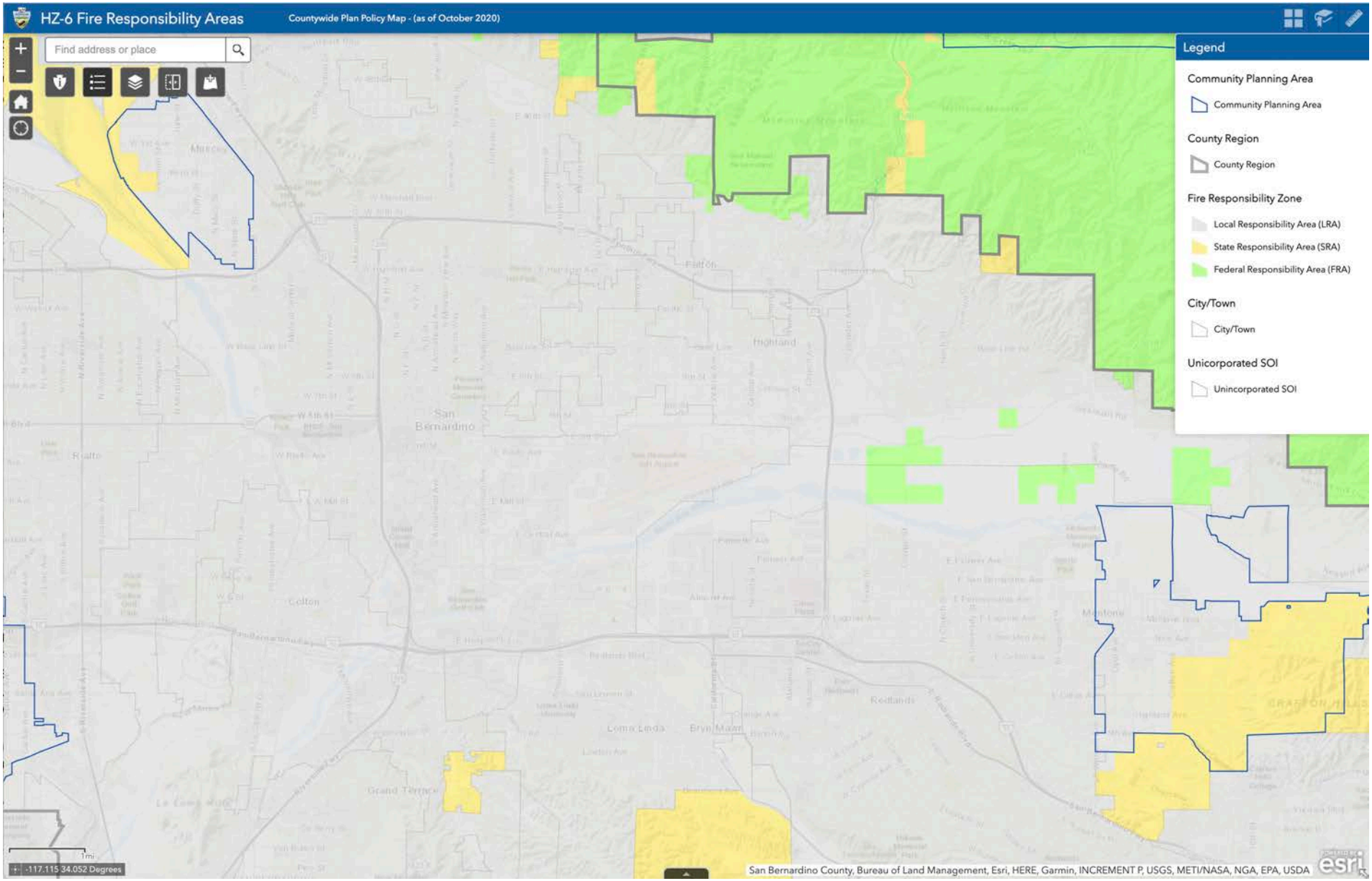

FIGURE 4.21-3

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Environmental Consultants

Fire Hazard Responsibility Areas

CHAPTER 5 – ALTERNATIVES

5.1 INTRODUCTION

CEQA and State CEQA Guidelines require an evaluation of alternatives to the proposed action when a project may cause a significant adverse impact on the environment. The IVIC Project has been evaluated for potential significant adverse impacts in **Chapter 4, Environmental Impact Evaluation** of this document. This chapter of the DEIR describes and evaluates alternatives to the IVIC Project and is intended to implement the requirements set forth in the State CEQA Guidelines. This chapter also identifies the Environmentally Superior Project Alternative as required by State CEQA Guidelines Section 15126.6(e)(2).

5.1.1 CEQA Requirement

The purpose of the alternatives' evaluation under CEQA is to determine whether one or more feasible alternatives are capable of reducing these potentially significant impacts of a preferred project to a less than significant level. The applicable text in the State CEQA Guidelines is as follows:

Section 15126.6(a): *Alternatives to the Proposed Program. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.*

Section 15126.6(b): *Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.*

The range of feasible alternatives to the Project is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, regulatory limitations, jurisdictional boundaries and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative option. (State CEQA Guidelines § 15126.6(f)(1))

Additionally, a NPA is required to be included in the range of alternatives. An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, or one that would not achieve most of the basic Proposed Project objectives. Finally, the Environmentally Superior Alternative shall be identified and if it is the NPA, a second Environmentally Superior Alternative shall also be identified.

The only significant and unavoidable impact identified in this IVIC Project DEIR is under Transportation, specifically related to the VMT impact. The Project proposes to construct approximately 20-lane miles of lane addition. Consistent with the Technical Advisory, potential

induced vehicle travel was evaluated to determine if the roadway capacity enhancements would result in an increase in total VMT. Consistent with guidance provided by the Technical Advisory, the proposed Project would result in a potential VMT impact if the "With Project" condition would result in a net increase in total VMT as compared to the "No Project" condition. As such, the Project is found to result in a net increase in total VMT and would therefore result in a significant and unavoidable VMT impact. As IVDA does not have land use authority to enforce transportation reduction strategies, these strategies will be recommended to be incorporated by the Cities of Highland and San Bernardino and the County of San Bernardino. Furthermore, no VMT reduction strategy would be sufficient to offset the additional VMT that would be generated by the roadway capacity expansion that would occur as a result of the land additions by the proposed IVIC. Thus, significant and unavoidable VMT impacts would result from IVIC Project implementation. As such, based on these findings, the proposed Project would cause significant unavoidable adverse transportation impacts, specifically as a result of exceeding VMT significance thresholds.

Implementation of feasible **MMs** or Project design features would reduce potentially significant impacts to the following issues to less than significant: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services, Recreation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The issues of Energy, Greenhouse Gas, Land Use and Planning, Mineral Resources, and Population and Housing were found to be less than significant without the need for mitigation. No other potential significant adverse environmental impacts are forecast to result from the Project's implementation after implementation of the recommended **MMs**.

The IVIC is a focused effort resulting from years of input and effort by the IVDA and many regional partners. The IVIC represents a long-range infrastructure Project that would be installed over a 20 year horizon. The IVIC Project area covers territory within three jurisdictions—within the City of Highland and City of San Bernardino and County of San Bernardino—and the coordination of infrastructure concurrent with land development of the Project area is necessary to serve the whole of the area harmoniously. The IVIC would ensure that infrastructure improvements necessary to support the development of this area that has been forecast to occur pursuant to the respective jurisdictions' General Plans are implemented consistently across jurisdictional lines by the two cities. After conferring with the participating agencies, a group of local agencies and stakeholders agreed that the IVDA, a joint powers agency with responsibilities in both cities and intervening unincorporated areas) would assume the lead in managing the preparation of the IVIC and the environmental documentation required to comply with CEQA. Collectively, the participants determined that the Project area would benefit from the preparation of the IVIC. The following objectives have been established for the proposed Project to guide the implementation of the infrastructure improvements outlined herein:

- Provide comprehensive infrastructure improvements for water, sewer, circulation system, and stormwater drainage that resolve longstanding flooding and hydrology issues and that are adequately financed to meet future system needs. Infrastructure improvements provide solutions to current issues in the area experienced by residents and businesses and plans for future needs related to:
    - **Water** – Enhance the potable water distribution system and expand the potential for utilization of recycled water in the future
    - **Sewer** – Support wastewater collection capacity and upgrade sewer system to meet projected demand
    - **Roadways** – Improve traffic circulation, safety, mobility, and roadway conditions

  - **Stormwater Drainage** – Address longstanding flooding issues within the IVIC Project area by improving and expanding the capacity of drainage systems
  - **Other Utility Integration –** Strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements
- Efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

The primary goal of the IVIC is to provide the necessary infrastructure improvements to the Project area through a collaborative effort with IVDA partners to benefit the entire Project area, and greater area surrounding the Project utilizing this Inland Valley Infrastructure Corridor.

The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst case year of construction, construction would consist of the following:

- Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter;
- Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- Installation of a 3.5 MG storage reservoir
- Installation of a new extraction well
- Installation of 2,500 feet of sewer

5.2 NO PROJECT ALTERNATIVE

5.2.1 Overview of No Project Alternative

The No Project Alternative (NPA) is required under CEQA to evaluate the environmental effects associated with no action on the part of the Lead Agency. Under this alternative, the environmental impacts that would occur if the proposed IVIC Project is not approved and implemented are identified. This is a true no project alternative, in that it assumes that none of the proposed improvements would be installed in the future, leaving the area in a stasis of no further infrastructure expansion beyond that which exists at present.

Aesthetics

Under the NPA no new infrastructure improvements would occur within the IVIC Project area, and as such, the overall aesthetics of the IVIC Project area are not anticipated to change substantially from that which exists at present. In some ways, without any infrastructure improvements anticipated under the NPA, except where future projects on land within the IVIC Project boundaries arise with future potential development proposals, the IVIC Project area will remain

visually unchanged. Under the NPA, no significant aesthetic impacts would occur as no changes in the existing setting are anticipated. However, as discussed under **Subchapter 4.2**, Aesthetics, impacts from the IVIC Project would be less than significant. For the IVIC Project, aesthetic impacts to scenic vistas and resources from disturbance would be potentially significant, but can be reduced to less than significant by requiring the new EVWD Reservoir to be at a similar scale to nearby and adjacent development to minimize conflicts with scenic vistas, as specified in **MM AES-1**. Power lines shall be undergrounded to minimize existing conflicts to the surrounding mountains per **MM AES-2.** Additionally, under the IVIC Project implementation of **MM AES-3** is required to ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a less than significant level to ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. **MM AES-4** requires a light and glare analysis that demonstrates that individual IVIC Projects would not cause significant light and glare impacts at sensitive receivers such as residences and vehicles utilizing area roadways. These mitigations together minimize IVIC Project aesthetics impacts to a level of less than significant. Given that mitigation is required to minimize impacts under the IVIC Project, and that none would be required to minimize aesthetic impacts under the NPA, the NPA would have lesser aesthetic impacts those of the proposed IVIC Project, but no significant impacts would occur under either the IVIC Project or NPA scenarios.

Agricultural and Forestry Resources

Under the NPA no new infrastructure improvements would occur within the IVIC Project area. There are no agricultural or timberland resources within the IVIC Project area, nor within the areas that could be selected to install the EVWD Reservoir or Well Development. As there are no agricultural or timberland resources within the IVIC Project area, it is not anticipated that the NPA, which would see no infrastructure related development occur in the area, would impact such resources either. Based on the data and the analysis contained in this DEIR (**Subchapter 4.3**), the agricultural value of the land within the IVIC Project area was determined to be relatively low such that no prime farmland or farmland of Statewide Importance would be lost. Furthermore, no forestry resources exist in the area. Thus, neither the IVIC Project nor the NPA would result in significant adverse impacts on agricultural or timberland resources.

Air Quality

Since no construction activity would occur, the NPA would not have any short-term impacts on air quality beyond that which occurs at present. However, the existing infrastructure systems would continue to operate as they do at present, with no new uses anticipated under this alternative. Under the air quality evaluation, the proposed IVIC Project was determined to result in less than significant air quality impacts across the board, primarily as a result of **MM AQ-1**. Mitigation is required to reduce nitrogen oxide (NO_x) emissions, which would reduce construction related emissions and minimize impacts to sensitive receptors to a level of less than significant. As no new air quality emissions would be generated under the NPA, it is anticipated that the NPA would not result in any air quality impacts. Ultimately, in the comparison between the NPA and the IVIC Project, the IVIC Project would have greater impacts on air quality emissions, as a result of needing mitigation to be implemented to minimize emissions below significance thresholds, but neither the IVIC Project, nor the NPA would result in significant and unavoidable air quality impacts.

Biological Resources

The NPA would not result in any change to the existing biological resources in the IVIC Project area. Based on the biological resources survey, the Project is not forecast to cause any direct significant unavoidable adverse impact to sensitive biological resources. This is because all potential impacts to biological resources within the Project area would be limited and can be mitigated to a less than significant impact level. Mitigation to minimize impacts to Crotch's bumble bee, burrowing owl, least Bell's Vireo, San Bernardino kangaroo rat, and California coastal gnatcatcher are necessary under the NPA, as are mitigation to protect nesting birds and ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features and ensure that jurisdictional features are documented in accordance with state and federal guidelines. As no new infrastructure specific development would occur within the IVIC Project area as a result of the NPA, and that no new construction would occur under the NPA, the NPA would have lesser overall impacts on biological resources than would the IVIC Project. Therefore, based on this information, the NPA would have less overall impact to biological resources than the proposed IVIC Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

The NPA would not result in a change to any existing cultural resources of the project site and would not introduce large numbers of people into the area which can cause indirect impacts to cultural resources. The cultural resources information presented in this DEIR indicates the proposed project can be implemented without significant cultural resource impacts based on implementation of mitigation measures. Implementation of the IVIC Project may contain historical resources due to the age of the existing structures and known history of the project area. It is possible that some of the buildings within the project area may qualify as significant historical resources, and also possible that subsurface cultural resources could be discovered during construction, so mitigation has been identified to address these circumstances. Therefore, based on this information, the NPA would have less potential overall impact to cultural resources than the proposed project, but neither alternative would have any significant adverse cultural resource impacts.

Energy

The NPA would, much like the generation of air quality emission that occurs at present, continue to demand electricity in the manner that occurs at present, but would not create any new demand for electricity beyond that which exists at present. The proposed IVIC Project provides for greater opportunities to protect and improve energy efficiency through meeting current regulatory requirements. Furthermore, the IVIC Project would strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements, which includes alternative energy technologies. Thus, the IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). Through compliance with local General Plan policies, State and Federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the proposed IVIC Project's potential cumulative and Project-specific energy impacts can be controlled and will be reduced below a level of significance. As

such, it is anticipated that neither the NPA nor the IVIC Project would result in significant energy impacts, though the NPA would have less potential overall energy impacts than the proposed IVIC Project.

Geology and Soils

The NPA would not result in a change to geology and soils within the IVIC Project area, and would facilitate a change in numbers of people within the area that could can cause exposure to impacts related to geology and soils such as seismic ground shaking, liquefaction, etc. Contrastingly, the IVIC Project would result in new infrastructure development within the IVIC Project area, which would, in turn, would result in new infrastructure and limited aboveground facilities (the EVWD Reservoir and Well) that could be exposed to substantial adverse effects associated with severe ground shaking or ground failure. However, impacts related to geologic and seismic hazards associated with the IVIC Project would be less than significant by adherence to and/or compliance with building codes and standards and the goals and policies of the proposed City of Highland and City of San Bernardino General Plans, as well as through implementation of mitigation that would minimize geology and soils impacts to a level of less than significant. Though neither alternative would result in a significant impact, the NPA would result in lesser impacts under geology and soils due to the lack of new development that would result in persons that could be exposed to geologic hazards.

Greenhouse Gas

Since no construction activity would occur, the NPA would not have any short-term impacts on greenhouse gas beyond that which is generated by the existing uses within the IVIC Project boundaries. However, the existing uses would continue to operate as they do at present, with no new uses anticipated under this alternative. Under the greenhouse gas evaluation, the proposed IVIC Project was determined to result in approximately 1,422.67 $MTCO_2e$/yr (million metric tons of carbon dioxide per year) from construction and operational activities. As such, the Project would not exceed the SCAQMD's recommended numeric threshold of 3,000 $MTCO_2e$ or 10,000 $MTCO_2e$/yr if it were applied. The IVIC Project involves construction activity and does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. Therefore, the Project would not conflict with the 2022 Scoping Plan, and no significant impact would occur. The NPA would not contribute any new GHG emissions, as no new construction and no expanded operations would occur, while the IVIC Project would generate greater overall GHG emissions. Ultimately, in the comparison between the NPA and the IVIC Project, the IVIC Project would have greater impacts on GHG emissions, but neither the IVIC Project, nor the NPA would result in significant and unavoidable GHG impacts.

Hazards and Hazardous Materials

Under the NPA, existing uses would remain in place and operational, with no new infrastructure planned within the IVIC Project area. Existing uses and existing infrastructure currently utilize hazardous materials and in some case facilitate the transportation of hazardous materials, as is the case with local roadways. Regardless, the existing infrastructure facilities and uses must comply with local, State, and Federal laws pertaining to the handling of hazardous materials. No greater intensity of development would occur under the NPA; as such, the potential for impacts related to routine transport, use or disposal of hazardous materials would be lesser than that which would occur under the IVIC Project. Due to these substantial constraints and the installation of future Project infrastructure facilities in locations where such constraints may exist, a potential

for significant hazards and hazardous materials issue impacts from implementation of the IVIC Project were identified in **Subchapter 4.10**. However, several **MMs** were identified to minimize hazards and hazardous materials impacts, which would apply to all individual components of the IVIC Project. Though there will be some adverse hazard and hazardous materials impacts as a result of implementing the IVIC Project, specific mitigation measures would reduce potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level. As such, based on this information, the NPA would have lesser impacts related to hazards and hazardous materials than the IVIC Project, but neither alternative would have any significant impacts under this issue.

Hydrology and Water Quality

Under the NPA, the existing uses would remain the same, with no new infrastructure planned for within the IVIC Project area, and as such the hydrology of the area would remain the same. However, it is anticipated that new development would occur as development applications are developed for the IVIC Project area. The existing setting of the IVIC Project area is such that the existing stormwater collection systems do not have capacity to accommodate existing and future surface flows. This is because, in most cases, surface runoff flows travel along north-south roadway shoulders and enter into the City Creek By-Pass Channel through culverts with insufficient capacity. As such, under the NPA, the vital infrastructure updates within the IVIC Project area would not be developed, and therefore the NPA could result in a significant impact related to stormwater runoff when compared to the IVIC Project. All other existing hydrological and water quality related within the IVIC Project area meet existing demands or are otherwise operating proficiently. The proposed IVIC Project will make unavoidable alterations in the IVIC Project area hydrology and the proposed uses have a potential to result in generation of new pollutants from the proposed urban/suburban environment that can degrade water quality. However, through implementation of mitigation all potential hydrology and water quality impacts can be controlled to a less than significant impact level. Furthermore, implementation of the IVIC Project would include modifications to the City Creek By-Pass channel to enable it to accommodate existing and future flows. Based on this information, the NPA has a potential to result in a significant impact to area hydrology, while the IVIC Project would not cause unavoidable significant hydrology or water quality impacts, and therefore, the IVIC Project would result in lesser hydrology and water quality impacts when compared to the NPA, and the NPA would result in a new significant and unavoidable impact under this issue.

Land Use and Planning

Under the NPA, the existing underlying land uses would not change, and the infrastructure proposed under the IVIC Project would not be installed. The NPA would not contribute to the Cities' plans for infrastructure development that would accommodate future population growth, and therefore would not meet some of the current conditions or goals of either City. However, under the NPA, land use and planning impacts would remain less than significant as there would be no direct conflict with the Cities' General Plans as these uses are existing and are therefore allowed by the Cities. The proposed IVIC Project would install infrastructure in five categories: Road improvements; City Creek Bypass Channel; EVWD Well; EVWD Reservoir; and sewer installation. None of these facilities or their physical arrangement or character will function as a physical division within the existing IVIC Project area community. The IVIC Project does not propose to modify any existing land uses. Under the IVIC Project, the Project-related land use and planning impacts would fall below a level of significance. Based on this information, neither the NPA nor the IVIC Project would result in significant land use and planning impacts.

Mineral Resources

Under the NPA, the existing underlying land uses would not change, and the infrastructure proposed under the IVIC Project would not be installed. Based on a review of cities General Plans, mineral resource extraction is not a permitted activity within the IVIC Project area. Furthermore, as no mines are currently located within the IVIC Project footprint, even though mineral resource values are known or suspected to exist within the overall IVIC Project the individual components of the proposed Project would not preclude future mining activities from being developed within the IVIC Project area, nor would the IVIC Project components be anticipated to be within a site that would be suitable for future mining activities as a result of existing uses and underlying land use designations. As the NPA would not result in any new construction, it is not anticipated that it would result in any impacts to mineral resources, particularly as no mining activities exist nor are permitted within the IVIC Project boundaries, and no mineral resources have been identified within the IVIC Project area. Based on these data, neither the NPA nor the IVIC Project would result in significant mineral resource impacts.

Noise

Since no construction activity would occur, the NPA would not generate any short-term construction noise impacts. Under the NPA operational and traffic noise would continue to be generated from existing uses within the IVIC Project area. Under **Subchapter 4.14**, the IVIC Project compared the noise generated by Project construction to the existing noise levels generated by existing uses. In some cases, existing sensitive receptors experience ambient noise levels greater than that which is allowable by the Cities' noise standards; however, neither construction nor operation of the IVIC Project would result in significant short- or long-term noise that would exceed the Cities' noise standards. As the NPA would not change the short- or long-term noise circumstances within the IVIC Project area, it would not result in any noise impacts. Under the IVIC Project, construction noise impacts, operation (off-site traffic) noise impacts, and vibration noise impacts are less than significant with the implementation of mitigation to reduce noise generated from these activities to the extent feasible. Therefore, noise impacts from the NPA would be less than that of the proposed IVIC Project but neither alternative would result in unavoidable significant adverse noise impacts.

Population and Housing

Under the NPA, no new infrastructure would be installed, and no new opportunities for employment or housing development would occur. The proposed IVIC Project envisions installing new infrastructure over a 20 year period to meet both City's build-out growth forecasts based on the existing mix of General Plan uses within the Project area. The IVIC Project does not directly contribute to future permanent development (population or housing), but will accommodate growth as it occurs under the existing cities' General Plan land use designations, and as envisioned in the cities' General Plans. While the locations of the EVWD Reservoir and Well Development are not presently known beyond that these facilities would be located within the lower and intermediate zones of EVWD's service area (**Figure 3-15**), respectively, EVWD anticipates avoid impacting any housing as a matter if site selection. As such, neither construction nor operation of the EVWD Reservoir and Well Development are not anticipated to impact persons or housing, as each will operate within its own facility intended to support water infrastructure. As the NPA would not result in any construction or operational changes, no population and housing impacts would be anticipated to occur. Therefore, while the impacts to

population and housing under the IVIC Project are greater than those under the NPA, neither the NPA nor the IVIC Project would result in significant population and housing impacts.

Public Services

The NPA would not result in the creation of additional demand for law enforcement and fire department services. The County Sheriff and County Fire Department response times would remain unaffected under the NPA, while the IVIC Project would create a minor new demand for these services, and **MM PS-1** is required to minimize impacts to police protection that would minimize the potential for trespass that could exacerbate demand for police protection services. The payment of established development impact fees for police and fire department facilities would not occur under the NPA, which is needed to ensure adequate response times for future development. However, under the existing conditions, existing uses are adequately served by the existing fire and police protection services; as such, given that lack of new demand for such services, this impact would be less than that which would occur under the IVIC Project.

The NPA would not result in the creation of additional demand for school services. Because the proposed project is not forecast to change land uses, increase housing, or create activities that can increase demand for additional school capacity beyond that anticipated in the Cities of Highland and San Bernardino General Plans, and because there are adopted standards and development fees are collected for new development, impacts related to demand for school services would be less than significant. Under the existing conditions, existing uses are adequately served by the existing schools; as such, given that lack of new demand for such services, this impact would be less under the NPA than that which would occur under the IVIC Project.

At present, there is a deficiency in the available parkland within the City of San Bernardino, though the City of Highland is meeting its parkland standard. As such, the NPA would continue under existing conditions with less parkland acreage for existing residents than is the standard of the City of San Bernardino, though the City of Highland offers adequate parkland under existing conditions. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Therefore, while the impacts to parks under the IVIC Project are greater than those under the NPA, neither the NPA nor the IVIC Project would result in significant park impacts. For these same reasons, the library and other public service impacts would be lesser under the NPA than under the IVIC Project, however, neither the NPA nor the IVIC Project would result in significant other public service impacts.

Recreation

Please refer to the discussion above under Public Services. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC is not anticipated to create activities that can increase demand for additional park

and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. As such, **MM REC-1** would be implemented to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, implementation of **MM REC-2** would ensure that, should construction of recreation or park facilities be required as a part of the IVIC Project, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated. The NPA would not generate any new demand for parks or recreation facilities, or result in construction thereof, but also would not provide any additional parks to meet the existing demand for parkland that is currently deficient in the City of San Bernardino. Based on this information, neither the NPA nor the IVIC Project would result in significant impacts to parks or recreation facilities; however, the IVIC Project would result in slightly greater impacts to parks as it would require mitigation to minimize recreation impacts.

Transportation

Under the NPA, no greater demand on area roadways would occur that that which exists at present. Under the existing conditions, there are a few intersections that are operating at an unacceptable LOS, and these intersections would continue to operate at an unacceptable LOS. As described in **Subchapter 4.18** of the DEIR, the proposed IVIC Project may result in significant and unavoidable transportation impacts, specifically related to Vehicle Miles Traveled impacts from expanding the area roadways to General Plan Buildout configurations. Under the NPA, existing roadways would not have a funding mechanism beyond that which exists at present to improve deficiencies. However, the NPA would not contribute to significant vehicle miles travelled (VMT) as these trips are already existing and accounted for under the existing conditions. The NPA would, however, result in greater circulation impacts as a result of not implementing the necessary roadway and other circulation improvements necessary to accommodate demand for such infrastructure as each jurisdiction reaches buildout. Therefore, while the IVIC Project would result in significant and unavoidable VMT impacts that the NPA would avoid, the NPA would result in new significant circulation impacts that the IVIC Project avoids. Overall, the NPA and IVIC Project would both contribute to significant and unavoidable transportation impacts, though under different individual issues.

Tribal Cultural Resources

The NPA would not result in a change to any existing tribal cultural resources of the project site and would not introduce large numbers of people into the area which can cause indirect impacts to cultural resources. The tribal cultural resources information presented in this DEIR indicates the proposed project can be implemented without significant tribal cultural resource impacts based on implementation of mitigation measures requested by the Yuhaaviatam of San Manuel Nation (YSMN; [formerly known as the San Manuel Band of Mission Indians]) and the Morongo Band of Mission Indians (MBMI) tribes. Implementation of the IVIC Project may contain tribal cultural resources and it is also possible that tribal cultural resources could be discovered during

construction, so mitigation has been identified to address these circumstances. The NPA would not result in any construction or change in circumstance that would impact tribal cultural resources. Therefore, based on this information, the NPA would have less potential overall impact to tribal cultural resources than the proposed project, but neither alternative would have any significant adverse tribal cultural resource impacts.

Utilities and Service Systems

The NPA would not result in result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Furthermore, it would not create new demand for area utilities and service systems. Alternatively, under the IVIC Project, the construction and operation of the EVWD Well and Reservoir can be accomplished without causing significant adverse environmental effects. The existing wastewater transmission system, as well as the previously analyzed and planned for transmission system associated with the development of the SNRC, for which implementation is in progress, are anticipated to require construction of approximately 5,000 linear feet of new sewer over the 20 year implementation period (maximum estimate 2,500 lineal feet per year. Given that the proposed IVIC project would not result in any significant impacts under any issues pertaining to construction of infrastructure, no significant impacts related to the construction of utilities are anticipated, though the implementation of **MM UTIL-1** is required to ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated. The proposed IVIC Project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. Further, none of the proposed infrastructure facilities will generate wastewater and given that the SNRC would be developed and ready to accept sewer flow from EVWD's service area, the potential impact from the IVIC Project is a no impact finding. As the NPA would not result in any construction whatsoever, it would not result in significant impacts from installation of utility infrastructure as none is proposed. Under the NPA, no new demand for wastewater would occur, and therefore no wastewater impacts would be forecast to result from the NPA. However, as the NPA would not result in the identified necessary water infrastructure to serve the population growth, as identified by EVWD, it would result in a new significant and unavoidable Utilities and Service Systems impact, where the IVIC Project would not.

Because future construction developed under the IVIC Project will be regulated by waste reduction and diversion from landfill programs, the construction of the IVIC Project, particularly given that development will occur gradually over a 20-year horizon, would not result in a substantial increase in demand in excess of capacity for local solid waste disposal facilities and regional landfill capacity. IVIC Project infrastructure development would be required, through the implementation of **MM UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. The IVIC Project will be required to ultimately divert up 75 percent of solid waste from landfills as a result of AB 341. Furthermore, **MM UTIL-3** would require further diversion through the recycling of soils where possible for future IVIC Project infrastructure. Any hazardous materials collected within the IVIC Project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. As the NPA would not result in any construction whatsoever, it would not result in significant impacts solid

waste generation. Furthermore, under the NPA, no new solid waste during operation would occur, and therefore no impacts to solid waste, landfill capacity, or conflicts with solid waste regulations would be forecast to result from the NPA.

Based on this information, the NPA has a new potential to result in a significant impact to utilities and service systems, while the IVIC Project would not cause unavoidable significant utilities and service system impacts, and therefore, the IVIC Project would avoid a significant and unavoidable impact related to utilities and service systems caused by the NPA.

Wildfire

Under both the NPA and the IVIC Project, the location of existing and new infrastructure facilities remains the same, and the IVIC Project area is located about 3 to 5 miles from the southern extension of the San Bernardino Mountain foothills. Therefore, the IVIC Project area is located well outside of any delineated high fire hazard severity zone. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. The implementation of **MM WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level. As the NPA would not result in any new development, no mitigation would be applicable under this issue. As such, the existing development as well as any planned development under the IVIC Project would not result in exposure of persons or structures to significant wildfire hazards. As such, neither the IVIC Project nor the NPA would result in significant wildfire impacts.

5.2.2 Summary of No Project Alternative

With respect to the NPA, Project objectives are not attained because no infrastructure improvements would be included as a part of the NPA. With respect to the significant unavoidable impacts of Project, the NPA would avoid the significant VMT impact that would result from implementation of the IVIC Project, but would have a potential to result in significant impacts to Hydrology and Water Quality as a result of not updating the stormwater capacities concurrent with continued development of vacant land within the IVIC Project area, Transportation as a result of the lack of circulation improvements for pedestrians, transit, bicycles, and automobiles that would result under from not expanding roadway capacities concurrent with development, and Utilities and Service Systems as a result of not developing necessary water infrastructure to adequately serve the anticipated growth in demand forecast to occur by the EVWD Urban Water Management Plan (UWMP), where the IVIC Project would not.

5.3 PROJECT ALTERNATIVE WITHOUT ROADWAY CAPACITY EXPANSION

5.3.1 Overview of the Project Alternative without Roadway Capacity Expansion

Another alternative is the Project Alternative without Roadway Capacity Expansion. Under this Alternative (PA1), each of the IVIC Project infrastructure components would be installed, with the exception of the expansion of the roadway lane capacities and improvements. As the IVIC pertains to infrastructure only, the changes in land use that may occur over time are within the overall IVIC Project area not being considered.

The following improvements proposed under the IVIC Project are contemplated as part of the Planning Documents of the Partner agencies, but it should be noted that environmental documentation to address the implementation of these individual projects would likely still be required:

EVWD

- **Project 1** - 3.5 MG storage reservoir located in the Lower Zone;
- **Project 2 -** New Well 01 in the Intermediate Zone.

City Creek Bypass Channel

Installation of a new channel design (two alternatives) that will need to be installed to have sufficient capacity to convey the future 100-year flood flows between Victoria Avenue (just north of the Airport and south of 3rd Street) and the Twin Creek Channel (terminus). Figures 3 11a through 3-11d show the alternative channel designs and acknowledges that these designs are preliminary and not ready for construction. For planning and impact forecast purposes it is assumed that a maximum of one-half mile of new channel will be installed in any given year.

Sewer Line Expansion

While no new sewer is planned to be necessary as a result of EVWD's installation of infrastructure for the Sterling Natural Resource Center, as a contingency measure, it is forecast that up to 5,000 LF of sewer may be installed to support the infrastructure needs of the IVIC area.

With respect to the PA1, some of the IVIC Project objectives are not attained.

The PA1 would not result in some vital infrastructure projects, such as the roadway capacity expansion and improvements proposed under the IVIC. Furthermore, because the PA1 would not result in an integrated planning approach across the jurisdictions within which the IVIC would occur, it would not efficiently connect future and existing development to the interstate system while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along 3rd, 5th and 6th Streets and gateway nodes.

Aesthetics

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. As such, the overall aesthetics of the IVIC Project would be comparable to that which would be expected to occur under the PA1. Under the PA1, the only improvement that would not occur are the proposed roadways, which overall, would not contribute significant aesthetics impacts. As discussed under **Subchapter 4.2**, Aesthetics, impacts from the IVIC Project would be less than significant. For the IVIC Project, aesthetic impacts to scenic vistas and resources from disturbance would be potentially significant, but can be reduced to less than significant by requiring the new EVWD Reservoir to be at a similar scale to nearby and adjacent development to minimize conflicts with scenic vistas, as specified in **MM AES-1**. Power lines shall be undergrounded to minimize existing conflicts to the surrounding mountains per **MM AES-2.** Additionally, under the IVIC Project implementation of **MM AES-3** is required to ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a less than significant level to ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. **MM AES-4** requires a light and glare analysis that demonstrates that individual IVIC Projects would not cause significant light and glare impacts at sensitive receivers such as residences and vehicles utilizing area roadways. These mitigations together minimize

IVIC Project aesthetics impacts to a level of less than significant. Furthermore, these same mitigations, when applied to the PA1, would result in a less than significant aesthetic impact. Given that mitigation is required to minimize impacts under the IVIC Project and the PA1, both alternatives would have less than significant impacts, and therefore, impacts would be equal.

Agricultural and Forestry Resources

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. There are no agricultural or timberland resources within the IVIC Project area, nor within the areas that could be selected to install the EVWD Reservoir or Well Development. As there are no agricultural or timberland resources within the IVIC Project area, it is not anticipated that the PA1 would impact such resources either. Based on the data and the analysis contained in this DEIR (**Subchapter 4.3**), the agricultural value of the land within the IVIC Project area was determined to be relatively low such that no prime farmland or farmland of Statewide Importance would be lost. Furthermore, no forestry resources exist in the area. Thus, neither the IVIC Project nor the PA1 would result in significant adverse impacts on agricultural or timberland resources, and impacts would be equal.

Air Quality

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Under the air quality evaluation, the proposed IVIC Project was determined to result in less than significant air quality impacts across the board, primarily as a result of **MM AQ-1**. Mitigation is required to reduce nitrogen oxide (NO_x) emissions, which would reduce construction related emissions and minimize impacts to sensitive receptors to a level of less than significant. As air quality emissions would be reduced under the PA1 without any roadway improvements proposed, which make up less than one quarter of the emissions generated for any criteria pollutant, air quality emissions generated under the PA1 would also be less than significant. Further, the PA1 would be subject to **MM AQ-1**, which would further minimize overall impacts to air quality emissions and sensitive receptors, and therefore, impacts thereof would continue to be less than significant under the PA1. Ultimately, in the comparison between the PA1 and the IVIC Project, the IVIC Project would have greater impacts on air quality emissions, but neither the IVIC Project, nor the PA1 would result in significant and unavoidable air quality impacts.

Biological Resources

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Based on the biological resources survey, the Project is not forecast to cause any direct significant unavoidable adverse impact to sensitive biological resources. This is because all potential impacts to biological resources within the Project area would be limited and can be mitigated to a less than significant impact level. Mitigation to minimize impacts to Crotch's bumble bee, burrowing owl, least Bell's Vireo, San Bernardino kangaroo rat, and California coastal gnatcatcher are necessary under the PA1, as are mitigation to protect nesting birds and ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features and ensure that jurisdictional features are documented in accordance with state and federal guidelines. Under the PA1, most of the mitigation measures applicable to the IVIC Project would not be applicable, because most mitigation measures apply to the construction of roadway

improvements that traverse City Creek where the channel bottom contains native vegetation. Regardless, with the implementation of mitigation, it would be anticipated that the PA1 could be implemented without significant impacts to biological resources. Therefore, based on this information, the PA1 would have less overall impact to biological resources than the proposed IVIC Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. As future individual IVIC Projects may be developed within sites that contain such resources, the same would be true for the PA1, though within a smaller overall footprint of development. The cultural resources information presented in this DEIR indicates the proposed project can be implemented without significant cultural resource impacts based on implementation of mitigation measures. Implementation of the IVIC Project may contain historical resources due to the age of the existing structures and known history of the project area. It is possible that some of the buildings within the project area may qualify as significant historical resources, and also possible that subsurface cultural resources could be discovered during construction, so mitigation has been identified to address these circumstances. These same circumstances would apply to the PA1, and therefore, mitigation would minimize potentially significant impacts to cultural resources. Therefore, based on this information, the PA1 would have similar overall impact to cultural resources than the proposed IVIC project, and neither alternative would have any significant adverse cultural resource impacts.

Energy

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. The proposed IVIC Project provides for opportunities to protect and improve energy efficiency through meeting current regulatory requirements. Furthermore, the IVIC Project would strive to accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements, which includes alternative energy technologies. Thus, the IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). Through compliance with local General Plan policies, State and Federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the proposed IVIC Project's potential cumulative and Project-specific energy impacts can be controlled and will be reduced below a level of significance. As the PA1 would be subject to these same requirements, and would contribute to these some energy efficiency principals, the impacts from the PA1 would be comparable to that of the IVIC Project. The PA1 would not demand as much fuel related energy because the scope of construction of the PA1 would be less than that which is proposed to occur under the IVIC Project. As such, it is anticipated that neither the PA1 nor the IVIC Project would result in significant energy impacts, though the PA1 would have less potential overall energy impacts than the proposed IVIC Project.

Geology and Soils

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. The IVIC Project would result in new infrastructure development within the IVIC Project area, which would, in turn, would result in new infrastructure and limited aboveground facilities (the EVWD Reservoir and Well) that could be exposed to substantial adverse effects associated with severe ground shaking or ground failure. As these same aboveground facilities would be proposed under the PA1, these same potential impacts could occur. However, impacts related to geologic and seismic hazards associated with the IVIC Project, and similarly with the PA1, would be less than significant by adherence to and/or compliance with building codes and standards and the goals and policies of the proposed City of Highland and City of San Bernardino General Plans, as well as through implementation of mitigation that would minimize geology and soils impacts to a level of less than significant. Therefore, based on this information, the PA1 would have similar overall geology and soils impacts to the proposed IVIC project, and neither alternative would have any significant adverse geology and soils impacts.

Greenhouse Gas

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Under the greenhouse gas evaluation, the proposed IVIC Project was determined to result in approximately 1,422.67 $MTCO_2e$/yr (million metric tons of carbon dioxide per year) from construction and operational activities. As such, the IVIC Project would not exceed the SCAQMD's recommended numeric threshold of 3,000 $MTCO_2e$ or 10,000 $MTCO_2e$/yr if it were applied. The IVIC Project involves construction activity and does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. Therefore, the Project would not conflict with the 2022 Scoping Plan, and no significant impact would occur. The PA1 would contribute less overall GHG emissions as a result of eliminating construction associated with roadway improvements. The PA1 would result in 1,025.77 $MTCO_2e$ of GHG emissions, which would continue to fall below SCAQMD significance thresholds, and further, the PA1 would not conflict with the 2022 Scoping Plan. Thus, the PA1 would contribute less overall GHG impacts when compared to the IVIC Project, but neither the IVIC Project, nor the PA1 would result in significant and unavoidable GHG impacts.

Hazards and Hazardous Materials

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Due to these substantial constraints and the installation of future Project infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the IVIC Project were identified in **Subchapter 4.10**. While the roadway related hazards, such as operational transport of hazardous materials that would be expanded as a result of greater lane capacity, would be eliminated under the PA1, the same potential hazards and hazardous materials issue impacts would be expected to occur under the PA1. However, several **MMs** were identified to minimize hazards and hazardous materials impacts, which would apply to all individual components of the IVIC Project, and would minimize impacts under the PA1, as well. Though there will be some adverse hazard and hazardous materials impacts as a result of implementing the IVIC Project, specific mitigation measures would reduce potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level. This

same principal would apply to the PA1, as it would install identical infrastructure, excluding the roadway improvements, to the IVIC Project. As such, based on this information, the PA1 would have comparable, if slightly lesser, impacts related to hazards and hazardous materials than the IVIC Project, but neither alternative would have any significant impacts under this issue.

Hydrology and Water Quality

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. The existing setting of the IVIC Project area is such that the existing stormwater collection systems do not have capacity to accommodate existing and future surface flows. Under both the IVIC Project and the PA1, the vital infrastructure updates within the IVIC Project area would be developed, and therefore would avoid significant and unavoidable stormwater related impacts. The proposed IVIC Project will make unavoidable alterations in the IVIC Project area hydrology and the proposed uses have a potential to result in generation of new pollutants from the proposed urban/suburban environment that can degrade water quality. However, through implementation of mitigation all potential hydrology and water quality impacts can be controlled to a less than significant impact level. Furthermore, implementation of the IVIC Project, as well as the PA1, would include modifications to the City Creek By-Pass channel to enable it to accommodate existing and future flows. As the PA1 would be subject to the same mitigation measures as the IVIC Project, it would avoid significant and unavoidable hydrology and water quality impacts. As such, based on this information, the PA1 would have comparable impacts related to hydrology and water quality than the IVIC Project, but neither alternative would have any significant impacts under this issue.

Land Use and Planning

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. The PA1 would not contribute to all of the Cities' plans for infrastructure development that would accommodate future population growth, and therefore would not meet some of the current conditions or goals of either City. However, under the PA1, land use and planning impacts would remain less than significant as there would be no direct conflict with the Cities' General Plans as these uses are existing and are therefore allowed by the Cities. The proposed IVIC Project would install infrastructure in five categories: Road improvements; City Creek Bypass Channel; EVWD Well; EVWD Reservoir; and sewer installation. None of these facilities or their physical arrangement or character will function as a physical division within the existing IVIC Project area community. As the PA1 would install the same facilities, excepting the roadway improvements, this same impact conclusions would apply. The IVIC Project does not propose to modify any existing land uses, nor would not PA1. Under the IVIC Project, the Project-related land use and planning impacts would fall below a level of significance, as would the PA1. Based on this information, neither the PA1 nor the IVIC Project would result in significant land use and planning impacts.

Mineral Resources

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Based on a review of cities General Plans, mineral resource extraction is not a permitted activity within the IVIC Project area. Furthermore, as no mines are currently located within the IVIC Project footprint, even though mineral resource values are known or suspected to exist within the overall IVIC Project the individual components of the proposed IVIC Project would not preclude future mining activities

from being developed within the IVIC Project area, nor would the IVIC Project or PA1 components be anticipated to be within a site that would be suitable for future mining activities as a result of existing uses and underlying land use designations. Thus, mineral resource impacts associated with the PA1 are anticipated to be comparable to what has been identified under the IVIC Project. Based on these data, neither the PA1 nor the IVIC Project would result in significant mineral resource impacts.

Noise

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. Under the PA1 construction, operational and traffic noise would be generated from the proposed infrastructure improvements. Under **Subchapter 4.14**, the IVIC Project compared the noise generated by Project construction to the existing noise levels generated by existing uses. In some cases, existing sensitive receptors experience ambient noise levels greater than that which is allowable by the Cities' noise standards; however, neither construction nor operation of the IVIC Project would result in significant short- or long-term noise that would exceed the Cities' noise standards. As the PA1 would not result in roadway construction, the overall construction noise generated by the PA1 would be lesser than that which would occur under the IVIC Project. Under the IVIC Project, construction noise impacts, operation (off-site traffic) noise impacts, and vibration noise impacts are less than significant with the implementation of mitigation to reduce noise generated from these activities to the extent feasible. These same mitigation measures, with the exception of **MM NOI-1,** which is necessary to reduce off-site traffic noise impacts from roadway improvements, when applied to the PA1, would ensure that a less than significant noise impact would result. Therefore, noise impacts from the PA1 would be less than that of the proposed IVIC Project but neither alternative would result in unavoidable significant adverse noise impacts.

Population and Housing

Therefore, the IVIC Project-related population impacts are less than significant, and this same conclusion would apply to the PA1 as it would also not induce substantial population growth, as no land use projects are proposed. However, while the locations of the EVWD Reservoir and Well Development are not presently known beyond that these facilities would be located within the lower and intermediate zones of EVWD's service area (**Figure 3-15**), respectively, EVWD anticipates avoid impacting any housing as a matter if site selection. As such, neither construction nor operation of the EVWD Reservoir and Well Development are not anticipated to impact persons or housing, as each will operate within its own facility intended to support water infrastructure. As the PA1 would install these same facilities, this same impact conclusion would apply. The proposed roadway improvements would occur within existing and adjacent to road rights-of-way. The areas adjacent to the road rights-of-way that would be expanded in width could result in some encroachment onto adjacent properties, but this take would not encroach into residential housing units within the IVIC Project area. As the roadways within the IVIC Project area do not support any housing or persons, the implementation of this project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Further, as the PA1 would not install any roadways, no encroachment onto residential property would occur, and therefore no impacts would occur. Therefore, neither the NPA nor the IVIC Project would result in significant population and housing impacts.

Public Services

The IVIC Project would create a minor new demand for these services, as would the PA1, and **MM PS-1** is required to minimize impacts to police protection that would minimize the potential for trespass that could exacerbate demand for police protection services. The payment of established development impact fees for police and fire department facilities would occur under both the PA1 and IVIC Project, which is needed to ensure adequate response times for future development. Thus, this impact for the PA1 would be comparable than that which would occur under the IVIC Project.

The PA1 and IVIC Project would each improve local infrastructure within the IVIC Project area. However, implementation of the proposed project is not forecast to change existing land uses or increase either the number of residential units located within the IVIC Project area or the number of students generated from the IVIC Project area beyond that anticipated in the Cities of Highland and San Bernardino General Plans. This would remain the case under the PA1. Operation of the proposed IVIC Project is not forecast to require any additional permanent employees which would result in no increase in demand for school services. As this remains the case for the PA1, school service impacts would be less than significant under both the IVIC Project and PA1.

At present, there is a deficiency in the available parkland within the City of San Bernardino, though the City of Highland is meeting its parkland standard. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC Project is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. As such, **MM REC-1** would be implemented to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. As the PA1 would also install the EVWD Well Development and Reservoir, this mitigation measure would be required to minimize impacts to parks. Therefore, neither the PA1 nor the IVIC Project would result in significant park impacts. For these same reasons, neither the PA1 nor the IVIC Project would result in significant other public service impacts. Overall, the PA1 and IVIC Project would result in comparable less than significant impacts under public services.

Recreation

Please refer to the discussion above under Public Services. As discussed under Population and Housing, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the IVIC Project area. The IVIC Project is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through

the mitigation provided below. Furthermore, there is a potential for the development of the EVWD Well Development and Reservoir to impact the availability of parkland. As such, **MM REC-1** would be implemented to ensure that, for the EVWD Well Development and Reservoir located within vacant land designated for park uses, or if the EVWD Well Development and Reservoir are installed within sites larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. As the PA1 would also install the EVWD Well Development and Reservoir, this mitigation measure would be required to minimize impacts to recreation. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, implementation of **MM REC-2** would ensure that, should construction of recreation or park facilities be required as a part of the IVIC Project and as part of the PA1, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated. Based on this information, neither the PA1 nor the IVIC Project would result in significant impacts to parks or recreation facilities and both would require mitigation to minimize recreation impacts to a level of less than significant.

Transportation

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. As described in **Subchapter 4.18** of the DEIR, the proposed IVIC Project may result in significant and unavoidable transportation impacts, specifically related to Vehicle Miles Traveled impacts from expanding the area roadways to General Plan Buildout configurations. Under the PA1, similar to the NPA, existing roadways would not have a funding mechanism beyond that which exists at present to improve deficiencies. However, the PA1 would not contribute to significant VMT as these trips are already existing and accounted for under the existing conditions and no roadway improvements would result from the PA1. The PA1 would, however, result in greater circulation impacts as a result of not implementing the necessary roadway and other circulation improvements necessary to accommodate demand for such infrastructure as each jurisdiction reaches buildout. Therefore, while the IVIC Project would result in significant and unavoidable VMT impacts that the PA1 would avoid, the PA1 would result in new significant circulation impacts that the IVIC Project avoids. Overall, the PA1 and IVIC Project would both contribute to significant and unavoidable transportation impacts, though under different individual issues.

Tribal Cultural Resources

The tribal cultural resources information presented in this DEIR indicates the proposed IVIC Project can be implemented without significant tribal cultural resource impacts based on implementation of mitigation measures requested by the Yuhaaviatam of San Manuel Nation (YSMN; [formerly known as the San Manuel Band of Mission Indians]) and the Morongo Band of Mission Indians (MBMI) tribes. Implementation of the IVIC Project may contain tribal cultural resources and it is also possible that subsurface tribal cultural resources could be discovered during construction, so mitigation has been identified to address these circumstances. The PA1 would result in similar construction scope to the IVIC Project, which could comparably impact tribal cultural resources. Therefore, based on this information, the PA1 would have similar overall impact to tribal cultural resources when compared with the IVIC Project, and neither alternative would have any significant adverse tribal cultural resource impacts once mitigation is employed.

Utilities and Service Systems

Under the PA1, most of the infrastructure improvements proposed under the IVIC Project would be developed, with the exception of the roadway improvements. As under the IVIC Project, the construction and operation of the EVWD Well and Reservoir can be accomplished without causing significant adverse environmental effects, so too would this conclusion apply to the PA1. The existing wastewater transmission system, as well as the previously analyzed and planned for transmission system associated with the development of the SNRC, for which implementation is in progress, are anticipated to require construction of approximately 5,000 linear feet of new sewer over the 20 year implementation period (maximum estimate 2,500 lineal feet per year. Given that the proposed IVIC Project would not result in any significant impacts under any issues pertaining to construction of infrastructure, no significant impacts related to the construction of utilities are anticipated, though the implementation of **MM UTIL-1** is required to ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated. As the PA1 would result in the nearly identical infrastructure installation, excepting the roadway improvements proposed by the IVIC Project, this same conclusion would apply to the PA1. The proposed IVIC Project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. As the PA1 is smaller in scope than the IVIC Project and would not require greater water resources than the IVIC Project, water supply impacts for the PA1 would be less than significant. None of the proposed IVIC Project infrastructure facilities will generate wastewater and given that the SNRC would be developed and ready to accept sewer flow from EVWD's service area, the potential impact from the IVIC Project is a no impact finding, which would apply to the PA1, as well.

Because future construction developed under the IVIC Project will be regulated by waste reduction and diversion from landfill programs, the construction of the IVIC Project, particularly given that development will occur gradually over a 20-year horizon, would not result in a substantial increase in demand in excess of capacity for local solid waste disposal facilities and regional landfill capacity. IVIC Project infrastructure development would be required, through the implementation of **MM UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. This same requirement would apply to the PA1 to reduce solid waste impacts to a level of less than significant. The IVIC Project and PA1 will be required to ultimately divert up 75 percent of solid waste from landfills as a result of AB 341. Furthermore, **MM UTIL-3** would require further diversion through the recycling of soils where possible for future IVIC Project infrastructure. This same requirement would apply to the PA1 to reduce solid waste impacts to a level of less than significant. Any hazardous materials collected within the IVIC Project footprint and PA1 footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the IVIC Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes, as would the PA1. Solid waste impacts from both the IVIC Project and PA1 would be less than significant through the implementation of mitigation.

Based on this information, neither the IVIC Project nor the PA1 would not cause unavoidable significant utilities and service system impacts, and thus impacts would be equal for each alternative.

Wildfire

Under both the PA1 and the IVIC Project, the location of new infrastructure facilities remains the same, and the IVIC Project area is located about 3 to 5 miles from the southern extension of the San Bernardino Mountain foothills. Therefore, the IVIC Project area is located well outside of any delineated high fire hazard severity zone. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. The implementation of **MM WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level, which would be applicable to the PA1 to reduce impacts thereof. The IVIC Project and PA1 would not result in exposure of persons or structures to significant wildfire hazards. As such, neither the IVIC Project nor the PA1 would result in significant wildfire impacts and impacts for each alternative would be equal .

5.3.2 Summary of Project Alternative without Roadway Capacity Expansion

With respect to the significant unavoidable impacts of Project, the PA1 would avoid the significant and unavoidable VMT impact that would result from expanding the roadway lane capacities that would result under the IVIC. Furthermore, the PA1 would have a potential to result in new significant impacts to Transportation (circulation) where the IVIC would not, as a result of not expanding the roadway capacities necessary to accommodate growth in the area (as identified in the City of Highland and City of San Bernardino General Plans) as the area reaches Build-Out. Ultimately, the IVIC and PA1 would result in similar levels of significance for many issues, though some impacts would be lesser than those that would occur under the IVIC. The exceptions—Circulation—are discussed in detail above.

5.4 DISCUSSION OF ALTERNATIVES TO THE PROPOSED PROJECT

There is no alternative that completely avoids a significant impact. Even the NPA would not fully avoid significant and unavoidable impacts because without taking action in the IVIC Project area to improve infrastructure, certain infrastructure systems would reach existing capacity, and would therefore not be sufficient to meet future demand. The NPA would result in new stormwater (Hydrology & Water Quality and Utilities & Service Systems, Transportation [circulation]) and water supply impacts (Utilities & Service Systems). The PA1 would avoid the significant and unavoidable VMT impact that would result from the IVIC Project, primarily as a result of expansion of roadway capacities, but would create a new Transportation impact through lack of circulation improvements—including pedestrian, bicycle, and transit, as well as roadways circulation—that are necessary to accommodate the future growth within this area identified in the City of Highland and City of San Bernardino General Plans. Arguably, the IVIC Project would be the environmentally superior alternative because the significant and unavoidable VMT impact would have lesser overall consequence on public safety and health than that which would occur under the PA1. As VMT was, in part, developed as a model by which to moderate significant GHG emissions, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution,[1] and that the IVIC Project would not result in significant and unavoidable GHG

[1] California Office of Planning and Research (OPR), 2024. SB 743 Frequently Asked Questions. https://opr.ca.gov/ceqa/sb-743/faq.html#:~:text=VMT%20measures%20how%20much%20actual,and%20metric%20for%20some%20time. (Accessed 07/09/24)

emissions in and of itself, this significant impact is deemed to be lesser in overall impact to human health and public safety than that which would be generated by the PA1. The PA1 would not provide the necessary circulation improvements—including pedestrian, bicycle, and transit, as well as roadways circulation—to protect public safety along and adjacent to the IVIC Project area roadways. Thus, the IVIC Project is deemed the environmentally superior alternative. Furthermore, the IVIC Project would achieve all of the Project Objectives, and the PA1 would not achieve the transportation and circulation improvement objectives because it would not result in any roadway capacity improvements.

A summary of impacts of the alternatives compared to the proposed IVIC Project is included in **Table 1.6-1** below, pursuant to CEQA Guidelines Section 15126.6(d).

Table 1.6-1
TABULAR COMPARISON OF ALTERNATIVES

	Would the Project Result in Significant Adverse Impact?	***Would the Alternative Result in Equal, Greater, or Less Impacts than the Project?***	
	Proposed Project	**No Project Alternative**	**PA1**
Aesthetics	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Agricultural and Forestry	Yes Impacts LS	Impact level would be equal	Impact level would be equal
Air Quality	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Biological Resources	Yes Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Cultural Resources	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Energy	No Impacts LS	Impact level would be less than the Project	Impact level would be less than the Project
Geology and Soils	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Greenhouse Gas	No Impacts LS	Impact level would be less than the Project	Impact level would be less than the Project
Hazards and Hazardous Materials	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Hydrology and Water Quality	No Impacts LSM	Impact level would be greater than the Project	Impact level would be equal
Land Use and Planning	No Impacts LS	Impact level would be equal	Impact level would be equal
Mineral Resources	No Impacts LS	Impact level would be equal	Impact level would be equal
Noise	No Impacts LSM	Impact level would be less than the Project	Impact level would be less than the Project
Population and Housing	No Impacts LS	Impact level would be less than the Project	Impact level would be equal
Public Services	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Recreation	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Transportation	Yes Impacts would be Significant	Impact level would be less than the Project	Impact level would be equal the Project
Tribal Cultural Resources	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal
Utilities and Service Systems	No Impacts LSM	Impact level would be greater than the Project	Impact level would be equal
Wildfire	No Impacts LSM	Impact level would be less than the Project	Impact level would be equal

LSM = less than significant with **MMs**
LS = less than significant without **MMs**

CHAPTER 6 – TOPICAL ISSUES

All Chapter 6 figures are located at the end of this chapter, not immediately following their reference in the text.

Each environmental document contains a certain amount of duplication to ensure that information is conveyed to the decision-makers and interested members of the public in an organized fashion. Chapter 4 contains a detailed discussion of environmental effects that may result from implementing the proposed project. This includes a discussion of project specific and cumulative environmental impacts to the extent feasible, as well as discussion of unavoidable adverse impacts for each topic evaluated in the EIR. This section of the EIR combines three "topical issues" that are mandated in the State CEQA Guidelines Section 15126. Section 15126 states: "The subjects listed below shall be discussed...preferably in separate sections or paragraphs of the EIR." These sections are: (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented and (d) Growth-Inducing Impact of the Proposed Project. Section 15130 requires a discussion of Cumulative Impacts. Because of the importance of this topic, a summary of cumulative effects is included in this Chapter. The other major topics required in an EIR (Significant Environmental Effects; Unavoidable Significant Environmental Effects; and Mitigation Measures) are specifically addressed in Chapter 4 of this EIR. Alternatives to the proposed Project are evaluated in Chapter 5.

6.1 GROWTH-INDUCING IMPACTS

CEQA requires a discussion of the ways in which a project could be growth inducing. (Pub. Resources Code, §21100, subd.(b)(5); CEQA Guidelines, §§15126, subd.(d), 15126.2, subd.(d)) The CEQA Guidelines identify a project as growth-inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement consists of causing growth beyond that which is anticipated in a community's General Plan land use designations or an agency's expected future growth (such as an Urban Water Management Plan). Under CEQA, growth inducement is not considered necessarily detrimental or beneficial, but an analysis of this topic is required. (CEQA Guidelines §15126.2, subd.(d))

A project may indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. Projects that induce growth directly would include commercial or industrial development that hire new employees and residential development that provides housing in excess of planned growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in an area. Growth inducement may also occur if a project provides infrastructure or service capacity that accommodates growth beyond the levels currently permitted by local or regional land use plans. However, a project's potential to induce growth does not automatically result in growth. Growth only happens when the private or public sector responds to a change in the underlying development potential of an area with capital investment.

Typically, significant growth is induced in one of three ways. In the first instance, a project developed in an isolated area may bring sufficient urban infrastructure to cause new or additional development pressure on the intervening and surrounding land. This type of induced growth leads to conversion of adjacent acreage to higher intensity uses than originally envisioned, either unexpectedly or through accelerated development. This conversion occurs because the adjacent land becomes more suitable for development and, hence, more valuable because of the availability of the new infrastructure. This type of growth inducement is termed "leap frog" or

"premature" development because it creates an island of higher intensity developed land within a larger area of lower intensity land use.

The second type of significant growth inducement is caused when development of a large-scale project, relative to the surrounding community or area, produces a "multiplier effect" resulting in substantial indirect community growth, although not necessarily adjacent to the development site or of the same type of use as the project itself. This type of stimulus to community growth is typified by the development of major destination facilities, such as Disney World near Orlando, Florida, or around military facilities, such as the Marine Corps Air Ground Combat Center, near Twentynine Palms.

A third, and more subtle type of significant growth inducement occurs when land use plans are established that create a potential for growth because the available land and the land uses permitted result in the attraction of new development. This type of growth inducement is also attributed to other plans developed to provide the infrastructure necessary to meet the land use objectives, or community vision, contained in the governing land use agency's general plan. In this type of growth inducement, the ultimate vision of future growth and development within a project area is typically stablished in a city General Plan or other comprehensive land use plan. The net effect of a General Plan's land use designations is to establish a set of expectations regarding future land use and growth that may or may not occur in the future, depending upon the actual demand and other circumstances when development is proposed. Thus, a plan may assign an area 100,000 square feet of commercial space, but if actual development does not ultimately generate demand for this much retail square footage, it will never be established.

The IVIC represents a long-range infrastructure Project that would be installed over a 20 year horizon. The IVIC Project area covers territory within three jurisdictions—within the City of Highland and City of San Bernardino and County of San Bernardino—and the coordination of infrastructure concurrent with development of the Project area is necessary to serve the whole of the area harmoniously. The IVIC Project is envisioned to be developed over a period of about 20 years in an incremental manner. The IVIC Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

As stated above, the first type of significant growth occurs when a project developed in an isolated area may bring sufficient urban infrastructure to cause new or additional development pressure on the intervening and surrounding land. The proposed IVIC Project generally proposes to install infrastructure that has been identified to meet planned growth. The City of Highland and City of San Bernardino each identify the roadway improvements that would be installed by the IVIC Project in their respective General Plans. Thus, these roadways have already been identified to accommodate expected growth identified in the respective City's General Plan. Further, the EVWD Reservoir and Well were identified in EVWD's 2019 Water Supply Master Plan (WSMP) as necessary to accommodate growing demand and supply needs, and thus would not create a new demand that has not been identified through existing planning documents. The City Creek Bypass Channel improvements have been identified as necessary to accommodate existing stormwater runoff as well as future stormwater runoff. The Channel is insufficient as presently configured to accommodate flows, and as a result would not contribute to an indirect source of growth inducement. While the sewer improvements that would be installed by the IVIC Project

have been required as a contingency to accommodate a potential future need, this singular infrastructure component, while not identified as necessary in any planning documents, may become necessary depending on the types of development that are ultimately proposed within the IVIC Project boundaries, which are anticipated to conform to the planning documents governing development of this area. The IVIC Project will not induce growth directly since no additional number of employees are estimated to be required to accommodate operation of the proposed infrastructure. Further, no indirect growth will be created because the IVIC Project infrastructure will be used to meet the projected population demands for such infrastructure components.

In summary, implementation of the proposed project would not result in the extension of significant new urban infrastructure to an isolated area. Moreover, the proposed IVIC Project would also not indirectly induce substantial population growth through the creation of jobs and it would not be a new large project with the potential to create a "multiplier effect" that has not already been provided for in the local land use planning documents and that could induce growth beyond that anticipated in those planning documents. Finally, the IVIC Project would not create or change a land use plan that might cause a potential for growth because the available land and the land uses permitted result in the attraction of new development. The IVIC Project would also not indirectly induce growth.

6.2 CUMULATIVE IMPACTS

Cumulative Impact Analysis

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contribution to area-wide or community environmental impacts when added to other development that has occurred or that is proposed to occur in the region. Typically, cumulative impacts are discussed in relation to a list of past, present, and reasonably anticipated projects or in relation to broad growth projections and related area-wide impacts identified in general (city or county General Plan) or regional plans (such as, SCAQMD's Air Quality Management Plan, AQMP). (State CEQA Guidelines § 15130(b).) For the proposed IVIC Project, cumulative impacts are evaluated in the context of both types of cumulative impact forecast methodologies. The cumulative impact projections were made using regional planning documents and site-specific technical studies, and more specifically modeling that takes into account the existing and projected conditions within the IVIC Project area, with the proposed IVIC Project analyzed against these existing and projected conditions. Cumulative impacts are discussed in each issue subchapter of Chapter 4 in this DEIR, and are either located at the end of each subchapter, or at the end of each individual issue under each subchapter.

Cumulatively considerable impacts from the implementation of the IVIC Project were identified for the singular topic of Transportation. Please refer to the **Subchapter 4.19**) for an expanded discussion of cumulative impacts.

The following summary of cumulative impacts is provided for all the issues addressed in the DEIR.

Aesthetics: As described in **Subchapter 4.2**, all potential cumulative aesthetic impacts associated with the Project can be mitigated to a less than significant impact level. Cumulative impacts are those impacts of a proposed Project when combined with other projects that may affect the same resource. The addresses limited areas within approximately IVIC Project area shown on **Figure 3-2**. Within this area it is forecast that the existing visual setting will transition from the mix of

undeveloped land and older residential/industrial development to a future area of light industrial warehouses, offices, commercial development, and business park uses. **Figures 4.2-3 through 4.2-12** illustrate these different visual settings. Although there will be a change in the developed visual setting from implementing the IVIC Project, this change generally reflects the existing land use designations for the Project area and no significant aesthetic impacts are forecast to result from the IVIC Project with implementation of mitigation measures. Thus, the future visual setting of the Project area will reflect the expected visual setting as envisioned by both cities' General Plans, with future modifications associated with the IVIC Project to support the ultimate development of the IVIC Project area.

Based on the anticipated change in visual setting within the IVIC Project area and those other projects being developed independently in the general area, the potential aesthetic impacts are determined to less than cumulatively considerable. No cumulatively significant aesthetic impacts will result from implementing the IVIC and other development in the Project area the is designed consistent with each cities' design guidelines..

Agriculture and Forestry Resources: As described in **Subchapter 4.3** of this DEIR, the proposed Project is not forecast to cause any significant adverse cumulative impacts to agricultural or forestry resources or resource values. While cumulative development within the region may result in cumulatively significant impacts related to loss of and impacts to agricultural and forestry resources, the cumulative analysis of each Agriculture and Forestry Resources issue evaluated in **Subchapter 4.3** of the DEIR determined that the proposed Project would not result in a considerable contribution to cumulative impacts to agricultural and forestry resources within the Region. There are no agriculture or forestry resources located within the IVIC's area of potential impact. Furthermore, the proposed IVIC Project is an infrastructure project intended to improve the infrastructure within the Project area, and does not propose any specific land use projects, other than the development of a Reservoir and Well, which are land use independent, but would be installed outside of the existing roadway, sewer, and City Creek Bypass Channel footprints. As an infrastructure development Project, the Project's implementation would not prevent the continued operation of any farmland or timber resources within the overall Project area. Therefore, the proposed IVIC has a less than significant potential to result in a cumulatively considerable contribution to any agricultural and forestry resources impacts.

Air Quality: As described in **Subchapter 4.4**, the CAAQS designate the IVIC Project area as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the IVIC Project area as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution.* In this report the SCAQMD clearly states (Page D-3):

"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts
The project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts
The project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

Biological Resources: Cumulative biological resource impacts can only occur when such resources are not avoided, protected or mitigated as outlined above. The mitigation requirements outlined in **Subchapter 4.5** are identified to ensure that biological resources are avoided or otherwise protected or mitigated, such that no cumulatively considerable impacts are anticipated to occur. The proposed project will not cause significant adverse cumulative effects related to the reduction of sensitive vegetation communities or wetland/riparian habitat present in the general area because there are no such communities located within the project area for which impacts cannot be minimized through either avoidance or mitigation that would: preconstruction clearance surveys to confirm that special status plant species are absent from the project site, or otherwise, impacts to such species are fully avoided through site design or through compliance with USFWS and/or CDFW regulations (**MM BIO-1**), minimize impacts to burrowing owl through preconstruction surveys and following protocol for protection of this species based on CDFW regulations (**MM BIO-2**), minimize impacts to San Bernardino kangaroo rat through restricting construction to roadways and adjacent developed sidewalk area along 5th Street between Church Avenue and State Route (SR) 210 (**MM BIO-3**), conducting preconstruction/absence surveys for SBKR where avoidance per **MM BIO-3** is not possible (**MM BIO-4**), through further impact minimization methods where SBKR are determined to be present at a project site (**MM BIO-5**), and through avoiding the installation of new permanent lighting along 5th Street between Church Avenue and SR 210 (**MM BIO-6**), minimize impacts to California coastal gnatcatcher through presence absence surveys in targeted locations (**MM BIO-7**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if California coastal gnatcatcher is found to be present within an IVIC Project site (**MM BIO-8**), minimize impacts to least Bell's vireo through presence absence surveys in targeted locations (**MM BIO-9**), and through consultation with the USFWS is conducted and that a take permit from the USFWS is obtained if least Bell's vireo is found to be present within an IVIC Project site (**MM BIO-10**),

minimize impacts to Crotch's bumble bee through vegetation removal carried out under the observations of a qualified monitor/biologist/entomologist prior to construction outside of the Crotch's bumble bee flying season (**MM BIO-11**), and through consultation with the CDFW and obtaining a take permit from the CDFW if Crotch's bumble bee is found to be present within an IVIC Project site, ensure that the EVWD Well Development and Reservoir are subject to a site-specific biological resources assessment, wherein, if sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements (**MM BIO-12**), ensure that the City Creek Bypass Channel is designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features (**MM BIO-13**), ensure that jurisdictional features are documented in accordance with state and federal guidelines (**MM BIO-14**), and minimize impacts to nesting birds through either construction outside of nesting season or through a preconstruction survey that confirms nesting birds are absent from a given IVIC Project site (**MM BIO-15**). The IVIC Project can be implemented consistent existing regulations and with mitigation as outlined in the preceding sections. Based on compliance with the required mitigation and the overall lack of any habitat to support sensitive species or a substantial wildlife population, the proposed Project will not result in significant adverse biology resource impacts that rise to a cumulatively considerable level.

Cultural Resources: As the IVIC Project area continues to develop with projected growth, new industrial mixed-use development is forecast to occur. The IVIC Project area may contain many historical and archaeological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for future cumulative development projects in the project area to destroy known or unknown historical and archaeological resources or resource sites. The potential construction impacts of a project, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact specific historical and archaeological resources. Therefore, the project's cumulative effects to specific historical and/or archaeological resources could be cumulatively considerable and cumulative impacts would be potentially significant. However, implementation of **MMs CUL-1 through CUL-6** would minimize the proposed IVIC Project's contribution to cumulative impacts to a level of less than significant.

MM CUL-1 would exclude highly disturbed sites from requiring further cultural resource evaluation, in addition to those sites for which a cultural resource evaluation has already been prepared (the City Creek Bypass Channel) and would require the implementing agency to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities. **MM CUL-2** would ensure that the future IVIC Project Sites that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, will require a follow-on Phase I Cultural Resources Investigation. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within the future IVIC Project Sites. **MM CUL-3** would ensure that, after each phase of the studies required by **MM CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the project site. **MM CUL-4** would ensure that, after each phase of the studies required by **MM CUL-3** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to the South Central Coastal Information Center (SCCIC), the Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM). This would ensure that any discoveries are properly documented for future

researchers that may seek information regarding the Project Infrastructure project site. **MM CUL-4** would require an archaeologist to be present if any cultural resources are discovered during construction of any individual IVIC Project, and that YSMN is informed of the find to provide tribal input in regard to the potential significance of the cultural resource and to provide input on the treatment of the resource to ensure it is handled in a manner that would ensure impacts to the resource would be less than significant. **MM CUL-5** was also requested to be implemented by YSMN as part of the AB 52 consultation process, as was **MM CUL-4**, which requires that, if avoidance of cultural resources is not possible, that an archaeological monitor be present for the remainder of the implementation of the given IVIC Project pursuant to a Monitoring and Treatment Plan, which would further ensure that cultural resources are treated appropriately if unearthed as part of the implementation of the IVIC Project. Further, **MM CUL-6** was also requested to be implemented for the IVIC Project by YSMN, as it would protect human remains and funerary objects, and minimize impacts thereof.

Energy: As discussed in **Subchapter 4.7**, Project construction and operation would not result in cumulative inefficient, wasteful or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The proposed IVIC would contribute to the cumulative use of energy within San Bernardino Valley region. The region is anticipating moderate population growth and associated housing, commercial, and industrial developments that would cumulatively increase the demand for energy, including that which would be demanded by the proposed project. While the IVIC aims at reducing overall energy consumption from the proposed development, it would minimally increase the overall energy demands over the approximately 20-year horizon in which IVIC would be implemented. The IVIC Project incorporates a goal to accommodate installation of alternative energy technologies as such technologies become available and as individual projects are installed; it would support the installation of alternative energy technology, provision of electric vehicle (EV) charging stations, utilization of electric equipment, and would require future development to meet Green Building Code Standards, in additional utilization of high efficiency lighting, etc. These measures would minimize the IVIC's energy footprint over the 20-year horizon and beyond such that the proposed project's cumulative energy demand would be less than significant.

Geology and Soils: The San Bernardino Valley contains substantial geological and soils constraints. Development of the IVIC Project area will be affected by limited geotechnical constraints at locations where infrastructure is installed and on the privately developed properties within the Project area. None of the future on-site or off-site Project-related activities are forecast to cause significant changes in geology or soils or the constraints/hazards affecting the Project area that cannot be fully mitigated. Geology and soil resources are inherently site specific and the only cumulative exposure would be to a significant geological or soil constraint (onsite fault, significant ground shaking that could not be mitigated, or steep slopes creating a landslide exposure). Therefore, the Project has no potential to make a cumulatively considerable contribution to any significant geology or soils impact. Project soil and geology impacts are forecast to be less than significant, or less than cumulatively considerable.

Greenhouse Gas: As described in **Subchapter 4.9**, the IVIC Project is not forecast to make a cumulatively considerable contribution to on- of off-site hazards and hazardous material issues. For those potential hazards or hazardous material issues with a potential for direct significant impact within the Project area, mitigation measures have been provided that can reduce the project's contribution to cumulative impacts to a less will be required to reduce site specific and ultimately cumulative impacts to a less than significant level. Because most of the project impacts contribute to cumulative demand for emergency services or protection of the public from hazards,

all of the above measures shall be implemented. While cumulative development within the region may result in significant cumulative impacts related to exposure to hazards, the potential for the proposed IVIC Project to result in a cumulatively considerable contribution to such impacts has been minimized to a level of insignificance through the implementation of mitigation measures..

Hazards and Hazardous Materials: The IVIC Project is not forecast to make a cumulatively considerable contribution to on- of off-site hazards and hazardous material issues. For those potential hazards or hazardous material issues with a potential for direct significant impact within the Project area, mitigation measures have been provided that can reduce the project's contribution to cumulative impacts to a less will be required to reduce site specific and ultimately cumulative impacts to a less than significant level. Because most of the project impacts contribute to cumulative demand for emergency services or protection of the public from hazards, all of the above measures shall be implemented. While cumulative development within the region may result in significant cumulative impacts related to exposure to hazards, the potential for the proposed IVIC Project to result in a cumulatively considerable contribution to such impacts has been minimized to a level of insignificance through the implementation of mitigation measures.

Hydrology and Water Quality: The proposed IVIC Project has been evaluated as having a less than significant potential to cause significant flood hazards and a less than significant potential to substantially degrade water quality onsite and downstream with implementation of the preceding mitigation measures. Due to the small size of the watershed that contributes to the City Creek Bypass Channel, the fact that all other new projects in the watershed will have to comply with SWPPP and WQMP requirements or otherwise implement BMPs to minimize violations of water quality, the potential for significant hydrology or water quality impacts would be less than significant with implementation of the proposed stormwater management design, as outlined in the Preliminary Hydrology Study. The City Creek Bypass Channel improvements, when combined with the above mitigation measures, would ensure that future stormwater runoff after development of the project site is not forecast to make a cumulatively considerable contribution to downstream flood hazards and/or water quality degradation in the Santa Ana River Watershed. This conclusion is based on the findings that the proposed mitigation and design measures will not substantially increase runoff from the IVIC Project area and will provide adequate attenuation of water pollutants in runoff from this Project area so as not to make a cumulatively considerable contribution to the runoff volume or water pollution within the local watershed and more broadly within the downstream Santa Ana River and watershed as a whole. Thus, cumulative hydrology and water quality impacts are less than significant.

Land Use and Planning: Development of the proposed Project will result in substantial change of the land use within the IVIC Project area, but the changes will be required to be consistent with the land use and planning designations of the existing General Plans which establish the cumulative land use framework for the cities of Highland and San Bernardino. Approval of the proposed Project will not contribute to this future change, but will provide adequate infrastructure to the ultimate build-out of the IVIC Project area. The proposed IVIC Project would contribute to implementation of each City's General Plan vision for the Project area. No significant adverse impacts related to land use and planning resources and issues have been identified, and no cumulatively considerable and unavoidable impact is forecast to occur if the proposed Project is implemented as proposed.

Mineral Resources: The Project area does not contain any existing mineral development nor any identified potential for mineral resource development. Development of the proposed infrastructure development Project—the IVIC—will not cause any adverse impacts to mineral resources or

values. Given that the Project would not preclude future mining activities, and the overall lack of mineral resources designated for mining use under the respective cities' General Plans, implementation of the proposed Project will not contribute to cumulative loss of mineral resources or mineral resource values. As such, the Project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed Project's cumulative impact on mineral resources is less than significant.

Noise: Based on the impact significance criteria described in Subsection 4.14.6, the IVIC Project contributions to the cumulative noise environment are as follows. Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the IVIC Project areas. The construction associated with the City Creek Bypass Channel, Roadway Improvements & Sewer Installation would be less than significant without the need for mitigation, and cumulative impacts thereof would be ***less than significant***. Cumulative contributions to noise as a result of construction of the EVWD Well Development and Reservoir can be minimized to a level of less than significant through the implementation of **MMs NOI-2 and NOI-3,** and therefore cumulative construction impacts thereof would be ***less than significant with the implementation of mitigation*****.** IVIC Project construction vibration levels will satisfy the typical Project construction vibration levels will satisfy the transient human annoyance and building damage threshold. Therefore, the cumulative vibration impacts due to Project construction are considered ***less than significant***. Furthermore, the analysis shows that the unmitigated Project-related off-site traffic noise levels can be minimized to a level of less than significant through the implementation of **MM NOI-1**, and therefore cumulative off-site impacts are considered ***less than significant with the implementation of mitigation***. Thus, no cumulatively considerable noise impacts are anticipated.

Population and Housing: As described in **Subchapter 4.15**, the IVIC Project would not result in a cumulatively considerable contribution to population growth within the IVIC Project and surrounding area. The IVIC Project is not forecast to cause significant growth inducement in the community or to cause the elimination of a substantial number of homes with the subsequent relocation of a substantial population. Thus, the IVIC Project would have a less than cumulatively considerable potential to impact the local population or housing and would therefore not result in a considerable contribution to cumulative impacts to population and housing.

Public Services: As described in **Subchapter 4.16**, the proposed Project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would not substantially increase demand for public services. However, the proposed Project has a potential to, without **MM PS-1**, which requires the EVWD Reservoir and Well site to be fenced, attract trespass, and thus result in greater demand for police protection. With the implementation of **MM PS-1**, police protection impacts would be reduced to a level of less that cumulatively considerable, and therefore would not contribute to significant cumulative impacts thereof. Therefore, the Project would not result in a considerable contribution to cumulative impacts to public services.

Recreation: As described in **Subchapter 4.17**, the proposed Project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the IVIC Project would not substantially increase demand for recreation facilities. However, the proposed Project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the IVIC Project could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result. **MM REC-1** would ensure that IVIC Project infrastructure site selection would not impact the

cumulatively available parkland within the region, and **MM REC-2** would ensure that subsequent CEQA documentation is completed should new park or recreation facilities be required to replace a loss thereof as a result of IVIC Project implementation, thus reducing the impacts to park and recreation facilities to less than cumulatively significant. Therefore, the IVIC Project would not result in a considerable contribution to cumulative impacts to public services.

Transportation:

Construction

Overlapping cumulative construction activities, simultaneous lane/road closures, and simultaneous staging of construction equipment and materials in public rights-of-way could result in cumulative construction impacts related to transportation circulation patterns in the Project area, transit stops, bicycle and pedestrian facilities, and/or emergency access. Cumulative construction activities are expected to increase construction vehicles traveling on the roadways. While individual emergency vehicles could be slowed if traveling behind a slow-moving truck, vehicle codes require vehicles to yield to emergency vehicles using a siren and red lights. As such, cumulative impacts related to construction transportation circulation and emergency access within Chino Basin would be potentially significant. However, the proposed project would be required to implement **MM TRAN-1**, which requires coordination with other active construction projects within 0.25 mile of project construction sites to minimize simultaneous lane and/or road closures, major deliveries, and haul truck trips. **MM TRAN-1** also requires designating alternate detour routes and construction transportation routes that avoid these projects to the maximum extent practicable. Therefore, with mitigation incorporated, the proposed project would not have a cumulatively considerable contribution to the significant cumulative impact related to construction transportation circulation and emergency access.

Operation

Operations related to buildout of cumulative development within the project area, including the projects assumed under buildout of the various jurisdictions' general plans within the IVIC Project area, would increase cumulative operational roadway vehicle volumes on local roadways. The traffic impacts from the proposed project have been weighed against the cumulative total vehicle miles traveled as part of the VMT Analysis that was prepared for the Project (Appendix 9). Cumulative VMT within the IVIC based on the general plan buildout roadway configuration has been determined to be significant (the With Project condition results in a net increase in total VMT of 0.04% and the 10-Mile boundary is found to increase by 0.03%). When these VMT are placed on the already existing circulation system, the IVIC would contribute significant vehicle miles travelled. The VMT analysis is also inherently cumulative as it analyzes the impacts of vehicle miles travelled in the context of the cumulative vehicle miles travelled in the Cities and region within which a given project is located. As such, given that the project would exceed the VMT threshold identified under issue TRAN-2, above, the IVIC would contribute significant cumulative vehicle miles travelled within the project area and region. Thus, the proposed project is forecast to make a substantial contribution to cumulative circulation or transportation systems within the City and surrounding communities.

Tribal Cultural Resources: As described in **Subchapter 4.19** of this DEIR, IVIC Project implementation can proceed without causing any unavoidable significant adverse impacts to TCRs. Implementation of the proposed project is not forecast to cause any direct, significant adverse impact to any site specific TCRs following implementation of identified mitigation measures, and as a result the proposed project has no potential to make a cumulatively considerable contribution to TCR impacts in the project area. This is because impacts to individual

TCRs at specific sites would be mitigated and site specific as such, the proposed IVIC Project's contribution to cumulative impacts, whether significant or mitigated below significance thresholds, would not be cumulatively considerable. Any TCRs discovered on a Project site that would be adversely impacted by proposed future projects would be mitigated by implementing one or more of the three mitigation measures listed above. With implementation of the appropriate measures, the IVIC Project is not forecast to cause or contribute to cumulatively considerable tribal cultural resource impacts.

Utilities and Service Systems:

Water

Infrastructure development associated with the proposed IVIC Project would create limited additional demand on water services within EVWD's service area. However, given the analysis and data provided herein and within EVWD and regional planning documents, the water demand by development under the IVIC Project would be well within planned demand and supply of water within the EVWD service area over the long term. Furthermore, the IVIC Project incorporates the development of the water-related infrastructure identified and therefore required to serve future development proposed under the cities' General Plans. As such, the development of the IVIC Project would accommodate cumulative infrastructure development required to meet water demanded not only by future IVIC Project uses, but also other uses within EVWD's service area. Thus, the IVIC Project's contribution to cumulative impacts is considered less than cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Wastewater

Future cumulative development could exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board and result in potential significant cumulative impacts. Given that the IVIC Project area would be served with wastewater services by EVWD's SNRC and that the SNRC is anticipated have appropriate capacities to accommodate development associated with the IVIC Project as well as future development within EVWD's service area, the Project's contribution to cumulative wastewater capacity impacts is not considered cumulatively considerable, particularly given the excess capacity at the nearby San Bernardino Municipal Water Department's Water Reclamation Plant (WRP) would be freed up to accommodate cumulative development in the area. Therefore, implementation of the IVIC Project would result in a less than significant cumulative impact related to wastewater treatment capacities and compliance with the RWQCB.

Stormwater

Future cumulative development within the IVIC Project area would result in the removal of pervious surfaces and in an increase in impervious surfaces. Increases in impervious surfaces would increase stormwater volume. This increase could cumulatively affect drainage patterns as well as drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. This cumulative need for the construction of new and/or expanded stormwater drainage facilities is not forecast to result in significant environmental effects. Additional/expanded stormwater collection is necessary to develop the IVIC Project as envisioned in the cities' General Plans. The development of the new City Creek Bypass channel would occur gradually, which would contribute to minimizing impacts on the stormwater system from cumulative development within the area that would generate runoff that would be received by the new stormwater collection system. Cumulative drainage impacts are considered a less than considerable/significant impact.

Electricity/Natural Gas
The IVIC Project would contribute to the cumulative use of energy primarily electricity the IVIC Project area. The region is anticipating population growth and associated housing, commercial, and industrial developments, including those infrastructure facilities that would be developed under the IVIC Project, that would cumulatively increase the demand for energy. However, no new energy facilities would be required to be developed to serve the IVIC Project area, particularly given that the IVIC Project area is currently served by energy infrastructure.

Telecommunications
Future cumulative development within the IVIC Project would require telecommunication facility connections. While it is anticipated that the dry utility services throughout the IVIC Project area will be provided through the existing backbone system, cumulative development may require additional telecommunication facilities to be developed over time. However, given that the whole of the IVIC Project area is anticipated to be served the existing facilities, any future expansion, relocation, or construction of telecommunication facilities is not anticipated to result in cumulatively considerable impacts thereof.

Solid Waste
Project impacts to landfill capacity from construction and demolition debris were found to be less than significant based on the information and analysis provided above. Mitigation addresses construction debris recycling and reuse to achieve a reduction in waste beyond State requirements. Implementation of this measure would reduce the construction waste from the proposed IVIC Project at a higher level than required by the State. Therefore, because the proposed IVIC Project will exceed those requirements with implementation of one mitigation measures outlined above, the Project increment of construction-related solid waste for cumulative projects in the area will be less than cumulatively considerable/significant. Furthermore, compared to landfill capacity—the Mid Valley and San Timoteo landfills have a permitted remaining capacity of 73,579,773 CY—and available daily intake capacity at both landfills, the limited volume of construction waste generated per day by build-out of the IVIC Project infrastructure would correspond to a very small volume of the combined maximum daily permitted intake capacities of both landfills. As such, cumulative impacts to landfill capacity will be less than significant due to the IVIC Project construction debris and operational waste generation representing a less than substantial cumulative increment with mitigation.

Other Infrastructure
The purpose of identifying other potential infrastructure requirements in the future is to note the growth in demand by electric and hybrid vehicles for ECSs. A combination of public and private fast-charging stations will be needed within the IVIC Project area. For the time being, the required ECS infrastructure is not being developed as fast as the marketing and purchase of electric vehicles is proceeding. It is anticipated that this deficiency will be rectified by a mix of public and private construction of new ECS facilities to meet demand in the future.

Wildfire: As described **in Subchapter 4.21** of this DEIR, Because implementation of the IVIC Project would not result in impacts to any wildfire issues, the proposed Project would not contribute to any cumulative impacts thereof. Wildland fire hazards within the two cities and foothill and mountain areas may be considered significant, but as indicated, future IVIC Project infrastructure development in the will not contribute to cumulative wildland hazards.

Conclusion

As summarized in the preceding text, a substantial majority of the environmental topics addressed in the DEIR were determined to contribute a less than cumulatively considerable adverse impact to the environment in which the IVIC Project will be implemented. The following issues fall into this less than cumulatively considerable category: aesthetics, agricultural and forestry resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, and wildfire.

Cumulatively considerable impacts from implementation of the IVIC Project were identified for the topic of Transportation. The basis for these findings is explained in the text presented above, and in **Subchapter 4.19**.

6.3 SIGNIFICANT IRREVERSIBLE AND/OR UNAVOIDABLE ENVIRONMENTAL IMPACTS

In considering the topic of "Significant Irreversible and/or Unavoidable Environmental Impacts," it is important to define the terminology that is used in making impact forecasts. For example, an "unavoidable significant adverse environmental impact" is an effect of a proposed that cannot be avoided or reduced below some specific threshold of significance by any available or feasible mitigation measure or feasible alternative. These impacts are discussed in the subchapter text for each environmental issue in Chapter 4 of this document.

An irreversible impact is an impact that once experienced, cannot be changed or modified, by any means. The CEQA Guidelines (14 CCR 15000 et seq.) require an EIR to address any significant irreversible environmental changes that would result from the project should it be implemented. Pursuant to Section 15126.2(d), an impact would fall into this category if (14 CCR 15126.2[d]):

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- The project involves uses in which irreversible damage from environmental accidents could result;
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether the project may result in significant and irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. As such irreversible impacts have more nuance than do unavoidable impacts. For example, if a project results in the death of the last individual of an endangered species, this impact cannot be reversed (at least with technology available at this time). At least for the present, we cannot make any more individuals of the species. On the other hand, if air emissions from a project exceed established thresholds and are considered significant, it is feasible that future improvements in air emissions controls could reverse this impact and reduce (reverse) or perhaps eliminate the air emissions and reduce or reverse the significant impact. For example, if project mobile source emissions contribute to a significant air quality impact, increased availability and/or adoption of electric vehicles could reduce the air quality emissions attributable to the project. Thus, the potential for a reversal of an identified impact, be it less than significant or significant, depends on the time scale used for evaluation (forever or just

next year) and the likelihood that sufficient resources (societal or individual) will be applied to reverse an impact.

Another example that illustrates this topic is the potential exposure of people to an accidental spill of an acutely hazardous or toxic substance. If the threat is significant enough, society will demand that such exposure be eliminated immediately. Thus, such a spill and the related exposure to the hazard may be a significant environmental impact but it is typically immediately reversed. Where it is not reversed the potential significant effects will remain until sufficient individual or societal resources are expended to eliminate the hazard.

The significant impact projections were made using regional planning documents and site-specific technical studies. Significant impacts are discussed for each issue in 20 of the 21 Subchapters of Chapter 4 in this document. A discussion of significant impacts, including unavoidable significant impacts, can be found at the end of each Subchapter for each topic discussed in Chapter 4. As noted above, four significant unavoidable impacts were determined to result from the implementation of the IVIC Project. Please refer to each individual Subchapter of Chapter 4 for an expanded discussion of significant unavoidable impacts.

There is only one significant and unavoidable impact—VMT under Transportation, **Subchapter 4.19**—and it is expected that this impact could be reversed, again, assuming that that society is willing to allocate sufficient resources to reverse the impacts. By increasing the lane capacities facilitated by the roadway improvements, inherently, a greater number of vehicle miles traveled would be enabled by the IVIC Project. The only means by which to reverse this impact is to dedicate funds to developing alternative modes of transportation utilizing existing technologies or technologies of the future to reverse the use of these roadways at the expected capacities, supporting the current amount of VMT expected by the IVIC Project. Alternative modes of transportation could encourage people to forgo use of vehicles, and thereby reduce the significant VMT that would be generated by the proposed project.

The state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals. Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. Further, other technologies to minimize heavy duty truck emissions are being pursued to determine the best available technology for this purpose. Furthermore, the state has policies in place to support decreased use of personal vehicles, to be replaced with alternative modes such as transit, walking, and biking. These policies are incentivized at the local level by the proposed project's provision of alternative transportation amenities (e.g. pedestrian pathways and bicycle parking). Thus, in compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As such policies are carried out, the number of vehicles traveling to and from the Project area are anticipated to decrease over time.

Commitment of nonrenewable resources includes issues related to increased energy consumption, loss of agricultural lands, and lost access to mining reserves. There would be an

irretrievable commitment of labor, capital, and materials used during construction and operation of development under the IVIC. Nonrenewable resources would primarily be committed in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the project. Consumption of other non-renewable or slowly renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

To ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code Section 21100[b][3]). Energy conservation implies that a project's cost-effectiveness be reviewed not only in dollars but also in terms of energy requirements. For many projects, cost-effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Consistent with both Public Resources Code Section 21100(b)(3), Appendices F and G of the CEQA Guidelines, and a ruling set forth by the court in California Clean Energy Committee v. City of Woodland, potentially significant energy implications of a project must be considered in an EIR to the extent relevant and applicable to the project. Accordingly, based on the thresholds set forth in Appendix G of the CEQA Guidelines, the project's estimated energy demands (both short-term construction and long-term operational demands) were evaluated (see **Subchapter 4.7, Energy**, of this DEIR). Project energy consumption was determined to not result in the inefficient, wasteful or unnecessary consumption of energy and therefore not cause or result in the need for additional energy producing or transmission facilities.

In addition to the above considerations, State and local laws and regulations would further reduce the project's use of nonrenewable resources over time. Specifically, electricity consumed at the project site would be increasingly sourced from renewable energy, pursuant to Senate Bill 100. Senate Bill 100 sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources — those such as solar and wind energy that do not emit climate-altering greenhouse gases. Senate Bill 100 updates the state's Renewables Portfolio Standard to ensure that by 2030 at least 60 percent of California's electricity is renewable. Senate Bill 100 requires the Energy Commission, Public Utilities Commission and Air Resources Board to use programs under existing laws to achieve 100 percent clean electricity and issue a joint policy report on SB 100 by 2021 and every four years thereafter.[1] As such, the Project's consumption of nonrenewable energy is anticipated to significantly decrease over time, as Senate Bill 100 is implemented statewide and overall nonrenewable energy consumption decreases.

The project would be subject to compliance with the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen). In conclusion, while the proposed project would result in the use of nonrenewable resources, such use would be limited primarily to building materials, fossil fuels, and water. During operation, use of such resources is expected to decrease, as increasingly stringent efficiency requirements are implemented at the local and state level. Once consumed, the energy resources cannot be recreated. Minerals and materials (iron and steel for example) consumed to support Project

[1] California Energy Commission, 2024. SB 100 Joint Agency Review Report. https://www.energy.ca.gov/sb100 (accessed 07/17/24)

Infrastructure may be recycled, but in general these resources are disposed of and their consumptive use cannot be reversed. Thus, there are less than significant environmental resources that will be consumed in conjunction with Project implementation, and this consumption is not considered reversible in our current societal context.

Potential environmental accidents of concern include those events that would adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release. Development activities associated with the IVIC Project over the Planning Horizon would involve some risk of environmental accidents. However, these activities would be conducted in accordance with all applicable federal, state, and local regulations, and would follow professional industry standards for safety. Furthermore, the proposed IVIC would require the incorporation of **MMs HAZ-2** and **HAZ-3,** which would reduce the potential of accidental release and exposure by identifying those actions that must occur in the event of an accidental release or the disturbance of a previously unknown contaminated areas. These measures require notification of appropriate regulatory agencies, and specific activities that will limit and control the potential for exposure. Future infrastructure development under the IVIC Project would be required to remediate any accidental release or the disturbance of a previously unknown contaminated areas prior to operation of the individual development.

CHAPTER 7 – PREPARATION RESOURCES

7.1 REPORT PREPARATION

7.1.1 LEAD AGENCY

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In Partnership With
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City of San Bernardino – Community Development
East Valley Water District
San Manuel Band of Mission Indians

7.1.2 EIR CONSULTANT

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7.1.3 EIR TECHNICAL CONSULTANTS

- Air Quality – Urban Crossroads, Inc.
- Health Risk Analysis – Urban Crossroads, Inc.
- Biological Resources – HDR
- Cultural Resources – CRM TECH
- Greenhouse Gas – Urban Crossroads, Inc.
- Hydrology – JLC Engineering & Consulting, Inc.
- Noise – Urban Crossroads, Inc.
- VMT – Urban Crossroads, Inc.

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CHAPTER 8 – APPENDICES

8.1 NOTICE OF PREPARATION

8.2 NOP COMMENT LETTERS

8.3 DISTRIBUTION LIST

APPENDIX 8.1

NOTICE OF PREPARATION

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT (EIR)

DATE: November 30, 2023

TO: Responsible and Trustee Agencies, Interested Organizations and Parties

FROM: Inland Valley Development Agency

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE INLAND VALLEY INFRASTRUCTURE CORRIDOR

The Inland Valley Development Agency (IVDA) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the proposed Project identified above (Inland Valley Infrastructure Corridor, IVIC). The IVDA is seeking input from the general public, public agencies, and interested parties regarding the scope and content of the environmental information that should be analyzed in the EIR, including input regarding any topics or specific issues that are germane to a particular agency's statutory responsibilities (such as biology resources) in connection with the proposed Project. A short description of the Project, as well as the location and potential environmental effects, are discussed below. A detailed project description is provided as an attachment to this Notice of Preparation (NOP). The maps and aerial photos in the attached Project Description show the location of the proposed Project. In accordance with Section 15060(d) of the State CEQA Guidelines the IVDA has determined that an EIR will be prepared to address all of the environmental issues identified in the Standard Environmental Assessment Form/Initial Study. Thus, no Initial Study accompanies this NOP.

PROJECT ENTITLEMENT: The IVDA is preparing the IVIC in cooperation with the cities of Highland and San Bernardino. Once the IVIC EIR has been certified, each City and the IVDA will work with utilities that provide infrastructure within the project corridor, shown on the Project Description maps. As funding becomes available from the individual participating agencies or through infrastructure grants and loans, future specific infrastructure projects will be evaluated in the context of the IVIC EIR documentation. Additional CEQA environmental determinations will be prepared the time a specific project is considered for approval/funding.

PROJECT APPLICANT & LEAD AGENCY: Inland Valley Development Agency

PROJECT LOCATION: The IVIC area is located approximately 60 miles east of Los Angeles just south of the foothills of the San Bernardino Mountains. It is centrally located between three major freeways (State Route (SR)-210 to the north and east, the I-215 to the west, and the I-10 to the south).

The IVIC area is located immediately north of the San Bernardino International Airport (SBIA) and the infrastructure planning area extends to the north side of 6th Street except at the southwest and southeast corners of Del Rosa Drive and 6th Street where the Plan area extends to the north side of 5th Street. The western boundary extends to the center line of Tippecanoe Avenue and the Plan area is bounded by the SR-210 to the east.

PROJECT DESCRIPTION: IVDA has facilitated coordination of a number of infrastructure improvements within the IVIC project area with the participating agencies working with IVDA to implement this project. The other participating agencies in developing the IVIC include: City of Highland; City of San Bernardino; the Yuhaaviatam of San Manuel Nation (YSMN); and the East Valley Water District (EVWD). These stakeholders have jurisdictional and ownership/service

interests in the project area and have invested significant time and resources in supporting the IVDA in completing the IVIC for the benefit of the area. Improvements to the following infrastructure systems will be considered in the IVIC EIR: water; wastewater/sewer; dry utilities, including communications; drainage; roads; and other future utility integration (accommodate other utilities/emerging technologies that can be integrated concurrently with above infrastructure improvements).

The following environmental issues will be analyzed in the EIR: aesthetics, agricultural and timberlands, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gases/climate change, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural systems, utilities and service systems, and wildfire.

COMMENT PERIOD: Pursuant to State CEQA Guidelines (Cal Code Regs., Title 14 para. 15000 *et seq.)* Section 15082(a), any response and/or comments must be submitted to this office as soon as possible but **not later than forty-five (45) days** after the date upon this Notice. The Notice of Preparation comment period begins on November 30, 2023 and ends on January 16, 2023.

Please send your written responses to this Notice, including any comments you may have on this project, by regular mail or e-mail, to:

Ms. Myriam Beltran, Manager of Planning and Programs
Inland Valley Development Agency
1601 E. Third Street
San Bernardino, CA 92408
mbeltran@sbdairport.com
(909) 382-4100, ext. 153

Please include the name of a contact person at your agency in any submitted comments.

If you have any questions, please contact Ms. Myriam Beltran, at 909-382-4100 or mbeltran@sbdairport.com. The NOP and IVIC Project Description are available electronically at IVDA's website: www.ivdajpa.org

Ms. Myriam Beltran, Manager of Planning and Programs

APPENDIX 8.2

NOP COMMENT LETTERS

Main Office - 825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.7910 Fax: 909.387.7911

www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works

- Flood Control
- Operations
- Solid Waste Management
- Special Districts
- Surveyor
- Transportation

Brendon Biggs, M.S., P.E.
Director

Noel Castillo, P.E.
Assistant Director

David Doublet, M.S., P.E.
Assistant Director

December 29, 2023

Transmitted Via Email
File: 10(ENV)-4.01

Inland Valley Development Agency
1601 E. Third Street
San Bernardino, CA 92408
Attn: Ms. Myriam Beltran, Manager of Planning and Programs
mbeltran@sbdairport.com

RE: CEQA PROJECT REVIEW – NOTICE OF PREPARATION FOR A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE INLAND VALLEY INFRASTRUCTURE CORRIDOR (IVIC) PROJECT.

Dear Ms. Beltran:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on December 1, 2023** and pursuant to our review, the following comments are provided:

Permits Division (Johnny Gayman, Chief, 909-387-1863):

The proposed Project site location near the San Bernardino International Airport is adjacent to the County Maintained Road System (CMRS) at Tippecanoe Avenue.

1. A Road Construction Permit will be required if any public road improvements are proposed within any County maintained road right-of-way on Tippecanoe Avenue.
2. An Excavation Permit will be required if any public off-site utility work such as sewer, water, gas, electric, telephone/tv cable, etc. that involve trenching or boring are proposed within any County maintained road right-of-way on Tippecanoe Avenue.
3. An Encroachment Permit will be required if conditions require a tie into an existing utility that falls within the CMRS road along Tippecanoe Avenue.

If you have any questions regarding the permitting process, please contact the San Bernardino County Flood Control District (District) Permit Section at (909) 387-1863.

Traffic Division (Jeremy Johnson, P.E., Chief, 909-387-1869):

The Traffic Division has reviewed the Inland Valley Infrastructure Corridor Draft Program Environmental Impact Report, Chapter 3 and offered the following comments:

1. Figure 3-12:
    a. Provide the San Bernardino County the road sections as completed for the City of Highland and the City of San Bernardino.
2. Section 3.4.4.1 Current Street System:
    a. Add San Bernardino County circulation information for road sections within the unincorporated portions of San Bernardino County per *San Bernardino County Policy Map TM-1A Roadway Network.*
3. Section 3.4.4.3 Future Street System:
    a. Verify *General Plan Buildout Configuration* against *San Bernardino County Policy Map TM-1A Roadway Network* for road sections within the unincorporated portions of San Bernardino County.

Flood Control Planning/Operations Support Division (Michael Fam, Chief, 909-387-8120):

1. Portions of the District's right-of way and facilities (2-603-1A) City Creek Channel (aka: City Creek By-Pass), (2-601-1B and 5A) City Creek, and City Creek Levee, COE, are within the proposed project area. Any encroachments including, but not limited to access for grading, side drain connections, utilities crossing, street improvements, and channel improvements on the District's right-of-way or facilities will require a permit from the District prior to start of construction. Also, District facilities built by the Army Corps of Engineers (ACOE) will require the District to obtain approval (408-Permit) from the ACOE. Please contact the San Bernardino County Flood Control Permit Section at (909) 387-8120 for further information regarding this process.

Storm Water Program (Jonathan Dillon, P.E., Supervising Engineer 909-387-8119):

1. In compliance with the Municipal separate storm sewer system (MS4) Permit, a Water Quality Management Plan (WQMP) should be prepared for the proposed project. Impacts associated with the development and implementation of the WQMP and any proposed mitigation should be discussed within the EIR prior to adoption and certification. If you have any questions regarding this process, please contact the San Bernardino County Flood Control Permit Section at (909) 387-1863.
2. The proposed Project shall be in conformance with the Construction General Permit.

Water Resources Division (Michael Fam, Chief, 909-387-8120):

The proposed Project is located within both the Cities of Highland and San Bernardino, and bounded by Nineth Street to the north, Third Street at the south, and proceeds just east of Palm Avenue on the east border, at close proximity to the State Highway 215 (SH-215).

The District possesses fee-owned Right-of-Way and granted easement from others within the parameters of the Project.

The Project is also part of the Comprehensive Strom Darin Plan (CSDP) No. 6, dated August 2001, by Exponent.

The District's recommendations are most often made for site specific conditions. Therefore, the recommendations made here are general in nature until such time as more detailed plans become available.

1. According to the most recent FEMA Flood Insurance Rate Map (FIRM), Panels 06071C8682J, 8701J (dated September 2, 2016) and 8702H, (dated August 28, 2008), the Project lies within Zones AE, X-shaded (500-yr. floodplain, 0.2% annual chance of flooding; protected by a levee), X, and the Regulatory Floodway.
2. If any activity is anticipated on the District's Right-of-Way, a permit shall be obtained from the District. Other on-site improvements may be required, which cannot be determined at this time. If you have any questions regarding this process, please contact the San Bernardino County Flood Control Permit Section at (909) 387-1863.
3. We recommend that both Cities should enforce their most recent FEMA regulations for construction within the Special Flood Hazard Area (SFHA).

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

Nancy Sansonetti

Nancy J. Sansonetti, AICP
Supervising Planner-Capital Improvement Section
Environmental Management Division

TRIBAL HISTORIC PRESERVATION OFFICE

VIA ELECTRONIC MAIL

mbeltrans@sbdairport.com

Myriam Beltran
Manager of Planning and Programs
Inland Valley Development Agency
1601 E Third Street
San Bernardino, CA 92408

MORONGO BAND OF MISSION INDIANS
A SOVEREIGN NATION

January 18, 2024

RE: AB-52 Consultation for Inland Valley Infrastructure Corridor, California

The Morongo Band of Mission Indians (Tribe/MBMI) Tribal Historic Preservation Office received the Inland Valley Development Agency (Agency) letter regarding the above referenced project on December 5, 2023. The proposed Infrastructure Project (Project) is located within the ancestral territory and traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians.

Tribal cultural resources are non-renewable resources and therefore of high importance to the Morongo Tribe, therefore, tribal participation (a.k.a. tribal monitors) is recommended during all ground disturbing activities. We look forward to working with the Agency to protect these irreplaceable resources out of respect for ancestors of the Morongo people who left them there, and for the people of today and for generations to come.

Projects within this area are potentially sensitive for cultural resources regardless of the presence or absence of remaining surface artifacts and features. Our office requests to initiate government-to-government consultation under Assembly Bill (AB) 52 (California Public Resources Code § 21080.3.1) and requests the following from the Agency to ensure meaningful consultation:

- Currently proposed Project design and Mass Grading Maps
- A records search conducted at the appropriate California Historical Resources Information System (CHRIS) center with at least a 1.0-mile search radius from the project boundary. If this work has already been done, please furnish copies of the cultural resource documentation (ArcMap Shapefiles, reports and site records) generated through this search so that we can compare and review with our records to begin productive consultation.
- Tribal participation (a.k.a. tribal monitors) during the pedestrian survey and testing, if this fieldwork has not already taken place. In the event that archaeological crews have completed this work, our office requests a copy of the current Phase I study or other cultural assessments (including the cultural resources inventory).
- Shapefiles of the Projects area of effect (APE)
- Geotechnical Report

This letter does not conclude consultation. Upon receipt of the requested documents the MBMI THPO may further provide recommendations and/or mitigation measures.

The lead contact for this Project is Bernadette Ann Brierty, Tribal Historic Preservation Officer (THPO).

MBMI Cultural Resource Specialist Laura Chatterton, will be assisting the Tribe in the review of this project. Please do not hesitate to contact us at ABrierty@morongo-nsn.gov, THPO@morongo-nsn.gov, lchatterton@morongo-nsn.gov or (951) 663-2842, should you have any questions. The Tribe looks forward to meaningful government-to-government consultation with the Agency.

Respectfully,

Bernadette Ann Brierty
Tribal Historic Preservation Officer
Morongo Band of Mission Indians

CC: Morongo THPO

12700 Pumarra Road – Banning, CA 92220 – (951) 755-5259 – Fax (951) 572-6004 – THPO@morongo-nsn.gov

San Bernardino Valley
Water Conservation District

Helping Nature Store Our Water

December 21, 2023

Myriam Beltran
Manager of Planning and Programs
Inland Valley Development Agency
1601 E. Third Street
San Bernardino, CA 92408

RE: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT
FOR THE INLAND VALLEY INFRASTRUCTURE CORRIDOR

Dear Myriam Beltran,

The San Bernardino Valley Water Conservation District (District) would like to comment that the Inland Valley Infrastructure Corridor project is located adjacent to the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) boundary. The District is the lead Permittee for the Wash Plan. The area of adjacency, as seen in the attached Figure 1, is located southeast of 5th Street and west of State Route (SR)-210.

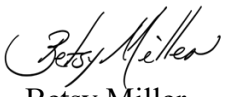
The Wash Plan is the culmination of two decades of coordination among the District and our Task Force partners to develop an integrated approach to permit and mitigate construction and maintenance activities within the Wash Plan area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. Members in the Task Force include the District, County of San Bernardino, the Cities of Highland and Redlands, Redlands Municipal Utility District, BLM, Cemex Inc., Robertson's Ready-Mix, East Valley Water District, San Bernardino Valley Municipal Water District, and San Bernardino County Flood Control District. The Wash Plan conserves and protects the following endangered and threatened species: Santa Ana woolly star, San Bernardino kangaroo rat, California coastal gnatcatcher, and slender-horned spineflower. Additionally, the Wash Plan serves as mitigation for several infrastructure projects within the area.

While the District is not a CEQA Responsible Agency, we request that any required environmental analysis consider the Wash Plan. The Wash Plan is available online at https://www.sbvwcd.org/~documents/route:/download/6246.

1630 W. Redlands Blvd, Suite A
Redlands, CA 92373
Phone: 909.793.2503
Fax: 909.793.0188
www.sbvwcd.org Email: info@sbvwcd.org

Please feel free to contact Milan Mitrovich at mmitrovich@sbvwcd.org with any questions or comments. We appreciate the opportunity to comment, and request to be included on future project notifications as well.

Sincerely,

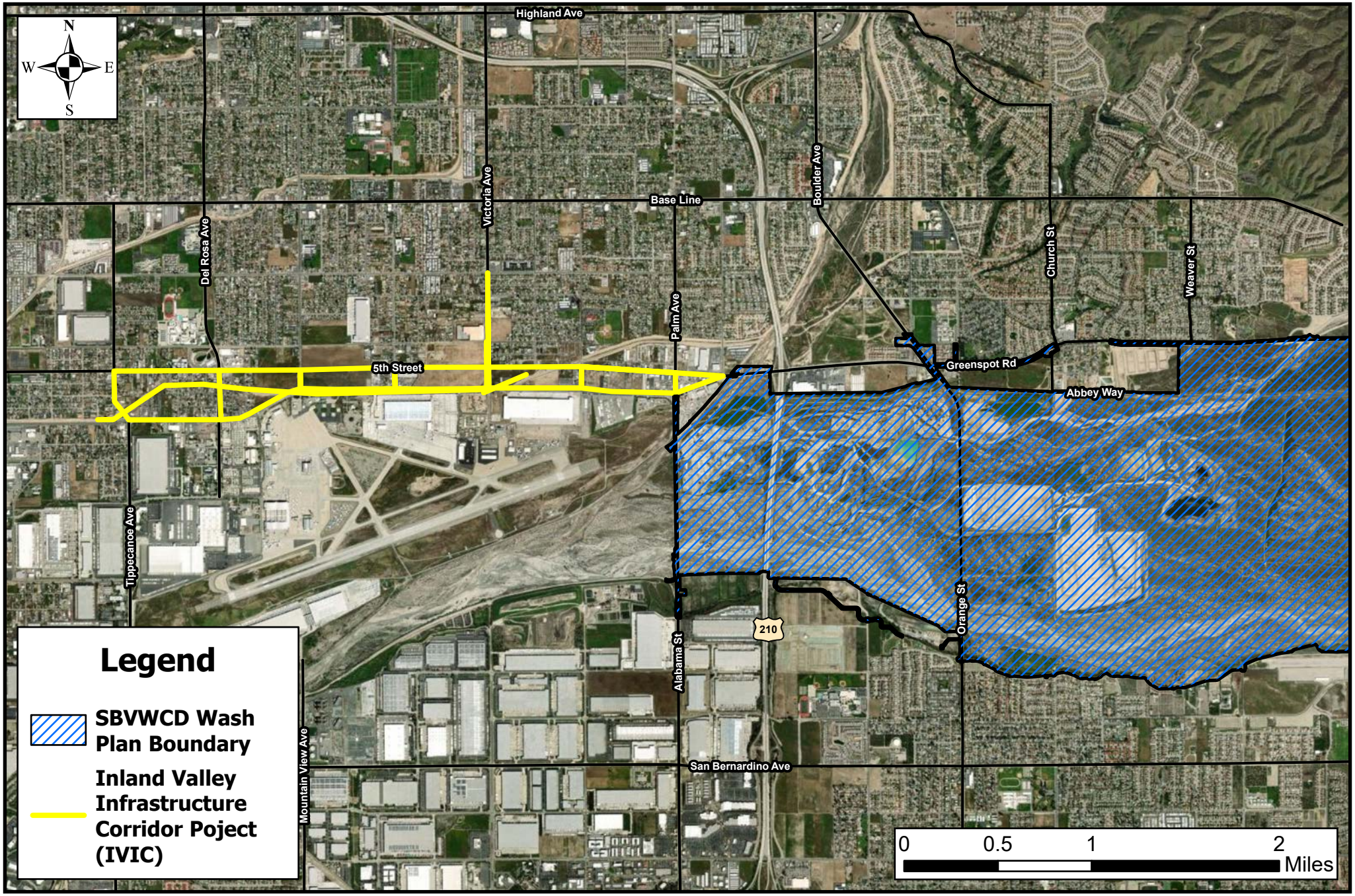


Betsy Miller
General Manager

Inland Valley Infrastructure Corridor Project

Coordinate System:
NAD 1983 StatePlane California V FIPS 0405 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Source: SBVWCD. CASIL, SBVMWD
GIS Contact: Zach Blum
M:\Non-District Projects_CEQA_Location Checks\Inland Valley Infrastructure Corridor
December, 2023

San Bernardino Valley Water Conservation District
Helping Nature Store Our Water



Legend

- SBVWCD Wash Plan Boundary
- Inland Valley Infrastructure Corridor Poject (IVIC)

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

December 1, 2023

Myriam Beltran
Inland Valley Development Agency
1601 E. Third Street
San Bernardino, CA 92408

Re: 2023110715, Inland Valley Infrastructure Corridor Project, San Bernardino County

Dear Ms. Beltran:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

APPENDIX 8.3

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AIRPORT SUPERVISOR
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CITY OF REDLANDS PLANNING DEPT
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