ALTITUDE
BUSINESS CENTRE

Final Environmental Impact Report

SCH No. 2017051060

Lead Agency

City of Chino
13220 Central Avenue
Chino, CA 91710

September 2019

Final Environmental Impact Report
SCH No. 2017051060

Altitude Business Centre

City of Chino, California

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City of Chino
13220 Central Avenue
Chino, CA 91710

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Lead Agency Discretionary Permits
Tentative Parcel Map No. 19756 (PL16-0456)
Master Site Approval (PL16-0457)
Special Conditional Use Permit (PL17-0042)
Site Approval (PL17-0044)

September 2019

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A: Initial Study, Notice of Preparation, and Written Comments on the NOP
B1: Air Quality Impact Analysis
B2: Mobile Source Diesel Health Risk Assessment
B3: Supplemental Air Quality Assessment
B4: Supplemental Air Quality Calculations
C: Biological Resources Assessment and Burrowing Owl Survey Report
D1: Phase I Cultural Resources Survey
D2: Paleontological Resource and Monitoring Assessment
E: Geotechnical Investigation
F: Greenhouse Gas Analysis
G1: Phase I Environmental Site Assessment
G2: Phase II Environmental Site Assessment
H1: Preliminary Water Quality Management Plan
H2: Preliminary Drainage Study
I: Noise Impact Analysis
J: Traffic Impact Analysis
K: Water Supply Assessment Report
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ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
§	Section
µg/m^3	microgram per meter cubed
AB	Assembly Bill
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
AB 1493	Assembly Bill 1943
ACMs	Asbestos Containing Materials
ACOE	Army Corps of Engineers
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
amsl	Above Mean Sea Level
AO	Agricultural Overlay
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
APS	Alternative Planning Strategy
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
AR	Airport-Related
ARB	Air Resources Board
ASTM	American Society of Testing and Materials
BAU	Business as Usual
BMPs	Best Management Practices
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod™	California Emissions Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise Emission Levels
CAO	Chino Airport Overlay
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CBDA	Chino Basin Dairy Area
CBSC	California Building Standards Code
CCAA	California Clean Air Act

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
CCCC	California Climate Change Center
CCR	California Code of Regulations
CD	consistency determination
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
C_2F_6	Hexaflouroethane
CF_4	Tetraflouromethane
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
C_2H_6	Ethane
CH_4	Methane
CH_3CHF_2	HFC-152a
CHE	cargo handling equipment
CHF_3	HFC-23
CLCA	California Land Conservation Act
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
COG	Council of Governments
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COHb	carboxyhemoglobin
COP	Conference of the Parties
CRPR	County Rare Plant Register
CSU	California State University Fullerton
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CVIFD	Chino Valley Independent Fire District
CWA	Clean Water Act
c.y.	Cubic Yards
dB	Decibel
dBA	A-weighted Decibels
DIF	Development Impact Fee
DOE	Determination of Eligibility
DOSH	Division of Occupational Safety and Health
DOT	Department of Transportation

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
E+P	Existing plus Project Conditions
e.g.	for example
EIR	Environmental Impact Report
EMFAC	Emission Factor Model
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
F	Fahrenheit
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FYI	for your information
Gg	Gigagrams
GHG	Greenhouse Gas
GS-1	General Rate Schedule
GWP	Global Warming Potential
H_2O	Water Vapor
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HETs	high-efficiency toilets
HFCs	Hydrofluorocarbons
HHD	heavy-heavy duty trucks
HMBEP	Hazardous Materials Business Emergency Plan
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act
HPLV	High Pressure Low Volume
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Amendments
HWCL	Hazardous Waste Control Law
I	Interstate
I-15	Interstate 15
i.e.	that is
IEUA	Inland Empire Utilities Agency

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
ITP	incidental take permit
JPA	Joint Powers Authority
kBTU/yr	thousand British thermal units per year
kWh	kilowatt-hour
L_2	noise levels equaled or exceeded during 2 percent of a stated time
L_8	noise levels equaled or exceeded during 8 percent of a stated time
L_{25}	noise levels equaled or exceeded during 25 percent of a stated time
L_{50}	noise levels equaled or exceeded during 50 percent of the time
L_{eq}	equivalent continuous sound level
LACM	Museum of Los Angeles County
LBP	lead based paint
LCA	Life-cycle analysis
LCC	Land Capability Classification
LCFS	low carbon fuel standard
LE	Land Evaluation
LESA	Land Evaluation and Site Assessment
LOS	Level of Service
LSA	Lake and Streambed Alteration Agreement
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act
MDR	Medium Density Residential
MEISC	maximally exposed individual school child
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
MHD	medium-heavy duty trucks
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSA	Master Site Approval
MT	metric ton
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
n.d.	no date
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NDCs	naturally determined contributions
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
N_2O	Nitrous Oxide
NOP	Notice of Preparation
NPPA	Native Plant Protection Act
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NPS	Non-Point Source
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NVIA	Noise and Vibration Impact Assessment
O_2	Oxygen
O_3	Ozone
OCP	Organo-Chlorine Pesticides
OEHHA	Office of Environmental Health Hazards Assessment
OPR	Office of Planning and Research
OSHA	Occupational and Safety Health Act
Pb	Lead
PCBs	Polychlorinated biphenyls
PCEs	Passenger Car Equivalents
PeMS	Performance System
PFCs	Perfluorocarbons
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (2.5 microns or smaller)
PM_{10}	Fine Particulate Matter (10 microns or smaller)
ppm	parts per million
PRC	Public Resources Code
PUC	Public Utilities Commission
RCALUC	Riverside County Airport Land Use Commission
RCRA	Resource Conservation and Recovery Act

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
RCTC	Riverside County Transportation Commission
REMEL	Reference Energy Mean Emission Level
RMP	Resource Management Plan
ROGs	Reactive Organic Gasses
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
S_6	Sulfur Hexafluoride
SA	Site Approval
SANBAG	San Bernardino Associated Governments
SARA	Superfund Amendments and Reauthorization Act
SAWPA	Santa Ana Watershed Project Authority
SB	Senate Bill
SB 18	Senate Bill 18
SB 32	Senate Bill 32
SB 375	California Senate Bill 375, Sustainable Communities and Climate Protection Act of 2008
SB 743	Senate Bill 743
SB 1078	Senate Bill 1078
SB 1368	Senate Bill 1368
SBCDA	San Bernardino County Department of Agriculture
SBCM	San Bernardino County Museum
SBTAM	San Bernardino County Transportation Analysis Model
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	California State Clearinghouse (Office of Planning and Research)
SCS	Sustainable Communities Strategy
SCUP	Special Conditional Use Permit
SDWA	Safe Drinking Water Act
SF/s.f.	square foot or square feet
SF_6	Sulfur Hexafluoride
SHA	Safe Harbor Agreement
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SLF	Sacred Lands File
SNURs	Significant New Use Rules

ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

Acronym	Definition
SO_2	Sulfur Dioxide
SO_4	Sulfate
SO_X	Sulfur Oxides
SR	State Route
SR-60	State Route 60
SR-71	State Route 71
SR-83	State Route 83
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Regional Control Board
TAC	Toxic Air Contaminants
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
TPM	Tentative Parcel Map
TSF	thousand square feet
UBC	Uniform Building Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USTs	Underground storage tanks
UWMP	Urban Water Management Plan
Vdb	Vibration Decibel
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WDR	Waste Discharge Requirements
WMI	Watershed Management Initiative
WQMP	Water Quality Management Plan
ZOI	Zone of Influence
ZORI	Zones of Required Investigation

F.0 Final Environmental Impact Report

F.1 Introduction

This Final Environmental Impact Report (FEIR) was prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code § 21000 *et seq.*) and CEQA Guidelines (Title 14, California Code of Regulations, § 15000 *et seq.*).

According to CEQA Guidelines § 15132, a FEIR shall consist of:

- The Draft EIR (DEIR) or a revision of the draft;
- Comments and recommendations received on the DEIR either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the DEIR;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

In accordance with the above listed requirements, this FEIR for the proposed Altitude Business Centre project (hereafter, the "Project") and associated discretionary and administrative actions consists of the following:

1. Comment letters and responses to public comments; and
2. The circulated Altitude Business Centre DEIR and Technical Appendices, SCH No. 2017051060, with additions shown as underline text and deletions shown as ~~stricken~~ text, as described in Subsection F.3, *Additions, Corrections, and Revisions to the DEIR*.

This FEIR document was prepared in accordance with CEQA and the CEQA Guidelines and represents the independent judgment of the CEQA Lead Agency (City of Chino).

F.2 Responses to DEIR Comments

The City of Chino received seven (7) comment letters regarding the DEIR prior to the conclusion of the DEIR's 45-day public review period. A list of the agencies, organizations, and persons that submitted comments on the DEIR is presented in Table F-1, *Organizations, Persons, and Public Agencies that Commented on DEIR*.

Table F-1 Organizations, Persons, and Public Agencies that Commented on DEIR

COMMENT LETTER	COMMENTING ORGANIZATION, PERSON OR PUBLIC AGENCY	DATE
A	Riverside County Airport Land Use Commission	April 23, 2019
B	City of Ontario	May 22, 2019
C	California Department of Conservation	May 23, 2019
D	South Coast Air Quality Management District	May 24, 2019
E	California Air Resources Board	June 3, 2019
F	Blum Collins LLP	June 3, 2019
G	Governor's Office of Planning and Research	June 4, 2019

F.2.1 CEQA REQUIREMENTS

CEQA Guidelines § 15088 requires the Lead Agency (City of Chino) to evaluate comments received from public agencies and interested parties who reviewed the DEIR and to provide written responses to comments that relate to significant environmental issues.

CEQA Guidelines § 15204(a) outlines the parameters for public agencies and interested parties to submit comments and the Lead Agency's responsibility for responding to specific comments. Per CEQA Guidelines § 15204(a), comments should be related to:

> *…the sufficiency of the document in identifying and analyzing possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible…CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or suggested by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.*

CEQA Guidelines § 15204(c) further advises that, "[r]eviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to CEQA Guidelines § 15064, an effect shall not be considered significant in the absence of substantial evidence." Additionally, CEQA Guidelines § 15204(d) notes that, "[e]ach responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility;" but, pursuant to CEQA Guidelines § 15204(e), "[t]his section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section [CEQA Guidelines § 15204]."

F.2.2 RESPONSES

Copies of each of the seven (7) comment letters referenced in Table F-1 are provided on the following pages, followed by responses to each individual comment. Pursuant to CEQA Guidelines § 15204(a) the level of detail provided in the response is to correspond to the level of detail provided in the comment.

None of the comment letters submitted to the City of Chino regarding the DEIR have produced substantial new information requiring recirculation or additional environmental review under CEQA Guidelines § 15088.5.

COMMENT LETTER A

AIRPORT LAND USE COMMISSION
RIVERSIDE COUNTY

April 23, 2019

Ms. Andrea Gilbert, Senior Planner
City of Chino Planning Department
13220 Ventral Avenue
Chino CA 91708

CHAIR
Steve Manos
Lake Elsinore

VICE CHAIR
Russell Betts
Desert Hot Springs

COMMISSIONERS

Arthur Butler
Riverside

John Lyon
Riverside

Steven Stewart
Palm Springs

Richard Stewart
Moreno Valley

Gary Youmans
Temecula

STAFF

Director
Simon Housman

John Guerin
Paul Rull
Barbara Santos

County Administrative Center
4080 Lemon St.,14th Floor.
Riverside, CA 92501
(951) 955-5132

www.rcaluc.org

RE: AIRPORT LAND USE COMMISSION (ALUC) DEVELOPMENT REVIEW REQUIRED

Jurisdiction Project Case: Altitude Business Centre Project

Dear Ms. Gilbert:

Thank you for providing the Riverside County Airport Land Use Commission (RCALUC) with a copy of the public hearing notice for this project. We believe that the impacts of the proposed project on Chino Airport and the potential safety hazards to potential occupants of this project due to its proximity to the airport are potential concerns that should be considered by the Planning Department and Planning Commission in making its determination regarding the proposed project. **A-1**

The RCALUC has no jurisdiction over development within the City of Chino. However, in the course of preparing an Airport Land Use Compatibility Plan for the portion of the Chino Airport Influence Area in Riverside County, RCALUC consultant Mead & Hunt prepared a compatibility zone map that covered properties on both the Riverside County and San Bernardino County sides of the boundary line. The Planning Commission may find this information helpful in analyzing the land uses proposed at this site. To find an electronic copy of the associate documents, please go to http://www.rcaluc.org/Plans/New-Compatibility-Plan. **A-2**

The project is located within Compatibility Zones B1, C, and D of the Chino Municipal Airport Influence Area. Non-residential intensities are limited in the following zones: Zone B1 40 people per average acre and 80 people per single acre; Zone C 75 people per average acre and 150 people per single acre; and Zone D 150 people per average acre and 450 people per single acre. **A-3**

The inevitable corollary of continued encroachment of urbanization in the vicinity of an airport, unless open areas are planned in advance, is a continual reduction in the number and size of open areas where an aircraft may safely land without endangering the populace. **A-4**

Thank you for the opportunity to provide comments. If you have any questions, please contact Paul Rull, ALUC Principal Planner, at (951) 955-6893. **A-5**

Sincerely,

RIVERSIDE COUNTY AIRPORT LAND USE COMMISSION

Comment Letter A

AIRPORT LAND USE COMMISSION

Paul Rull, ALUC Principal Planner

LETTER A Riverside County Airport Land Use Commission

A-1: The DEIR addressed the Project's compatibility with the Chino Airport in Subsections 4.8, *Hazards and Hazardous Materials*, and 4.14, *Transportation and Traffic*, and, based on the information disclosed in the DEIR and included in the Project's administrative record, the DEIR made a reasonable conclusion based on substantial evidence that the Project would: 1) not conflict with applicable airport compatibility objectives and policies of the Chino General Plan; 2) would be consistent with the applicable airport-related development regulations contained in The Preserve Specific Plan and the Chino Zoning Ordinance; and 3) would not result in substantial airport-related safety hazards. Also refer to Responses A-2 through A-4.

A-2: The City recognizes that although the Riverside County Airport Land Use Commission (ALUC) has no jurisdiction over the proposed Project, the ALUC has prepared an Airport Land Use Compatibility Plan (ALUCP) for the Chino Airport due to the Airport's proximity to Riverside County.

A-3: The Draft EIR disclosed that the Project site is located within Compatibility Zones B1, C, and D for the Chino Airport ALUCP prepared by the Riverside County ALUC (refer to DEIR p. 2-6). No additions/revisions to the EIR are warranted in response to this comment.

A-4: The City of Chino acknowledges and shares the Riverside County ALUC's concern regarding airport land use compatibility. As discussed on DEIR p. 2-2, the Project site is located in The Preserve Specific Plan, which applies the Chino Airport Overlay (CAO) zoning overlay to the Project site. Any proposed development within the CAO must comply with City Zoning Ordinance Section 20.09.050, Airport Overlay District. The CAO is intended to ensure the viability of airport operations at the Chino Airport, and to protect the health, safety, and welfare of the residents of Chino. Almost all of the building area proposed by the Project is located within Safety Zone III, which has no restrictions on industrial land uses like those proposed by the Project (refer to Draft EIR Figure 2-4 and Draft EIR p. 4.8-3). Proposed on-site development located outside of Safety Zone III would not conflict with the City of Chino's compatibility standards for development near the Chino Airport (refer to Draft EIR Subsection 4.8, analysis of Threshold "e"). Based on the foregoing, the Draft EIR concluded that implementation of the Project would not result in a substantial airport-related safety hazard for people residing or working in the Project area. This response clarifies and amplifies information presented in the DEIR and no additions/revisions to the EIR are warranted in response to this comment.

A-5: The City acknowledges that Mr. Paul Rull is the Riverside County ALUC contact person for additional questions related to the Project.

Comment Letter B

CITY OF ONTARIO
303 EAST "B" STREET, CIVIC CENTER ONTARIO CALIFORNIA 91764-4105
(909) 395-2000
FAX (909) 395-2070

PAUL S. LEON
MAYOR

RUBEN VALENCIA
MAYOR PRO TEM

ALAN D. WAPNER
JIM W. BOWMAN
DEBRA DORST-PORADA
COUNCIL MEMBERS

SCOTT OCHOA
CITY MANAGER

SHEILA MAUTZ
CITY CLERK

JAMES R. MILHISER
TREASURER

COMMUNITY DEVELOPMENT
RECEIVED
MAY 24 2019

May 22, 2019

City of Chino
Ms. Andrea Gilbert, Senior Planner
13220 Central Avenue
Chino, California 91710

RE: NOTICE OF AVAILABILITY (NOA) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED ALTITUDE BUSINESS CENTRE PROJECT

Ms. Gilbert,

Thank you for allowing the City of Ontario an opportunity to review and comment on the above referenced project. After reviewing the accompanying NOA, the City of Ontario requests the following comments be addressed:

1. Page 4.11-2, Existing Intersection Conditions – PCE factor of 2.0 should be applied to 3-axle truck trips per TIA report by Urban Crossroads and San Bernardino County Congestion Management Plan. Please verify.

B-1

We appreciate being involved in the environmental review of the project and look forward to continued communications regarding this project. If you have any questions regarding our comments, please contact me at (909) 395-2282, or Richard Ayala, Senior Planner, at (909) 395-2421.

B-2

Sincerely,

Cathy Wahlstrom
Planning Director

www.ontarioca.gov

Printed on recycled paper.

LETTER B City of Ontario

B-1: The Final EIR has been revised to acknowledge that a PCE factor of 2.0 was used for 3-axle truck trips (refer to Final EIR p. 4.11-2). This revision is consistent with the information presented in the Traffic Impact Analysis (Technical Appendix J) and does not alter the conclusions presented in the Draft EIR as the revision merely corrects a typographic error in the Draft EIR.

B-2: The City of Chino acknowledges that Ms. Cathy Walstrom and Mr. Richard Ayala are the City of Ontario contact persons for additional questions related to the Project.

COMMENT LETTER C

California
Department of Conservation
Division of Land Resource Protection

Gavin Newsom, Governor
David Bunn, Director

May 23, 2019

VIA EMAIL: AGILBERT@CITYOFCHINO.ORG
Ms. Andrea Gilbert, Senior Planner
Community Development Department
13220 Central Avenue
Chino, CA 91710

Dear Ms. Gilbert:

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ALTITUDE BUSINESS CENTRE PROJECT, SCH# 2017051060

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Draft Environmental Impact Report (DEIR) for the Altitude Business Centre Project submitted by the City of Chino (City). The Division monitors farmland conversion on a statewide basis and administers the Williamson Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

C-1

Project Description

The Project involves the development of approximately 72 acres of property located in the southern portion of the City of Chino, San Bernardino County, California. Implementation of the Project would involve the demolition of the subject property's existing residential and agricultural/dairy land uses and the construction and operation of a business center complex with up to 25 buildings ranging in size from 5,000 sq ft to 200,000 sq ft and totaling up to 1,219,000 sq ft of building space. The Project would include business park, light industrial, mini-warehouse, and warehouse land uses.

The Project site is located in the southern portion of the City of Chino, approximately 5.2 miles west of Interstate 15 (I-15), approximately 1.8 miles east of State Route 71 (SR-71), and approximately 4.3 miles south of State Route 60 (SR-60).

C-2

State of California Natural Resources Agency | Department of Conservation
801 K Street, MS 14-15, Sacramento, CA 95814
conservation.ca.gov | T: (916) 324-0850 | F: (916) 327-3430

COMMENT LETTER C

Agricultural Impacts

As stated in the DEIR, the project site contains land designated as Prime and/or Unique Farmland as classified by the Department of Conservation's Farmland Mapping and Monitoring Program.[1] According to Appendix G II(a) of the California Environmental Quality Act (CEQA), conversion of this type of farmland is one of the leading indicators in determining the significance of a project's impact to agricultural resources. C-3

Department Comments and Mitigation Measures

The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State.

Conservation easements will protect a portion of those remaining land resources and lessen project impacts in accordance with CEQA Guideline § 15370. The Department highlights this measure because of its acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Although direct conversion of agricultural land is often an unavoidable impact under CEQA analysis, mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts. CEQA states that the Lead Agency shall describe the specific reasons for rejecting identified mitigation measures. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible based on its elements. Because agricultural conservation easements are an available mitigation tool they should always be considered. C-4

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

[1] Altitude Business Centre, CEQA Initial Study, p. 25

Comment Letter C

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

C-5

Thank you for giving us the opportunity to comment on the Draft Environmental Impact Report for the Altitude Business Centre Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Environmental Planner at (916) 324-7347 or via email at Farl.Grundy@conservation.ca.gov.

C-6

Sincerely,

Monique Wilber
Conservation Program Support Supervisor

LETTER C California Department of Conservation

C-1: The City of Chino acknowledges the Department of Conservation's responsibility as the farmland monitor and administrator of agricultural land conservation programs across the State, as well as the Department's role in the CEQA review process.

C-2: The Department of Conservation's summary of the Project is accurate.

C-3: The Draft EIR disclosed that implementation of the Project would convert approximately 40.6 acres of land designated as Prime Farmland by the Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) to non-agricultural use. The Project would not result in the conversion of Unique Farmland or Farmland of Statewide Importance, as designated by the FMMP, to non-agricultural use. See Draft EIR p. 4.2-9.

C-4: The commenter advocates that an agricultural conservation easement is a viable mitigation option for farmland under CEQA. The Draft EIR does not dispute that agricultural conservation easements may be, in certain circumstances, a valid mitigation option. However, on pages 4.2-11 and 4.2-12, the Draft EIR discloses the City's determination that applying an agricultural conservation easement to another nearby property is not a feasible mitigation option for the proposed Project due to rising land costs, increasing expenses, increasingly stringent environmental regulations for agricultural uses, encroaching urban land uses, planned habitat conservation areas, and constraints on agriculture within the Prado Dam inundation area. No additions/revisions to the EIR are warranted in response to this comment.

C-5: On Page 4.2-12, the Draft EIR acknowledges that in light of the fact that an off-site agricultural conservation easement is not a feasible mitigation option for the Project (see Response C-4, above) the only remaining mitigation option for the Project's impact to Farmland would be to place all or a substantial portion of the Project site into a permanent agricultural conservation easement. The Draft EIR concluded that such an action would conflict with the City's long-term vision of developing the Project site with "Airport Related" land uses, as set forth in The Preserve Specific Plan and the City's General Plan. Requiring all or a portion of the Project site to be set aside for permanent agricultural use would conflict with over 15 years of City policies contained in the General Plan and The Preserve Specific Plan that identified the Project site for development with non-agricultural uses. No additions/revisions to the EIR are warranted in response to this comment.

C-6: The City acknowledges that Mr. Farl Grundy is the Department of Conservation contact person for additional questions related to the Project.

COMMENT LETTER D

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL AND USPS:
agilbert@cityofchino.org
Andrea Gilbert, Senior Planner
Development Services Department
City of Chino
13220 Central Avenue
Chino, CA 91710

May 24, 2019

Draft Environmental Impact Report (Draft EIR) for the Proposed Altitude Business Centre Project (SCH No.: 2017051060)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final EIR.

South Coast AQMD Staff's Summary of Project Description

The Lead Agency proposes to demolish 87,000 square feet of existing residential and agricultural/dairy uses and construct 25 buildings for general light industrial, warehouse, business park, and self-storage uses totaling 1,219,015 square feet on 72 acres (Proposed Project). The Proposed Project is located on the southeast corner of Kimball Avenue and Euclid Avenue in the City of Chino. Construction is anticipated to begin in 2018 and will occur in three phases (Phases 1, 2, and 3) over a three-year period with overlapping construction and operational years, as suggested by the Traffic Impact and Noise Analysis[1]. The Proposed Project is anticipated to be fully operational by 2020[2]. During operations, the Proposed Project is expected to generate 1,317 truck trips per day[3]. D-1

South Coast AQMD Staff's Summary of Air Quality Analysis

In the Air Quality Analysis section, the Lead Agency quantified the Proposed Project's construction and operational emissions and compared those emissions to South Coast AQMD's recommended regional and localized air quality CEQA significance thresholds. Based on the analyses, the Lead Agency found that the Proposed Project's regional and localized construction air quality impacts would be significant for NOx at 159.30 pounds per day (lbs/day)[4]. However, with the implementation of Mitigation Measure (MM) 4.3-3, which requires that, during grading activities, all off-road diesel-powered construction equipment greater than 150 horsepower (hp) meet Tier 3 standards[5], construction–related NOx emissions would be reduced to 86.07 lbs/day[6], which is below South Coast AQMD's air quality CEQA significance threshold for construction. The Lead Agency also found that with the implementation of MMs 4.3-5 through 4.3-8, which include vehicle idling restrictions, and among other requirements, the use of electric cargo handling equipment, the Proposed Project's operational air quality impacts would remain significant and unavoidable for NOx emissions at 486.14 lbs/day[7]. The Lead Agency also prepared a mobile source Health Risk Assessment (HRA), and compared the results to South Coast AQMD's CEQA D-2 D-3 D-4 D-5

[1] Draft EIR. Section 4.10 Noise and Section 4.11 Transportation Traffic.
[2] *Ibid*. Appendix B: Air Quality Impact Analysis, Health Risk Assessment (HRA) and Supplemental Air Quality Assessment. Page 36.
[3] *Ibid*. Section 3 Project Description. Page 3-21.
[4] *Ibid*. Section 4.3 Air Quality. Page 4.3-20.
[5] *Ibid*. Page 4.3-28.
[6] *Ibid*.
[7] *Ibid*. Page 4.3-25 through 29.

COMMENT LETTER D

significance threshold of 10 in one million for cancer risk[8]. The Lead Agency found that the Proposed Project's air quality impacts from operations would result in a cancer risk of 6.5 in one million[9]. Additionally, the Lead Agency discussed South Coast AQMD Rules specific to the Proposed Project, such as Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities[10].

D-5 CONT.

South Coast AQMD's 2016 Air Quality Management Plan

On March 3, 2017, the South Coast AQMD's Governing Board adopted the 2016 Air Quality Management Plan (2016 AQMP)[11], which was later approved by the California Air Resources Board on March 23, 2017. Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and the challenges facing the South Coast Air Basin. The most significant air quality challenge in the Basin is to achieve an additional 45 percent reduction in nitrogen oxide (NOx) emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment.

D-6

South Coast AQMD Staff's General Comments

South Coast AQMD staff has comments on the Air Quality and HRA analyses. The Lead Agency did not analyze a scenario where construction activities of one development phase overlap with operational activities of one or two development phases. Additionally, South Coast AQMD staff found that the Lead Agency used different exposure parameters for a 30-year residential cancer risk than those discussed in the main body of the HRA in the Draft EIR. Please see the attachment for more information. In the event that the Lead Agency finds that, after revisions to the Air Quality Analysis, the Proposed Project will result in significant air quality impacts during construction, mitigation measures will be required. Additionally, since the Proposed Project will result in significant and unavoidable NOx emissions during operation, South Coast AQMD staff recommends that the Lead Agency require further operational mitigation measures. The attachment includes a list of potential mitigation measures as guidance to the Lead Agency that should be reviewed for incorporation in the Final EIR. The attachment also includes recommendations to include discussions of South Coast AQMD rules that may be applicable to the Proposed Project.

D-7

D-8

Conclusion

Pursuant to California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), South Coast AQMD staff requests that the Lead Agency provide South Coast AQMD staff with written responses to all comments contained herein prior to the certification of the Final EIR. In addition, issues raised in the comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice (CEQA Guidelines Section 15088(c)). Conclusory statements do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and to the public who are interested in the Proposed Project. Further, when the Lead Agency makes the finding that the recommended changes to the existing MMs 4.3-3 and 4.3-6 and new mitigation measures are not feasible, the Lead Agency should describe the specific reasons for rejecting them in the Final EIR (CEQA Guidelines Section 15091).

D-9

[8] South Coast AQMD has developed the CEQA significance threshold of 10 in one million for cancer risk. When South Coast AQMD acts as the Lead Agency, South Coast AQMD staff conducts a HRA, compares the maximum cancer risk to the threshold of 10 in one million to determine the level of significance for health risk impacts, and identifies mitigation measures if the risk is found to be significant.

[9] Draft EIR. Appendix B: Air Quality Impact Analysis, Health Risk Assessment (HRA) and Supplemental Air Quality Assessment. Page 1.

[10] South Coast AQMD. Rule 1403 – Control of Emissions from Demolition/Renovation Activities. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1403.pdf

[11] South Coast AQMD. March 3, 2017. *2016 Air Quality Management Plan*. Accessed at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

COMMENT LETTER D

Andrea Gilbert May 24, 2019

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Alina Mullins, Assistant Air Quality Specialist, at amullins@aqmd.gov or (909) 396-2402, should you have any questions.

D-9 CONT.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

Attachment
LS:AM
SBC190501-16
Control Number

3

COMMENT LETTER D

Andrea Gilbert May 24, 2019

ATTACHMENT

Air Quality Impact Analysis – Overlapping Construction and Operational Impacts

1. Based on a review of the Air Quality Analysis, South Coast AQMD staff found that the Lead Agency did not consider nor analyze a scenario where construction activities overlap with operational activities (e.g., one phase implementing the Proposed Project is operational while another phase implementing the Proposed Project is under construction). Since implementation of the Proposed Project is expected to occur over a multi-year timeframe of three years from 2018 to 2020[12], an overlapping construction and operation scenario is reasonably foreseeable, unless the Proposed Project includes requirement(s) that will prohibit overlapping construction and operational activities. To conservatively analyze a worst-case impact scenario that is reasonably foreseeable at the time the Draft EIR is prepared, South Coast AQMD staff recommends that the Lead Agency use its best efforts to identify the overlapping construction and operational years, combine construction emissions (including emissions from demolition) with operational emissions, and compare the combined emissions to South Coast AQMD's air quality CEQA *operational* thresholds of significance to determine the level of significance in the Final EIR. D-10

Health Risk Assessment Analysis

2. Upon a review of Appendix B: Air Quality Impact Analysis, Health Risk Assessment (HRA) and Supplemental Air Quality Assessment[13] and the technical files[14], South Coast AQMD staff found that the Lead Agency discussed the exposure parameters for residents, school, and offsite worker scenarios based on the 2015 OEHHA Guidelines. Upon further review of the detailed health risk calculations, South Coast AQMD staff found that the Lead Agency used different exposure parameters than those discussed in the main body of the Draft EIR. For example in the main body of the Draft EIR, the Lead Agency discussed the exposure assumptions for a 30-year residential cancer risk for age bins "0 to 2" and "2 to 16". The respective daily breathing rates are 1090 and 572, and the respective age sensitivity factors are 10 and 3[15]. Upon a review of the exposure factors used to calculate contaminant intake, South Coast AQMD staff found that for age bins "0 to 2" and "2 to 16" the Lead Agency used a different daily breathing rate of 461 and a different age sensitivity factor of 2.6[16]. Therefore, South Coast AQMD staff recommends that the Lead Agency provide an explanation for using different breathing rates and age sensitivity factors in the risk calculations than those discussed in the main body of the Draft EIR. Alternatively, South Coast AQMD staff recommends the Lead Agency revise the HRA to use the most conservative risk exposure parameters to estimate the Proposed Project's cancer risk in the Final EIR. D-11

Recommended Revisions to Existing Mitigation Measures

3. The Lead Agency has committed to implementing mitigation measures to reduce the Proposed Project's significant air quality impacts from construction and operations. These mitigation measures include, but are not limited to, Mitigation Measure (MM) 4.3-3 and MM 4.3-6. MM 4.3-3 requires that during grading activities, construction equipment greater than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified or better. MM 4.3-6 requires that, at a minimum, the Proposed Project is designed to include preferential parking for clean air vehicles, the use of electric-powered cargo handling equipment, and installation of water efficiency features. To further reduce the Proposed Project's air quality impacts, particularly from NOx emissions during operation, South D-12 D-13

[12] Draft EIR. Section 1 Executive Summary. Page 1-4.
[13] *Ibid*. Appendix B: Air Quality Impact Analysis, Health Risk Assessment (HRA) and Supplemental Air Quality Assessment.
[14] *Ibid*. Appendix 2.2.: Risk Calculations.
[15] *Ibid*. Appendix B: Air Quality Impact Analysis, Health Risk Assessment (HRA) and Supplemental Air Quality Assessment. Page 17.
[16] *Ibid*.

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Coast AQMD staff recommends that the Lead Agency incorporate the following revisions to existing mitigation measures in the Final EIR.

MM 4.3-3
Prior to grading permit issuance, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the following note. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of Chino staff to confirm compliance.

a) During ~~grading~~ all construction activity, all construction equipment with more than ~~150~~ 50 horsepower shall be California Air Resources Board (CARB) ~~Tier 3~~ Tier 4 Certified or better. Such equipment should be outfitted with Best Available Control Technology (BACT) devices including, but not limited to, a CARB certified Level 3 Diesel Particulate Filters (DPF). Level 3 DPFs are capable of achieving at least an 85 percent reduction in particulate matter emissions. A list of CARB verified DPFs are available on the CARB website. Additionally, the Lead Agency should include this requirement in applicable bid documents, and that successful contractor(s) must demonstrate the ability to supply compliant equipment prior to the commencement of any construction activities.

D-13 CONT.

MM 4.3-6
Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Chino demonstrating that the Project is designed to exceed the California Energy Code (Title 24, Part 6) standards in effect at the time of building permit application submittal by three (3) percent and includes the energy efficiency design features listed below at a minimum.

a) The Lead Agency should ensure that the Proposed Project is constructed with the appropriate infrastructure to meet the three percent exceedance of the California Energy Code (Titel 24, Part 6) standards and facilitate sufficient electric charging for passenger vehicles and trucks to plug-in. Electrical panels should be appropriately sized to allow for future expanded use. The Lead Agency should also include analyses to evaluate and identify sufficient power available for zero emission passenger cars and trucks, and supportive infrastructures (e.g., EV charging stations) in the Energy and Utilities and Service Systems Sections of the Final EIR, where appropriate. Additionally, the Lead Agency should implement a rideshare program for warehouse and other commercial employees, and set a goal to achieve a certain participation rate over a period of time. The Lead Agency should provide incentives for employees to encourage the use of public transportation or carpooling, such as discounted transit passes, carpool rebates, such as preferential parking locations for carpool, vanpool, EVs and CNG vehicles;

b) All outdoor cargo handling equipment (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts) shall be electric-powered; and

c) All fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent.

D-14

Additional Recommended Mitigation Measures

4. CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant adverse air quality impacts. In the event that, upon revisions to the Air Quality Analysis based on Comment No. 1, the Lead Agency finds the Proposed Project would result in significant air quality impacts during construction, mitigation would be required (CEQA Guidelines Section 15126.4). South Coast AQMD staff has compiled a list of

D-15

D-16

COMMENT LETTER D

recommended construction mitigation measures as suggested resources and guidance to the Lead Agency to assist in the identification of feasible mitigation measures for incorporation in the Final EIR. Additionally, to further reduce the Proposed Project's significant and unavoidable operational NOx emissions, and to facilitate the achievement of goals and attainment timelines outlined in the 2016 AQMP, South Coast AQMD staff recommends that the Lead Agency incorporate the following operational mitigation measures in the Final EIR. For more information on potential mitigation measures as guidance to the Lead Agency, please visit South Coast AQMD's CEQA Air Quality Handbook website[17].

D-16 CONT.

Mitigation Measure for Construction Air Quality Impacts

- Require the use of zero-emission (ZE) or near-zero emission (NZE) on-road construction haul trucks (e.g., material delivery trucks and soil import/export) such as heavy-duty trucks with natural gas engines that meet the California Air Resources Board (CARB)'s adopted optional NOx emission standard at 0.02 grams per brake horsepower-hour (g/bhp-hr). When requiring ZE or NZE on-road haul trucks, the Lead Agency should include analyses to evaluate and identify sufficient power and supportive infrastructure available for ZE/NZE trucks in the Energy and Utilities and Service Systems Sections of the Final EIR, where appropriate.

  At a minimum, require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year[18] or newer engines that meet CARB's 2010 engine emission standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks. Early implementation of the Truck and Bus Regulation at the Proposed Project will help establish in the construction management plan a preference for construction contractor(s) who can supply 2010 model year trucks earlier than 2023, provide time and opportunities to resolve implementation challenges ahead of 2023, facilitate the transition to 2010 model year trucks in 2023, ease the costs and burden of regulatory compliance, and yield emission reductions from fleets earlier than 2023.

  To monitor and ensure ZE, NZE, or 2010 model year trucks are used at the Proposed Project, the Lead Agency should require that operators maintain records of all trucks associated with the Proposed Project's construction and make these records available to the Lead Agency upon request. The records will serve as evidence to prove that each truck called to the Proposed Project during construction meets the minimum 2010 model year engine emission standards. Alternatively, the Lead Agency should require periodic reporting and provision of written records by contractors, and conduct regular inspections of the records to the maximum extent feasible and practicable.

D-17

- Maintain equipment maintenance records for the construction portion of the Proposed Project. All construction equipment must be tuned and maintained in compliance with the manufacturer's recommended maintenance schedule and specifications. All maintenance records for each equipment and their construction contractor(s) should be made available for inspection and remain on-site for a period of at least two years from completion of construction.

D-18

[17] South Coast AQMD. Accessed at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.
[18] CARB adopted the statewide On-Road Truck and Bus Regulation in 2010. The Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. More information on the CARB's Truck and Bus Regulations is available here: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

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- Encourage construction contractors to apply for South Coast AQMD "SOON" funds. The "SOON" program provides funds to applicable fleets for the purchase of commercially-available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles. More information on this program can be found at South Coast AQMD's website: http://www.aqmd.gov/home/programs/business/business-detail?title=off-road-diesel-engines. D-19

Mitigation Measures for Operational Air Quality Impacts from Mobile Sources

- Require the use of ZE or NZE heavy-duty trucks during operation, such as trucks with natural gas engines that meet CARB's adopted optional NOx emission standard of 0.02 grams per brake horsepower-hour (g/bhp-hr). At a minimum, require that operators of heavy-duty trucks visiting the Proposed Project during operation commit to using 2010 model year[19] or newer engines that meet CARB's 2010 engine emission standards of 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks. Include analyses to evaluate and identify sufficient power available for zero emission trucks and supportive infrastructures in the Energy and Utilities and Service Systems Sections of the Final EIR, where appropriate.

  To monitor and ensure ZE, NZE, or 2010 model year trucks are used at the Proposed Project, the Lead Agency should require that operators maintain records of all trucks associated with the Proposed Project's operation, and make these records available to the Lead Agency upon request. The records will serve as evidence to prove that each truck called to the Proposed Project during operation meets the minimum 2010 model year engine emission standards. Alternatively, the Lead Agency should require periodic reporting and provision of written records by operators, and conduct regular inspections of the records to the maximum extent feasible and practicable. D-20

- Limit the daily number of truck trips allowed at the Proposed Project to the level that was analyzed in the Final EIR (e.g., 1,317 daily truck trips). If higher daily truck volumes are anticipated during operation than what was analyzed in the Draft EIR, the Lead Agency should commit to re-evaluating the Proposed Project's air quality and health risks impacts through CEQA prior to allowing higher activity levels (CEQA Guidelines Section 15162). D-21

- Require trucks to use the truck routes that were used to analyze the air quality and HRA impacts in the Final EIR. D-22

- Enforce the City's designated truck routes, which are discussed in Appendix J: Traffic Impact Analysis (TIA)[20] of the Draft EIR. D-23

- Have truck routes clearly marked with trailblazer signs, so that trucks will not enter residential areas that are adjacent to portions of the designated truck routes analyzed in the Final EIR. D-24

- Restrict overnight truck parking in residential areas. Establish parking within the Proposed Project where trucks can rest overnight. D-25

[19] CARB adopted the statewide On-Road Truck and Bus Regulation in 2010. The Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. More information on the CARB's Truck and Bus Regulations is available here: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

[20] Draft EIR. Appendix J: Traffic Impact Analysis. Pages 63 and 68.

COMMENT LETTER D

- Establish area(s) within the Proposed Project site for repair needs and ensure that these designated areas are away from any sensitive land uses. D-26

Mitigation Measures for Operational Air Quality Impacts from Area Sources

- Maximize the use of solar energy including solar panels. Installing the maximum possible number of solar energy arrays on the building roofs and/or on the Proposed Project site to generate solar energy for the facility and/or EV charging stations. D-27
- Require the use of electric landscaping equipment, such as lawn mowers and leaf blowers. D-28
- Require use of electric or alternatively fueled sweepers with HEPA filters. D-29
- Maximize the planting of trees in landscaping and parking lots. D-30
- Use light colored paving and roofing materials. D-31
- Utilize only Energy Star heating, cooling, and lighting devices, and appliances. D-32

Responsible Agency, Permits, and Compliance with South Coast AQMD Rules

5. Implementation of the Proposed Project may require permits from South Coast AQMD. If operation of the Proposed Project will involve the use of stationary diesel-fueled internal combustion or compression engines (i.e., generators or firefighting equipment), South Coast AQMD Rule 1470 – Requirement for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines[21] and South Coast AQMD Rule Series 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters[22], including Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters[23] and Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters[24] would apply and should be discussed in the Air Quality Section of the Final EIR. Therefore, South Coast AQMD staff recommends that the Lead Agency consult with South Coast AQMD Permitting and Engineering staff as early as feasible to determine permit requirements and any applicable rules and regulations that should be discussed in the CEQA document for the Proposed Project. Additionally, in the event that the Proposed Project will require new stationary equipment that requires a permit from South Coast AQMD, the Lead Agency should identify South Coast AQMD as a Responsible Agency for the Proposed Project in the Final EIR. Questions on permits and applicable South Coast AQMD rules can directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385. For more general information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. D-33

[21] South Coast AQMD. Rule 1470 – Requirement for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1470.pdf.
[22] South Coast AQMD. Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1146.pdf.
[23] South Coast AQMD. Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1146-1.pdf.
[24] South Coast AQMD. Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1146-2.pdf.

LETTER D South Coast Air Quality Management District

D-1: The South Coast Air Quality Management District's (SCAQMD) summary of the Project's development proposal is accurate; however, the location of the Project site noted in this comment is incorrect. The Project site is not located at the southeast corner of the Euclid Avenue/Kimball Avenue intersection but rather the Project site is located south of Kimball Avenue and approximately 1,000 feet east of Euclid Avenue (as noted on Draft EIR pp. 2-1 & 3-1).

D-2: The SCAQMD accurately summarizes the Project construction regional emissions analysis contained in the Draft EIR and the Air Quality Impact Analysis (Technical Appendix B1); however, it should be noted that neither the Draft EIR nor the Air Quality Impact Analysis identify a significant impact related to localized NO_X emissions during Project construction. As shown on Draft EIR Table 4.3-7, localized NO_X emissions during Project construction would not exceed the applicable significance threshold established by the SCAQMD and would be less than significant.

D-3: This comment accurately notes that Project construction would result in less-than-significant regional NO_X emissions after the application of Mitigation Measure (MM) 4.3-3.

D-4: The SCAQMD accurately summarizes the Project operations analysis contained in the Draft EIR and the Air Quality Impact Analysis, the mitigation measures included in the DEIR for operational-related air quality effects, and the determination in the Draft EIR regarding the significance of the air quality effects during Project operation.

D-5: The SCAQMD accurately summarizes the health risk analysis contained in Draft EIR Subsection 4.3, *Air Quality*, and the Mobile Source Diesel Health Risk Assessment (Technical Appendix B2).

D-6: The City of Chino acknowledges the SCAQMD's imperative for reducing NO_X emissions within the South Coast Air Basin in order to achieve National Ambient Air Quality Standards for ozone.

D-7: Responses to SCAQMD's specific comments on the air quality and health risk analyses, as well as responses to SCAQMD's recommended additional mitigation measures, are provided in Responses D-11 through D-32.

D-8: Responses to SCAQMD's specific comments related to the permits and rules that would apply during the implementation and operation of the Project are addressed in Response D-33.

D-9: The City acknowledges that Ms. Alina Mullins is the SCAQMD contact person for additional questions. The City will provide a copy of the Final EIR to SCAQMD, including written responses to all comments regarding the Draft EIR, a minimum of 10 days prior to considering the Project for approval and certification of the Final EIR.

D-10: The commenter asserts that the Draft EIR did not include an analysis scenario that discloses the air pollutant emissions that would occur in the event that operation of the Project's initial phase(s) overlaps with construction of the Project's later phase(s). Notwithstanding, the analysis provided in the Draft EIR follows the guidance from SCAQMD in their *CEQA Air Quality Handbook*, which provides direction to quantify construction and operation emissions separately and compare each to the applicable construction and operational thresholds of significance (Chapters 6 and 9 of the CEQA Handbook). Neither the City nor their

air quality expert, Urban Crossroads, are aware of any significance thresholds that SCAQMD has developed or published to evaluate the significance of regional criteria pollutant emissions in instances where construction activities may overlap in the very short term with operational activities. Regardless, in response to the comment, Urban Crossroads quantified the regional criteria pollutant emissions that would occur in the event that Project operations were to overlap with Project construction; see Table D-1 below. As shown in Table D-1, overlapping operational and construction activities on the Project site would not result in regional criteria pollutant emissions that exceed the SCAQMD operational thresholds of significance and, also, would be less than the peak operational emissions levels already disclosed in the Draft EIR (refer to Draft EIR Table 4.3-6). Accordingly, consideration of overlapping operational and construction activities on the Project site would not result in a significant impact that was not disclosed in the Draft EIR and would not merit additional mitigation measures.

Table D-1: Emissions Summary of Potential Overlapping Construction and Operational Activities

Year	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Phase 1 Operational Emissions + Phase 2 Construction Emissions						
Phase 1 Operational Emissions	9.06	99.40	68.32	0.40	19.87	6.51
Phase 2 Construction	4.36	73.85	88.52	0.16	11.50	6.81
Maximum Daily Emissions	**13.42**	**173.25**	**156.84**	**0.56**	**31.37**	**13.32**
Phase 1 + Phase 2 Operational Emissions + Phase 3 Construction Emissions						
Phase 1 + 2 Operational Emissions	18.12	198.8	136.64	0.80	39.74	13.02
Phase 3 Construction	4.96	73.24	88.21	0.15	11.41	6.75
Maximum Daily Emissions	**23.08**	**272.04**	**224.85**	**0.95**	**51.15**	**19.77**

D-11: In response to the SCAQMD's comment the Project's health risk calculations were re-modeled using the parameters recommended by SCAQMD and also were updated to reflect the latest EMFAC2017 emission factors to provide the most conservative health risk analysis. The updated calculations show that operation of the Project would result in a maximum carcinogenic risk of 8.07 in one million and a non-cancer health hazard risk of 0.0029 at the MEIR; a maximum carcinogenic risk of 0.56 in one million and a non-cancer health hazard risk of 0.002 at the MEIW, and a maximum carcinogenic risk of 0.18 in one million and a non-cancer health hazard risk of 0.00024 at the MEISC. The modeling files for the updated health risk calculations are included in the Final EIR as Technical Appendix B4. The numerical values from the updated health risk calculations are slightly higher than the values reported in the Draft EIR but still below the applicable SCAQMD carcinogenic and non-cancer health hazard risk thresholds of significance for all receptor classes. Accordingly, even with consideration of the updated health risk calculations that rely on the most up-to-date methodologies and data, Project-related health risk impacts are determined to be less-than-significant. This determination is consistent with the conclusion made the in the Draft EIR (refer to Draft EIR p. 4.3-23).

D-12: The SCAQMD's summary of the mitigation requirements for the Project, as presented in the Draft EIR, is accurate.

D-13: The commenter requests that MM 4.3-3 from the Draft EIR be revised to become more stringent. However, MMs 4.3-1, 4.3-2, and 4.3-3 included in the Draft EIR to address Project construction NO_X emissions (regional) and PM emissions (localized) are already sufficient to reduce Project-related construction effects to less-than-significant levels based on SCAQMD significance thresholds. No revisions/modifications to any of these MMs are required to reduce impacts below SCAQMD significance thresholds, and no additional mitigation is required.

D-14: The commenter requests that MM 4.3-6 from the Draft EIR be revised to include specific design features that are claimed to reduce the Project's demand for energy. As presented in the Draft EIR, MM 4.3-6 already requires the Project Applicant to provide documentation to the City at time of building permit review that demonstrates that the proposed building(s) exceed the incumbent California Energy Code (Title 24, Part 6) requirements by at least three (3) percent. The City will confirm these design features are incorporated into the Project during building permit review and during the construction inspection process. In addition, through mandatory compliance with the California Green Building Standards Code (CALGreen) (see Cal Code of Regs., Title 24, Part 11), the Project would be required to include infrastructure improvements (e.g., conduit, appropriately-sized electrical panels) to ensure that proposed buildings can meet reasonably expected electricity demands for zero emission vehicles. Lastly, the City does not have an enforcement mechanism or the staffing resources to monitor and enforce transit and carpool requirements on private business operations. CEQA Guidelines Section 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the lead agency and have a proportional nexus to the Project's impact on the environment. Therefore, the City has determined that this recommendation is not feasible to require as a mitigation measure. No revisions/modifications were made to MM 4.3-6 in the Final EIR.

D-15: As noted in Response D-10 above, overlapping Project construction and operational activities would result in a less-than-significant impact and no mitigation is required.

D-16: The commenter requests that the EIR be revised to incorporate additional and more stringent mitigation measures addressing air pollution emissions. Responses to the specific items requested by the commenter are provided in Responses D-17 through D-32.

D-17: The commenter asserts that the Project should utilize zero-emission, near-zero-emission, or 2010 model year on-road construction vehicles. However, as described in Response D-13, the Project's air quality effects during construction would be less than significant with the imposition of the mitigation measures already identified in the Draft EIR. Because the Draft EIR adequately addressed and mitigated the Project's air quality impacts during construction, the City determines that additional mitigation is not warranted.

D-18: At the request of the SCAQMD, the following mitigation measure has been added to the Final EIR:

MM 4.3-3a Project construction contractors shall assure that all construction equipment complies with all applicable California Air Resources Board (CARB) air quality regulations. Also, Project construction contractors shall tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications. Maintenance records for all pieces of equipment shall be kept on-site for the duration of construction activities and shall be made available for periodic inspection by City of Chino staff or their designee.

The addition of MM 4.3-3a merely amplifies the mitigation already provided in the Draft EIR and does not warrant re-circulation of the EIR.

D-19: At the request of the SCAQMD, the following mitigation measure has been added to the Final EIR:

MM 4.3-3b The Project Applicant shall encourage construction contractors to apply for South Coast Air Quality Management District "SOON" funds. The "SOON" program provides funds to qualifying off-road diesel construction fleets for the purchase of commercially-available, low-emission heavy-duty engines.

The addition of MM 4.3-3b merely amplifies the mitigation already provided in the Draft EIR and does not warrant re-circulation of the EIR.

D-20: The commenter asserts that the Project should be required to use zero-emission, near-zero-emission, or 2010 model year heavy-duty trucks to reduce ongoing, long-term NO_X emissions. However, at present, requiring zero-emission vehicles is economically and technologically infeasible; also, such vehicles are not available on a large enough scale to be relied upon. In a report titled "Transitioning to Zero-Emission Heavy Duty Freight Vehicles," the International Council on Clean Transportation (ICCT) provides an overview of advancing technologies (ICCT, September 2017)[1]. The ICCT reports that although the technology is advancing and although at some point in the distant future non-diesel technology will likely be used in mass to power freight movement, "zero-emission vehicle technologies do present considerable challenges. They have a combination of near- and long-term barriers, issues, and questions that will have to be addressed before they can become widespread replacements for conventional trucks and tractor-trailers that are typically diesel fueled" (ICCT, p. 31). "Tesla's announced battery electric semi-tractor prototype is the only (emphasis added) battery electric project we found in our [world-wide] assessment targeting long-haul heavy-duty applications" (ICCT, p. 31). Instead of electric, "[h]ydrogen fuel cell heavy-duty vehicles could play a key role for low-carbon freight transport in several applications" (ICCT, p. 32). The ICCT further reports that their detailed analysis ". . . indicates that these technologies will be insufficient (emphasis added) to achieve decarbonization of heavy-duty vehicles by 2050" (ICCT, p. 32). "As technology solutions emerge, questions about how best to sequence the rollout of infrastructure in advance of vehicle deployment, and avoid technology lock-in or stranded assets, will become more important" (ICCT, p. 33). Imposing extensive requirements on the proposed Project related to emerging technology, when the various types of technological advancements and their timeframes for common availability are not known with any certainty, provides no to little assurance that requirements that may be imposed on the Project by the City related to zero-emission technologies would ever be used (or be capable of being used) by the building user.

In relation to the CARB's Truck and Bus Regulation, the Regulation's requirements were disclosed in the DEIR (refer to DEIR Page 4.3-12) and the Project's future building user(s) will be required to comply with the applicable phase-in timeline required by State regulation to ensure that any heavy trucks serving the Project would meet 2010 model year engine requirements or equivalent by January 1, 2023.

It is also important to note that the analysis provided in the EIR presents a "snapshot in time" of the Project's worst-case air pollutant emissions under the current regulatory environment. The Draft EIR recognizes that by January 1, 2023, the CARB's Truck and Bus Regulation will be in full effect and that all heavy-duty trucks traveling to and from the Project site will be required to comply with applicable engine standards to minimize air pollutant emissions (see Draft EIR p. 4.3-12). For informational purposes, the City's air quality expert modeled the Project's expected regional criteria air pollutant emissions post-January 1, 2023 – after the Truck and Bus Regulation becomes fully effective – and the results of the modeling exercise is presented in Table D-2. The modeling files for the informational criteria air pollutant calculations are included in the Final EIR as Technical Appendix B4. As shown, Project operational air pollutant emissions would be reduced relative to the peak levels disclosed in the Draft EIR once the more stringent engine requirements go into effect; but, operational NO_X emissions would remain significant and unavoidable based on the SCAQMD's daily significance thresholds.

[1] https://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf

D-2: Project Operational Emissions Summary with Truck and Bus Regulation in Full Effect

Operational Activities: Summer Scenario	Emissions (lbs/day)					
	VOC	NOX	CO	SOX	PM10	PM2.5
Area	27.68	1.22e-03	0.13	1.00e-05	4.80e-04	4.80e-04
Energy Source	0.54	4.90	4.12	0.03	0.37	0.37
Mobile (Passenger Cars)	5.29	3.78	86.89	0.29	35.71	9.57
Mobile (Trucks)	3.40	151.57	41.76	0.77	32.42	10.08
Total Max. Daily Emissions	**36.92**	**160.26**	**132.91**	**1.09**	**68.50**	**20.02**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Operational Activities: Winter Scenario	**Emissions (lbs/day)**					
	VOC	**NOX**	**CO**	**SOX**	**PM10**	**PM2.5**
Area	27.68	1.22e-03	0.13	1.00e-05	4.80e-04	4.80e-04
Energy Source	0.54	4.90	4.12	0.03	0.37	0.37
Mobile (Passenger Cars)	4.80	3.95	71.36	0.26	35.71	9.57
Mobile (Trucks)	3.18	156.67	35.43	0.77	32.37	10.06
Total Max. Daily Emissions	**36.19**	**165.53**	**111.05**	**1.06**	**68.46**	**20.00**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

D-21: The commenter asserts that the City should restrict the amount of daily truck traffic to and from the Project to the same level assumed in the Draft EIR. CEQA requires that an EIR evaluate a proposed development project based on reasonable assumptions and foreseeable actions. The number of truck trips that the Project is expected to generate is based on the Project's design (as an industrial business center) and recommendations from the Institute of Transportation Engineers (ITE) in their *Trip Generation Manual (9th Edition)*, which is reasonable and reliable information. Instituting a cap on the number of trucks that can access the Project site on a daily basis is not required under CEQA, nor would it be feasible for the City to monitor and enforce such a requirement. There is no substantive information presented by this comment or by any of the information in the Project's administrative record that contradicts the reasonable assumptions made in the Draft EIR about the expected number of truck trips. Also, requiring a daily vehicle count with the intent of limiting the number of vehicles that could collectively enter or exit multiple buildings on the Project site on a daily basis would render the Project economically and functionally infeasible. Few, if any new industrial developments in southern California have vehicle trip caps and requirements to report vehicle trips; as such, requiring vehicle caps and the reporting of vehicle count data to a public agency (City of Chino) would hinder/eliminate the Project's ability to secure tenants or buyers, because such end users would choose to buy or rent facilities which do not have trip caps and requirements to count and report daily trips for the public record. Further, end users generally consider the operating characteristics of their private businesses proprietary, and imposing a requirement to publicly report daily logs of each vehicle that enters and exists the Project would very likely sway end users away from occupying the Project site. Based on the foregoing discussion, the City concludes that it would be infeasible to impose and enforce a numerical cap on the number of trucks that access the site on a daily basis during the Project's operation.

D-22: The commenter requests that the Project's truck traffic be required to use the truck routes analyzed in the Draft EIR. The City has established truck routes, as described in the Draft EIR and the Project's Traffic Impact Analysis (*Technical Appendix J)*. Truck traffic, including trucks traveling to and from the Project site, are required to use legal truck routes and are restricted from using other routes, subject to enforcement penalties (fines).

D-23: The commenter requests that the EIR be revised to include a mitigation measure requiring the City to enforce their designated truck routes. As addressed in Response D-22, the City does require trucks to utilize designated truck routes and has an enforcement mechanism (fines) to ensure compliance with the City's regulations. No changes to the EIR are needed.

D-24: At the request of the SCAQMD, the following mitigation measure has been added to the Final EIR:

MM 4.3-9 Legible, durable, weather-proof signs shall be placed at driveways where delivery trucks exit onto public streets that direct truck drivers to designated truck routes. The City of Chino shall confirm the required signs are installed prior to issuance of an occupancy permit.

The addition of MM 4.3-9 does not warrant re-circulation of the EIR.

D-25: The commenter requests that the EIR be revised to include a mitigation measure that prohibits trucks from parking in residential areas overnight. The Project's design provides off-street parking on the Project site in accordance with applicable provisions of Chino Municipal Code Chapter 20.18. Furthermore, Chino Municipal Code Chapter 10.44.010 includes a comprehensive prohibition of truck and commercial vehicle parking along all City streets not officially designated as a City truck route. For these reasons, it is not reasonably foreseeable that vehicles accessing the Project site would be inclined to park in residential areas overnight.

D-26: The commenter requests that the EIR be revised to include a mitigation measure requiring a designated on-site area for vehicle repairs. The Project's design does not include a designated area for on-site vehicle repairs, but the Project's approval would not preclude a building user from designating an on-site repair area during the building permit stage of Project implementation. Regardless, the SCAQMD does not provide substantial evidence that inclusion of an on-site repair area would result in any demonstrable, quantifiable reduction in the Project's operational NO_X emissions.

D-27: The commenter requests that the EIR be revised to include a mitigation measure requiring the installation of solar panels on the Project site. As shown on EIR Table 4.3-6, only a small percentage of the Project's air pollutant emissions are associated with energy use; as such, the installation of solar panels does not have a proportional nexus to a majority of the Project's air pollutant emissions, which are attributed to mobile sources (vehicle exhaust). Although the Project Applicant does not propose the installation of solar panels at this time; but, the proposed buildings are designed to accommodate the future installation of solar panels should the Project Owner and/or Occupant decide to rely on solar energy for a portion of the Project's energy needs. Building roof areas that are free from obstructions and physically appropriate for the installation of solar panels are designed to support the weight of solar panel arrays (and associated equipment) and the building's electrical system is designed to accommodate the future installation of a solar energy inverters.

D-28: The commenter requests that the EIR be revised to include a mitigation measure requiring the use of electric landscape maintenance equipment (e.g., leaf blowers); however, the City does not have an enforcement mechanism or the staffing resources to monitor and enforce the equipment used by contractors that maintain the Project site landscaping during the course of normal, private business operations. In addition, electric-powered landscape maintenance equipment such as mowers and leaf blowers would require the use of long cords or heavy batteries, and are not in common use, if at all, by landscape maintenance contractors in Chino. CEQA Guidelines Section 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the lead agency and have a proportional nexus to the Project's impact on the

environment. As shown in the Project's Air Quality Impact Analysis (Technical Appendix B1, model outputs), only a small percentage of the Project's air pollutant emissions are associated with the use of landscape maintenance equipment; as such, the use of electric landscape equipment does not have a proportional nexus to a majority of the Project's air pollutant emissions, which are attributed to mobile sources (vehicle exhaust). Furthermore, the SCAQMD does not provide substantial evidence that use of the electric landscape equipment would result in any demonstrable, quantifiable reduction in the Project's operational NO_X emissions. Therefore, the City has determined that this recommendation is not reasonable or feasible to require as a mitigation measure.

D-29: The commenter requests that the EIR be revised to include a mitigation measure requiring the use of electric or alternatively-fueled sweepers with HEPA filters during on-site maintenance activities; however, the City does not have an enforcement mechanism or the staffing resources to monitor and enforce the equipment used by contractors that maintain the Project site during the course of normal, private business operations. CEQA Guidelines Section 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the lead agency and have a proportional nexus to the Project's impact on the environment. Furthermore, the SCAQMD does not provide substantial evidence that use of the specified sweepers would result in any demonstrable, quantifiable reduction in the Project's operational NO_X emissions. Therefore, the City has determined that this recommendation is not feasible to require as a mitigation measure.

D-30: The commenter requests that the EIR be revised to include a mitigation measure that maximizes the planting of trees in on-site landscaping and parking areas. The Project Applicant will install trees on-site as indicated in the Project's landscaping plan on file with the City of Chino and the City concludes that no revisions to the EIR are warranted. Tree plantings are focused along the perimeter of the Project site and within the automobile parking lot (to maximize the amount of shade on pavement). Trees cannot be planted in the tractors/trailer parking areas because adequate clear space needs to be maintained for the functional movement of tractors and trailers in order to avoid damage to vehicles/equipment and to trees and other plant materials.

D-31: The commenter requests that the EIR be revised to include a mitigation measures that requires the use of light-colored paving and roofing materials. However, the Project Applicant already proposes light-colored paving and roofing materials, as indicated on the Project's site plans and architectural drawings on file with the City of Chino. No changes to the EIR are needed.

D-32: The commenter requests that the EIR be revised to include a mitigation measure that requires the use of energy efficient heating and cooling equipment, appliances and fixtures. The Project already will be required by the California Green Building Standards Code to comply with the Title 24 Building Energy Efficiency Standards (Nonresidential) published by the California Energy Commission which contain mandatory standards for mechanical systems, lighting (indoor and outdoor), and appliances to minimize energy use. No changes to the EIR are needed.

D-33: The commenter acknowledges the various SCAQMD rules that the Project would be required to abide by during construction and operation. The proposed Project's building users are not known at this time. As such, it is unknown if any specialized equipment or activities requiring permits from the SCAQMD will be required for any element of Project operation. Prior to the issuance of occupancy permits, future users of the Project site will be required to provide documentation to the City of Chino demonstrating compliance with all applicable regulatory requirements.

COMMENT LETTER E

CALIFORNIA AIR RESOURCES BOARD

Gavin Newsom, Governor
Jared Blumenfeld, CalEPA Secretary
Mary D. Nichols, Chair

June 3, 2019

Ms. Andrea Gilbert
Development Services Department
City of Chino
13220 Central Avenue
Chino, California 91710

Dear Ms. Gilbert:

Thank you for providing California Air Resources Board (CARB) staff the opportunity to comment on the Altitude Business Centre Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2017051060. The Project consists of a business center complex with up to 25 light industrial buildings which would range in size from 5,000 square feet to 200,000 square feet of floor area. The Project's total floor area would be 1,219,015 square feet. The Project site is located within the City of Chino (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes.

E-1

Existing residences are located approximately 35 feet from the Project's southeastern boundary. In addition to residences, there is a school (Cal Aero Preserve Academy) located within a mile of the Project. Furthermore, there are three areas planned for future residential development immediately adjacent to the project site, and a fourth area less than one-half mile away. The community is surrounded by existing toxic diesel emission sources, which include existing warehouses and the Chino Airport. Due to the Project's proximity to residences (existing and planned) and a school already disproportionately burdened by multiple sources of pollution, CARB staff is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel emissions generated during the construction and operation of the Project would negatively impact the community, which is already disproportionally impacted by air pollution from existing freight facilities.

E-2

Through its authority under Health and Safety Code, section 39711, the California Environmental Protection Agency (CalEPA) is charged with the duty to identify

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COMMENT LETTER E

disadvantaged communities. CalEPA bases its identification of these communities on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code, section 39711, subsection (a)). In this capacity, CalEPA currently defines a disadvantaged community, from an environmental hazard and socioeconomic standpoint, as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). CalEnviroScreen uses a screening methodology to help identify California communities currently disproportionately burdened by multiple sources of pollution. The census tract containing the Project is within the top 1 percent for Pollution Burden.[1] Therefore, CARB urges the City to ensure that the Project does not adversely impact neighboring disadvantaged communities.

E-2 CONT.

The health risk assessment (HRA) prepared for the Project indicates that the incremental increase in lifetime cancer risk at the nearest residence would be 6.5 in a million. CARB staff is concerned that the HRA underestimates the cancer risks because it did not use CARB's most current version of the Emission Factors model (EMFAC) and did not account for diesel particulate matter (PM) emissions from transport refrigeration units (TRU).[2]

E-3

CARB staff have the following concerns on the DEIR and HRA:

1. Since the Project description in the DEIR did not explicitly state the warehouse proposed under the Project would not include cold storage space, there is a possibility that trucks and trailers visiting the Project site would be equipped with TRUs. Modeling in support of the DEIR did not account for emissions of diesel PM that result from the operation of TRUs. TRUs on trucks and trailers can emit large quantities of diesel PM while operating within the Project site. Residences and other sensitive receptors (e.g., day care facilities, senior care facilities, and schools) located near where these TRUs could be operating would be exposed to diesel PM emissions that would result in significant cancer risk. If trucks and trailers visiting the Project are equipped with TRUs, operational NOx and diesel PM emissions and health risks from TRUs should be quantified and reported in the Final Environmental Impact Report (FEIR).

E-4

[1] Pollution Burden represents the potential exposures to pollutants and the adverse environmental conditions caused by pollution.
[2] Transport refrigeration units (TRU) are refrigeration systems powered by integral diesel engines that protect perishable goods during transport in insulated truck and trailer vans, rail cars, and domestic shipping containers.

COMMENT LETTER E

2. The Project's HRA should be revised to include an existing baseline (current conditions) and future baseline without the Project, and the future conditions with the Project. The health risks modeled under both the existing and the future baselines should reflect all applicable federal, state, and local rules and regulations. By evaluating health risks using all baselines, the public and city planners will have a complete understanding of the potential health impacts that would result from the Project. These include the impacts from the loss of expected emission reductions as truck fleets turn over to cleaner models. E-5

3. The Air Quality section of the DEIR did not quantify or evaluate the potential health risk impact that would result during Project construction. The Office of Environmental Health Hazard Assessment's (OEHHA) guidance recommends assessing cancer risks for construction projects lasting longer than two months. Since Project construction would occur over a period longer than two months and the Project will be located in close proximity to existing and future proposed residences, the City should revised the Project's HRA to include the Project's construction cancer and noncancer risks and disclose the result in the FEIR for public review. E-6

4. The Project's air quality and health impacts were modeled using CARB's 2014 Emission Factors model (EMFAC2014). Project-related air pollutant emissions from mobile sources should be modeled using CARB's latest EMFAC2017. This model generally shows higher emissions of particulate matter from trucks than EMFAC2014. E-7

CARB staff is concerned with the modeling assumptions found in the Air Quality section of the DEIR. The emissions and health risks reported in the DEIR were estimated under the assumption that the Project would not be utilized for cold storage. As a result, the DEIR did not account for potential air quality impacts associated with the operation of TRUs. Because the future tenant of the proposed warehouse/industrial buildings are unknown, the air quality impact analysis in the DEIR should have accounted for trucks and trailers with TRUs entering the Project site. In this case, the DEIR does not assess the air quality impacts from the Project adequately. Without proper analysis, it is impossible to understand the magnitude of the Project's air quality impacts and the resulting health risk to nearby communities. The City must adequately account for all sources that may contribute to operational emissions, and clearly articulate the foundation and calculations used to assess the effectiveness of mitigation measures. E-8

In addition to the concerns listed above, CARB staff encourages the City and applicant to implement the measures listed in Attachment A of this comment letter to reduce the Project's construction and operational air pollution emissions. CARB staff appreciates E-9 E-10

COMMENT LETTER E

the opportunity to comment on the DEIR for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, at (916) 440-8242 or via email at stanley.armstrong@arb.ca.gov.

E-10 CONT.

Sincerely,

Richard Boyd, Chief
Risk Reduction Branch
Transportation and Toxics Division

Attachment

cc: See next page.

COMMENT LETTER E

cc: State Clearinghouse
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COMMENT LETTER E

ATTACHMENT A

Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers

California Air Resources Board (CARB) staff recommends developers and government planners use all existing and emerging zero to near-zero emission technologies during project construction and operation to minimize public exposure to air pollution. Below are some measures, currently recommend by CARB staff, specific to warehouse and distribution center projects. These recommendations are subject to change as new zero-emission technologies become available.

Recommended Construction Measures

1. Ensure the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools. E-11
2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating onsite. Necessary infrastructure may include the physical (e.g., needed footprint), energy, and fueling infrastructure for construction equipment, onsite vehicles and equipment, and medium-heavy and heavy-heavy duty trucks. E-12
3. In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits such that emission reductions achieved equal or exceed that of a Tier 4 engine. E-13
4. In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered. E-14

Attachment - 1

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5. In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NO_x standard starting in the year 2022.[1] E-15

6. In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB staff is available to assist in implementing this recommendation. E-16

Recommended Operation Measures

1. Include contractual language in tenant lease agreements that requires tenants to use the cleanest technologies available, and to provide the necessary infrastructure to support zero-emission vehicles and equipment that will be operating onsite. E-17

2. Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units. This requirement will eliminate the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the project site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration and cryogenic transport refrigeration are encouraged and can also be included lease agreements.[2] E-18

3. Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable. E-19

4. Include contractual language in tenant lease agreements that requires future tenants to exclusively use zero-emission light- and medium-duty delivery trucks and vans. E-20

5. Include contractual language in tenant lease agreements requiring all TRUs, trucks, and cars entering the Project site be zero-emission. E-21

6. Include contractual language in tenant lease agreements that requires all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission. This equipment is widely available. E-22

[1] In 2013, CARB adopted optional low-NO_x emission standards for on-road heavy-duty engines. CARB staff encourages engine manufacturers to introduce new technologies to reduce NO_x emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model years 2010 and later. CARB's optional low-NO_x emission standard is available at https://www.arb.ca.gov/msprog/onroad/optionnox/optionnox.htm.

[2] CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

Attachment - 2

COMMENT LETTER E

7. Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the project site to be model year 2014 or later today, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030. E-23

8. Include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation,[3] Periodic Smoke Inspection Program (PSIP),[4] and the Statewide Truck and Bus Regulation.[5] E-24

9. Include contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than five minutes while onsite. E-25

10. Include contractual language in tenant lease agreements that limits onsite TRU diesel engine runtime to no longer than 15 minutes. If no cold storage operations are planned, include contractual language and permit conditions that prohibit cold storage operations unless a health risk assessment is conducted and the health impacts fully mitigated. E-26

11. Include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid. E-27

[3] In December 2008, CARB adopted a regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation is available at https://www.arb.ca.gov/cc/hdghg/hdghg.htm.

[4] The PSIP program requires that diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions to ensure compliance. CARB's PSIP program is available at https://www.arb.ca.gov/enf/hdvip/hdvip.htm.

[5] The regulation requires newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. CARB's Statewide Truck and Bus Regulation is available at https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

Attachment - 3

LETTER E California Air Resources Board

E-1: The California Air Resources Board's (CARB) summary of the Project is accurate.

E-2: The City of Chino acknowledges the CARB's responsibility to identify and protect California's disadvantaged communities from disproportionate air pollution. As disclosed in Draft EIR Table 4.3-8 and Table 4.3-11, implementation of the Project would not exceed SCAQMD's significance threshold for localized air pollutant emissions after the application of identified mitigation measures and, therefore, would not expose communities adjacent to the Project site to substantial adverse air pollutant concentrations (refer to Draft EIR pp. 4.3-21 through 4.3-23).

E-3: At the request of the CARB, the Project's operational air pollutant emissions (regional) and health risk impacts were re-calculated to account for the potential for refrigerated warehouse space to be provided on-site. The updated analysis assumed that if refrigerated warehouse uses were to be provided on-site, they would be most likely/appropriate to occur at the locations of proposed Buildings 4, 5, and 6 as these buildings are located the farthest away from existing or planned residential land uses. The analysis conservatively assumed that up to 154,500 square feet of refrigerated uses would be provided on-site, which corresponds to approximately 30 percent of the proposed floor area of Buildings 4, 5, and 6. The updated analysis incorporated the most up-to-date modeling inputs, including the latest EMFAC2017 Emission Factors and the latest version of the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (*10th edition*), to provide the most accurate modeling forecasts possible. The modeling files for the supplemental regional emissions modeling and health risk calculations are included in the Final EIR as Technical Appendix B4.

Table E-1 summarizes the results of the supplemental regional emissions modeling. It should be noted that the emissions reported in Table E-1 also take into account the operational mitigation measures, MM 4.3-5 through MM 4.3-8, identified in the Draft EIR. With the exception of VOC emissions (which saw a slight increase in maximum daily emissions from 51.35 pounds per day to 54.84 pounds per day, but remained below applicable SCAQMD significance thresholds), all regional criteria pollutant emissions were lower than what was disclosed in the Draft EIR (refer to Table 4.3-10).

Table E-1: Operational Regional Emissions Summary with Refrigerated Warehouse Space

Operational Activities Summer (emissions in pounds per day)						
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	27.67740	0.00125	0.13490	0.00001	0.00048	0.00048
Energy Source	0.53940	4.90320	4.11870	0.02940	0.37260	0.37260
Mobile (Passenger Cars)	12.30060	4.50470	78.22010	0.21390	24.12440	6.47680
Mobile (Trucks)	14.32070	288.79150	122.47360	0.96510	35.11770	12.68490
Total Max. Daily Emissions	**54.84**	**298.20**	**204.95**	**1.21**	**59.62**	**19.53**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Operational Activities Winter (emissions in pounds per day)						
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	27.67740	0.00125	0.13490	0.00001	0.00048	0.00048
Energy Source	0.53940	4.90320	4.11870	0.02940	0.37260	0.37260
Mobile (Passenger Cars)	8.55240	4.71940	65.21470	0.19200	24.12440	6.47680
Mobile (Trucks)	13.74180	303.73860	126.23770	0.96590	35.13480	12.70130
Total Max. Daily Emissions	**50.51**	**313.36**	**195.71**	**1.19**	**59.63**	**19.55**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

The supplemental health risk calculations show that operation of the Project would result in a maximum carcinogenic risk of 8.07 in one million and a non-cancer health hazard risk of 0.0029 at the MEIR; a maximum carcinogenic risk of 0.56 in one million and a non-cancer health hazard risk of 0.002 at the MEIW, and a maximum carcinogenic risk of 0.18 in one million and a non-cancer health hazard risk of 0.00024 at the MEISC. The numerical values from the updated health risk calculations would be below the applicable SCAQMD carcinogenic and non-cancer health hazard risk thresholds of significance for all receptor classes. Accordingly, Project-related health risk impacts are determined to be less-than-significant even if refrigerated warehouse space is provided on-site; this determination is consistent with the conclusion made the in the Draft EIR (refer to Draft EIR p. 4.3-23).

Based on the foregoing, the potential use of refrigerated warehouse space on the Project site would not expose regional or local receptors to more substantial or adverse air quality effects than were already disclosed in the Draft EIR. A new mitigation measure, MM 4.3-10, has been added to the Final EIR to ensure that in the event refrigerated warehouse space is developed on-site in the future that such refrigerated warehouse space does not exceed the total floor area (i.e., 154,500 square feet) assumed in the supplemental air quality analysis summarized above. MM 4.3-10 is listed below:

MM 4.3-10 A maximum of 154,500 square feet of refrigerated warehouse space shall be permitted within the Project. The refrigerated warehouse space shall only be permitted west of Mayhew Avenue, at the approximate locations of proposed Buildings 4, 5, and/or 6. For purposes of this mitigation measure, refrigerated warehouse space shall include all areas kept at a sustained temperature of 55 degrees Fahrenheit or lower.

E-4: This comment reiterates CARB's request for an analysis that addresses the potential for refrigerated warehouse space to be provided on-site, which was addressed in Response E-3.

E-5: The Health Risk Assessment (*Technical Appendix B2*) included with the Draft EIR already disclosed the existing background cancer risk in the Project area based on calculations prepared by the SCAQMD in their MATES-IV report (refer to *Technical Appendix B2*, Page 26). The Health Risk Assessment also discloses that other development projects near the Project site also produce toxic air contaminant emissions that could exacerbate existing background cancer risks in the Project area (refer to *Technical Appendix B2*, Pages 27 & 28). Given the number of unknown variables (e.g., building users, site operations) it is not possible to quantify health risks from nearby development projects with any degree of accuracy. Notwithstanding, the Health Risk Assessment contains sufficient contextual information for City of Chino decision makers to understand existing air quality conditions and the contributions that the Project and nearby development would make to local receptors. It should also be noted that the Health Risk Assessment purposefully presents the Project's health risk calculations as a "static" figure to provide a conservative (or worst case) estimation of the Project-related effects. As the CARB acknowledges in their comment, as truck fleets turn over to cleaner models air pollutant emissions and associated health risks will decline in the future. As such, it is reasonably expected that Project-related health effects would be reduced in the future as compared to the impacts disclosed in the Draft EIR.

E-6: The commenter asserts that a construction Health Risk Assessment is warranted. Based on a review of relevant information, a Health Risk Assessment analyzing the Project's construction emissions of diesel particulate matter is not warranted because the primary purpose of an Health Risk Assessment is to determine long-term health risks, such as cancer risks over, for example, a 30-year residency or 70-year lifetime (emphasis added). As discussed in the Draft EIR, construction of the Project would take place over a non-contiguous time period spread over a few years, which is much less than the many years of exposure

required for air pollution-related health risks to present. Exposure of such a relatively brief duration would not create long-term health effects to adjacent receptors. Additionally, the City follows SCAQMD guidance for air quality analysis. The SCAQMD's Health Risk Assessment procedures recommend evaluating risk from extended exposures measured across several years and not for short term construction exposures or for infrequent operational exposure to diesel truck deliveries or trash hauling.[2]

SCAQMD uses Health Risk Assessments for compliance with AB2588, SCAQMD Rule 1401 and Rule 1402, which regulate facility emissions.[2] The SCAQMD's *Procedures for Rules 1401 and 212* includes guidance for short-term project Health Risk Assessments (Tier 2 analysis); however, these recommendations are for emissions from such sources as portable equipment, like generators, or air pollution control equipment used for soil remediation projects, not for short-term construction projects.[2] SCAQMD has also adopted guidance on the use of Health Risk Assessments for analyzing mobile source emissions.[3] However, this guidance refers to emissions associated with facilities such as truck stops and distribution centers that attract large volumes of daily heavy duty diesel truck trips, creating a long term emission source. Therefore, the SCAQMD's Health Risk Assessment guidance for mobile source emissions is not relevant for the Project's short-term construction activities.

Notwithstanding, in order to be fully responsive to CARB's request, supplemental, construction-level health risk calculations have been prepared for the Project. Results of the supplemental construction health risk evaluation identify the maximum potential carcinogenic health risk to an individual receptor would be 7.88 in one million, which is less than the SCAQMD's applicable threshold of 10 in one million. As such, health risk impacts from Project construction would be less than significant and no further analysis is warranted.

E-7: The commenter requests that the Health Risk Assessment analysis be updated to incorporate EMFAC2017. As noted in Response E-3, EMFAC2017 was used in an updated Health Risk Assessment.

E-8: This comment reiterates CARB's request for an analysis that addresses the potential for refrigerated warehouse space to be provided on-site, which was addressed in Response E-3.

E-9: The commenter requests that the EIR be revised to incorporate additional and more stringent mitigation measures addressing air pollution emissions. Responses to the specific items requested by the commenter are provided in Responses E-11 through E-27.

E-10: The City acknowledges that Mr. Stanley Armstrong is the CARB contact person for additional questions related to the Project.

E-11: The mitigation measures included in the Draft EIR already are sufficient to reduce the Project construction-related air quality effects to less-than-significant levels (see Draft EIR p. 4.3-28). The City of Chino has determined that no additional mitigation measures for construction-related air quality effects are required to reduce impacts to less-than-significant levels.

[2] SCAQMD. 2015. Risk Assessment (RA) Procedures for Rules 1401 and 212. Accessed July 2017 at http://www.aqmd.gov/home/permits/risk-assessment; SCAQMD. 2016. AB2588 Supplemental Guidelines. Accessed July 2017 at http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/health-risk-assessment

[3] SCAQMD. 2002. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis. Accessed July 2017 at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.

E-12: The commenter requests that the EIR be revised to include a mitigation measure that requires the use of zero- and near-zero emission vehicles during construction. However, as addressed in Response D-17, the mitigation provided in the Draft EIR reduces the Project's construction air quality effects to less-than-significant levels and additional mitigation is not warranted.

E-13: The commenter requests that the EIR be revised to include a mitigation measure that requires the use of off-road construction vehicles with Tier IV or cleaner engines. However, as addressed in Response D-13, the mitigation provided in the Draft EIR is sufficient to reduce the Project's construction air quality effects to less-than-significant levels and additional mitigation is not warranted.

E-14: The commenter requests that the EIR be revised to include a mitigation measure that requires the Project to utilize certain construction procedures and equipment to reduce air pollutant emissions. However, as addressed in Response E-11, the mitigation included in the Draft EIR already is sufficient to reduce the Project's construction air quality effects to less-than-significant levels and additional mitigation is not warranted.

E-15: The commenter requests that the EIR be revised to include a mitigation measure that requires the Project to utilize certain procedures and equipment to reduce construction air pollutant emissions. However, as addressed in Response E-11, the mitigation included in the Draft EIR already is sufficient to reduce the Project's construction air quality effects to less-than-significant levels and additional mitigation is not warranted.

E-16: At the request of the commenter, a new mitigation measure, MM 4.3-3a, has been added to the Final EIR to require construction equipment to comply with applicable CARB air quality regulations. The mitigation measure reads as follows:

MM 4.3-3a Project construction contractors shall assure that all construction equipment complies with all applicable California Air Resources Board (CARB) air quality regulations. Also, Project construction contractors shall tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications. Maintenance records for all pieces of equipment shall be kept on-site for the duration of construction activities and shall be made available for periodic inspection by City of Chino staff or their designee.

E-17: The commenter requests that the EIR be revised to include a mitigation measure that requires Project occupants/tenants to use the cleanest technologies available. However, the City does not have an enforcement mechanism or the staffing resources to monitor and enforce the equipment/vehicles used by Project building occupants during the course of normal, private business operations. CEQA Guidelines Section 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the lead agency and have a proportional nexus to the Project's impact on the environment. Therefore, the City has determined that this recommendation is not feasible to require as a mitigation measure. Notwithstanding, through mandatory compliance with the California Green Building Standards Code (CALGreen) (see Cal Code of Regs., Title 24, Part 11), the Project would be required to include infrastructure improvements (e.g., conduit, appropriately-sized electrical panels) to ensure that proposed buildings can meet reasonably expected electricity demands for zero emission vehicles.

E-18: At the request of the commenter, a new mitigation measure, MM 4.3-11, has been added to the Final EIR that requires electrical hookups to be provided at any loading dock that services refrigerated warehouse space. MM 4.3-11 reads as follows:

MM 4.3-11 Prior to the issuance of a building permit and/or tenant improvement permit for any warehouse building that contains refrigerating storage, an electrical hookup for refrigeration units on delivery trucks shall be provided at all loading dock spaces servicing the refrigerated storage spaces. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.

E-19: The commenter's request that TRUs accessing the Project site be plug-in capable is addressed by Response E-18.

E-20: The commenter requests that the EIR be revised to include a mitigation measure that requires Project occupants/tenants to exclusively use zero-emission light- and medium-duty delivery trucks and vans. For the reasons discussed in Response E-17 the City determines this request to be infeasible and no changes have been made to the EIR.

E-21: The commenter requests that the EIR be revised to include a mitigation measure that requires the use of specified zero-emission vehicles. For the reasons summarized in Response E-17 the City determines this request to be infeasible and no changes have been made to the EIR.

E-22: The Draft EIR already addresses the commenter's request for the use of zero-emission service equipment via MM 4.3-6b. No revisions to MM 4.3-6b or additional mitigation is required.

E-23: The commenter requests that the EIR be revised to include a mitigation measure that requires the use of specified zero-emission vehicles. For the reasons summarized in Responses E-17 and D-20 the City determines this request to be infeasible and no changes have been made to the EIR.

E-24: The commenter requests that the EIR be revised to include a mitigation measure that requires vehicles and equipment on-site to comply with specific CARB programs and regulations. The City makes the reasonable assumption that all private businesses that may operate on the Project site will comply with all applicable State programs and regulations related to air pollution control. However, the City does not have the staffing resources to inspect vehicles that access the Project site or an enforcement mechanism remedy any deficiencies that may be found. CEQA Guidelines Section 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the lead agency and have a proportional nexus to the Project's impact on the environment. Therefore, the City has determined that this recommendation is not feasible to require as a mitigation measure. Notwithstanding, it is reasonable to assume that future Project operations will fully comply with all applicable federal, State, and local laws and regulations, including applicable State air quality regulations.

E-25: The Draft EIR already addresses the commenter's concern regarding vehicle idling through a mitigation measure that requires signage to be posted on-site that advertises idling restrictions (refer to MM 4.3-5). It should be noted that MM 4.3-5 requires all signs to note that idling on-site is restricted to a maximum of three minutes, which is more restrictive than the five-minute idling period allowed by State law. No revisions to MM 4.3-5 or additional mitigation is required.

E-26: As noted in Response E-25, the Draft EIR addresses the commenter's concern regarding vehicle idling through MM 4.3-5, which limits trucks to less than 3 minutes of idling while on-site. In addition, the Final EIR contains a new mitigation measure that requires loading docks servicing refrigerated warehouse space to provide electrical hookups for delivery trucks and, also, prohibits trucks incapable of utilizing the electrical hookup for powering refrigeration from accessing the site (refer to Response E-18). The City concludes that

the mitigation provided within the EIR adequately addresses the CARB's comment and no additional mitigation is warranted.

E-27: The commenter requests that the EIR be revised to include a mitigation measure requiring the installation of solar panels on the Project site. For the reasons explained in Response D-27 the City concludes that no changes to the EIR or additional mitigation is warranted.

COMMENT LETTER F

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June 3, 2019

Ms. Andrea Gilbert
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City of Chino
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VIA FIRST CLASS MAIL & EMAIL

Re: Altitude Business Center Deir, SCH No. 2017051060

Dear Ms. Gilbert:

We represent the Golden State Environmental Justice Alliance ("GSEJA"), a nonprofit organization which is particularly active in the San Bernardino and Riverside County area. This is to provide comments under the California Environmental Quality Act ("CEQA") on behalf of GSEJA with respect to the Altitude Business Center project. F-1

According to the Draft Environmental Impact Report ("DEIR"), the Project site is approximately 72 acres located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 600 feet west of Rincon Meadows Avenue, just south of the Chino Airport. The Project would build "up to 25 light industrial buildings," although the DEIR subsequently identifies the uses of 16 of these buildings as "Business Park" uses and four of them as Warehouse uses, *see* DEIR at 3-7, and we are therefore uncertain whether the DEIR has adequately analyzed the operational traffic and air quality impacts on the site. F-2

Before we get into the DEIR's impacts analysis, we wish to comment that the Alternatives Analysis fails in its primary mission, which under Guidelines section 15126.6 is to analyze alternatives that would achieve the project objectives but reduce the impacts of the Project to some degree. The identified alternatives don't do this. F-3

With respect to Agricultural Resources, we note that you acknowledge a significant impact at DEIR 4.2-9 and 4.2-11 for cumulative impacts, but you fail to undertake any mitigations for the loss of Prime and Unique Farmland in the amount of approximately 52.7 acres. Other than citing case law for different localities you haven't demonstrated with substantial evidence that mitigations such as conservation easements are not feasible. You argue that conservation easements for dairy uses are not considered environmentally preferable, but the uses on the site F-4

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are obviously *not dairy uses*, so this argument falls flat and there is no substantial evidence for your conclusion and the lack of discussion means the DEIR fails as an informational document. Finally, your rejection of alternatives must be based on substantial evidence and it is not here.

F-4 CONT.

With respect to Air Quality, we submit herewith the comments of Soil Water Air Protection Enterprise ("SWAPE"). We have the following additional comments:

1. Given the Project's significant impacts with respect to NOx emissions, the City was obligated to consider a host of measures typically proposed by the South Coast Air Quality Management District, including: a) Allowing only trucks of model year 2010 or later onsite, and b) Allowing only the amount of truck traffic analyzed for the DEIR. You haven't demonstrated that either of these measures or others are infeasible. F-5 F-6
2. The City acknowledges the recent decision in *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502, but it fails to include the analysis required under that case, relying instead upon a SCAQMD amicus brief *on the losing side* of that case to argue that the characterization of health impacts is infeasible. The City does not demonstrate that quantifying health impacts is infeasible in either the DEIR or the Appendix. F-7
3. The City was required to provide its substantial evidence relating to health impacts in the DEIR and not the Appendix under *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412. F-8
4. The Health Risk Assessment acknowledges a greater than 10 in a million health risk from the Project and cumulative projects, although it does not quantify the extent of this risk. *See* Health Risk Assessment at 28. This information was required to be included in the DEIR and not merely the HRA, and it should have been quantified. F-9

Concerning Biological Resources, the DEIR fails to include as an attachment the results of the supposedly focused surveys for the Burrowing Owl. This violates the requirements of California Department of Fish & Wildlife ("CDFW") 2012 Staff Report on Burrowing Owl Mitigation as well as CEQA. Further, the DEIR concedes a significant cumulative impact on the Burrowing Owl, but it fails to provide for any mitigation in violation of CEQA. F-10

As to Greenhouse Gas ("GHG") Impacts, the DEIR is woefully lacking in analysis and mitigation. It starts out attempting to deny that Global Climate Change ("GCC") is even happening, even though a number of experts have concluded that California's recent deadliest-ever wildfire seasons are directly linked to GCC, *see, e.g.,* Stanford University School of Earth, Energy, & Environmental Sciences, "Wildfires Destroying California Bring Questions About Health And Climate" (Nov. 15, 2018), *available at* https://earth.stanford.edu/news/wildfires-destroying-california-bring-questions-about-health-and-climate#gs.c7s18p; R. Jackson, "The West Is Going Up In Flames: Fires Are Raging from British Columbia to California, and the Administration's Shortsighted Climate Policies Will Make Things Worse," *Scientific American* (Aug. 29, 2018), *available at* https://blogs.scientificamerican.com/observations/the-west-is-going-up-in-flames/?r; N. S. Diffenbaugh, D. Singh, J.S. Mankin, "Unprecedented Climate Events: Historical Changes, Aspirational Targets, and National Commitments," *Science Advances* (Feb. 14, 2018), *available at* F-11

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https://advances.sciencemag.org/content/4/2/eaao33541/tab-pdf, and even as the DEIR itself cites to the Climate Action Team's Scenarios paper to the effect that GCC will lead to a 55% increase in large wildfires by the end of the century. This is fundamentally irresponsible as well as meaning that the DEIR is insufficient as an informational document under CEQA.

F-11 CONT.

At 4.7-12, the DEIR then asserts that it doesn't have to assess compliance with SB 32 because the California Air Resources Board's Second Update to the Scoping Plan was not published prior to the filing of the Notice of Preparation for this Project. But SB 32 was already law when the NOP was filed, that is apparent from the State Clearinghouse Number. And as of the publication of the DEIR it had been law for over two years. The Supreme Court has twice made clear that projects at this time must assess compliance with targets beyond those for 2020, and Guidelines section 15064.4 makes that clear as well, and if the City if Chino thinks it can get away with assessing compliance based on its out-of-date Climate Action Plan, it is sorely mistaken.

F-12

We look forward to your responses to our comments. Please advise us of all progress on this project at collins@blumcollins.com and bentley@blumcollins.com.

F-13

Sincerely,

/s/ Hannah Bentley

Hannah Bentley
BLUM | COLLINS LLP

Attachments (email only): SWAPE Letter of May 29, 2019
SWAPE AERSCREEN Modeling Files
SWAPE CALEEMOD Output Files

COMMENT LETTER F

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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May 29, 2019

Hannah Bentley
Blum Collins LLP
707 Wilshire Boulevard, Suite 4880
Los Angeles, CA 90017

Subject: Comments on Altitude Business Centre (SCH No. 201751060)

Dear Ms. Bentley,

We have reviewed the April 2019 Draft Environmental Impact Report (DEIR) for the Altitude Business Centre Project ("Project") located in the City of Chino ("City"). The Project proposes to construct a business center complex in three phases with up to 25 light industrial buildings totaling approximately 1,218,400 square feet of floor area across the 72-acre site.

Our review concludes that the Project fails to adequately evaluate the Project's Air Quality impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report (EIR) should be prepared to adequately assess and mitigate the potential air quality and health risk impacts the Project may have on the surrounding environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR relies on emissions calculated with the California Emissions Estimator Model Version CalEEMod.2016.3.2 ("CalEEMod").[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type, and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and

F-14

[1] CalEEMod (Nov. 2017) User Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.
[2] CalEEMod (Nov. 2017) User Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4., p. 2, 9

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"output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions, and make known which default values were changed as well as provide justification for the values selected.[3]

When we reviewed the Project's CalEEMod output files, provided as Attachment B-1, we found that some values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction emissions are underestimated. An EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction of the Project will have on local and regional air quality.

Failure to Include All Land Uses

Review of the Project's CalEEMod output files demonstrates that not all of the land uses proposed by the DEIR were included in the Project's CalEEMod model. As a result, the Project's construction emissions are underestimated.

According to the DEIR, the Project proposes to construct a business center with 25 buildings ranging in size from 5,000 to 200,000 square feet for a total of 1,219,015 square feet (DEIR, p. 3-5).[4] Additionally, the Project proposes to construct approximately 3,214 parking spaces (DEIR, Figure 3-4, p. 3-6). However, review of the CalEEMod output files demonstrates that the model fails to include any of the proposed parking land uses (see excerpt below) (Appendix B-1, pp. 82, pp. 106, pp. 130, pp. 156, pp. 182, pp. 211, pp. 240, pp. 265, pp. 290, pp. 317, pp. 344, and pp. 372).

F-14 CONT.

Phase 1

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	515.00	1000sqft	11.82	515,000.00	0

Phase 2

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	194.00	1000sqft	4.45	194,000.00	0
Unrefrigerated Warehouse-No Rail	200.00	1000sqft	4.59	200,000.00	0

[3] CalEEMod (Nov. 2017) User Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4., p. 7, 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.

[4] The Project Applicant modeled emissions assuming a total floor area of 1,313,000 square feet in order to account for possible expansion (p. 3-13).

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Phase 3

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	61.00	1000sqft	1.40	61,000.00	0
Mini-Storage	110.00	1000sqft	2.53	110,000.00	0
General Office Building	233.00	1000sqft	5.35	233,000.00	0

As you can see in the excerpts above, the Applicant fails to include any of the proposed parking land uses. This presents a significant issue, as the CalEEMod model uses the land use sizes to determine default variable and emission factors that go into the model's calculations.[5] For example, the square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Similarly, the acreage is used to determine the amount of ground to be prepared, graded, paved, etc.[6] Furthermore, CalEEMod assigns each land use type with its own set of energy usage emission factors.[7] By underestimating the land use from the model, the emissions that would be produced during construction and operation of the entire parking spaces are unaccounted for, and as a result, the Project's emissions are underestimated.

F-14 CONT.

Failure to Include Grading Hauling Trips

According to the DEIR, "[p]roposed earthwork and grading activities would require approximately 102,000 cubic yards of fill soil to be imported from the approved TM 20008 development site" (DEIR, p. 3-18). However, review of the CalEEMod output files demonstrates that the Applicant fails to include any grading hauling trips and, as a result, emissions are underestimated (see excerpt below) (Appendix B-1, pp. 90, pp. 114, pp. 139, pp. 165, pp. 193, pp. 221).

Phase 1

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	18	45.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	12	216.00	84.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	43.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

F-15

[5] CalEEMod User's Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2, p. 17
[6] CalEEMod User's Tips, available at: http://www.aqmd.gov/docs/default-source/caleemod/Model/2013.2.2/caleemod-usertips-april2014.pdf?sfvrsn=0, p. 27, p. 11
[7] CalEEMod User's Guide, Appendix D, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2

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Phase 2

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	12	165.00	65.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	18	45.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Phase 3

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	18	45.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	12	146.00	66.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

F-15 CONT.

As you can see in the excerpts above, the Applicant failed to model the hauling trucks trips during the grading phases of construction. Therefore, the emissions required to import the 102,000 cubic yards of import are unaccounted for and, as a result, construction emissions are underestimated.

Relied on an Incorrect Construction Schedule

Review of the CalEEMod output files demonstrates that the Project Applicant models Phase 1 construction emissions assuming a different construction schedule than what is disclosed in the Air Quality Impact Assessment (AQIA). As a result, construction emissions may be underestimated.

According to the AQIA, "[c]onstruction is expected to commence in March 2018 and will last through June 2020" (AQIA, p. 36). Specifically, Phase 1 will begin in March 2018 and end in December 2018 (see excerpt below) (AQIA, Table 3-2, p. 37).

TABLE 3-2: CONSTRUCTION DURATION (PHASE 1)

Phase Name	Start Date	End Date	Days
Demolition	03/01/2018	03/28/2018	20
Grading	03/29/2018	05/30/2018	45
Building Construction	05/31/2018	11/07/2018	115
Architectural Coating	07/19/2018	11/07/2018	80
Paving	11/08/2018	12/26/2018	35

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Review of the Phase 1 CalEEMod output files demonstrates that the Architectural Coating phase was incorrectly entered into the modeling (see excerpt below) (Appendix B-1, pp. 88).

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2018	3/28/2018	5	20	
2	Grading	Grading	3/29/2018	5/30/2018	5	45	
3	Building Construction	Building Construction	5/31/2018	11/7/2018	5	115	
4	Paving	Paving	11/8/2018	12/26/2018	5	35	
5	Architectural Coating	Architectural Coating	12/27/2018	11/7/2018	5	80	

F-16 CONT.

According to the AQIA, the Architectural Coating phase will occur from July 2018 to November 2018, at the same time as the Building Construction phase. However, the Applicant modeled emissions assuming that the Architectural Coating phase would take place from December 2018 to November 2018. This input is clearly incorrect. Additionally, the Architectural Coating phase is modeled to occur at a separate time as the Building Construction phase. Therefore, emissions are completely underestimated and should not be used to determine emissions.

Updated Emissions Demonstrate Potentially Significant Emissions

In an effort to accurately determine the Project's construction and operational emissions, we prepared three updated CalEEMod models for each phase of Project construction. In order to account for the parking land use, we assumed each phase of construction would construct approximately one third of the total proposed spaces. Therefore, we input a total of 1,071 spaces into each model.[8] Additionally, in order to account for the proposed 102,000 cubic yards of soil infill required, we assumed each phase of construction would haul approximately one third of the soil to the site. As a result, we input a total of 34,000 cubic yards of soil infill into each of the three models.[9]

When correct, site-specific input parameters are used to model emissions, we find that the Project's mitigated construction-related NOx emissions increase significantly when compared the DEIR's model and exceeds the 100 pounds per day (lbs/day) thresholds set forth by the South Coast Air Quality Management District (SCAQMD). [10]

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Mitigated Maximum Daily Construction Emissions (lbs/day)

Model	NOx
DEIR	
Phase 1	86.07
Phase 2	73.85
Phase 3	73.24
SWAPE	
Phase 1	107.03
Phase 2	95.04
Phase 3	92.96

[8] Calculate: 3,214 total parking spaces / 3 = 1,071.33 spaces per phase
[9] Calculate: 102,000 cubic yards / 3 = 34,000 cubic yards per phase
[10] SCAQMD (Apr. 2019) South Coast AQMD Air Quality Significance Thresholds, http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

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SCAQMD Significance Threshold	**100**
Exceed?	***Yes***

When correct, site-specific parameters are used to model the Project's emissions, construction-related NOx emissions exceed the SCAQMD's construction significance threshold of 100 lbs/day during Phase 1 of construction.

Our updated model demonstrates that when the Project's construction emissions are estimated correctly, the Project will result in a more significant air quality impact than stated in the DEIR. The Project proposes mitigation measure 4.3-3 (MM 4.3-3) in an effort to reduce construction-related NOx emissions. Specifically, the DEIR states,

> "During grading activity, all construction equipment with more than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified or better" (DEIR, p. 4.3-26).

As the above excerpt demonstrates, the DEIR claims that MM 4.3-3 would reduce construction-related NOx emissions to less than significant levels. However, our updated CalEEMod air model demonstrates that construction-related NOx emissions exceed thresholds to a greater extent than was determined by the DEIR. Thus, the Project Applicant must either demonstrate that MM 4.3-3 will still reduce construction NOx emissions to a less-than-significant level or include additional mitigation to the extent necessary. As a result, an updated DEIR should be prepared to include an updated air pollution model which adequately estimates the Project's construction and operational emissions, and additional mitigation measures should be identified and incorporated to reduce these emissions to a less-than-significant level.

F-17 CONT.

Diesel Particulate Matter Inadequately Evaluated

The EIR fails to adequately evaluate the potential health risk impacts that the proposed Project would have on nearby sensitive receptors because: (1) the EIR fails to adequately evaluate the Project's construction-related health risk impact; and (2) the EIR's operational health risk assessment (HRA) fails to follow the Office of Environmental Health Hazard Assessment's (OEHHA) guidance when estimating the total cancer risk. As a result, the Project's overall health risk impact is greatly underestimated and misrepresented. Our analysis, discussed herein, provides substantial evidence that when the Project's construction-related health risk is properly evaluated, and when an updated operational HRA is prepared using the most up-to-date guidance, we find that the proposed Project would result in a potentially significant health-related impact that was not previously identified in the EIR. As a result, until a proper construction and operational HRA is prepared that adequately evaluates the Project's health-related impacts, the Project should not be approved.

F-18

Failure to Evaluate the Construction Health Risk

Review of the HRA provided by the DEIR in Appendix B-2 demonstrates that the Applicant failed to evaluate the health risk posed to the nearby sensitive receptors as a result of Project construction and the Applicant fails to justify the omission. However, the omission of a quantified construction health risk is inconsistent with OEHHA guidance. This guidance document describes the types of projects that

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warrant the preparation of a health risk assessment. Construction activities for the proposed Project will produce emissions of diesel particulate matter (DPM) through the exhaust stacks of construction equipment over an 846-day construction duration (AQIA, Table 3-2, p. 37). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[11] Therefore, per OEHHA guidelines, health risk impacts from Project construction should have been evaluated by the DEIR. These recommendations reflect the most recent health risk assessment policy, and as such, an assessment of health risks to nearby sensitive receptors from construction and operation should be included in an EIR for the Project.

Incorrect Methodology Used to Estimate Operational Health Risk Impact

In order to evaluate the Project's operational health risk-impact, the Mobile Sources HRA conducted by Urban Crossroads uses the U.S. Environmental Protection Agency's (U.S. EPA) AERMOD program to model the Project's emissions and evaluate whether mobile source DPM emissions resulting from Project's operation will result in a significant health risk to nearby sensitive receptors (Appendix B-2, p. 16). According to the HRA, the cancer risk posed to the nearest sensitive receptor is 6.5 in one million, which is below the SCAQMD's significance threshold of 10 in one million (see excerpt below) (Appendix B-2, p. 4).

TABLE ES-2: SUMMARY OF CANCER AND NON-CANCER RISKS – WITH LIMONITE EXTENSION

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	6.50	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.49	10	NO
9 Year Exposure	Maximum Exposed School Child	0.12	10	NO

As a result, the Applicant determines that the health risk will be less than significant (Appendix B-3, p. 2). This conclusion, however, is incorrect as the HRA relies on averaged early-in-life exposure factors and, as a result, the early in life risk is unknown and the overall operational health risk is underestimated.

In 2015, OEHHA released the most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* that required health risks to evaluate the increased sensitivity of infant and child receptors by including age-specific breathing rates and age sensitivity factors (ASFs).[12] The Mobile Sources HRA acknowledges these requirements, stating, "[d]iscrete variants for daily breathing rates,

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[11] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18
[12] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html

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exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines" (Appendix B-2, p. 17). Additionally, the Mobile Sources HRA provided the following table that included OEHHA's age-specific breathing rates and ASFs (see excerpt below) (Appendix B-2, p. 17).

TABLE 2-5: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

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)
-0.25 to 0	361	10	0.25	1	350	24
0 to 2	1090	10	2	1	350	24
2 to 16	572	3	14	1	365	24
16 to 30	261	1	14	0.73	365	24

As you can see in the excerpt above, the DEIR acknowledges the age-specific factors required for the third trimester, infant, child, and adult receptors. However, further review of the HRA demonstrates that in order to calculate the thirty-year residential exposure risk, the Applicant relied on averaged breathing rates and ASFs (see excerpt below) (Appendix B-2, pp. 344).

exposure frequency (days/year)	350
exposure duration (years)	30
inhalation rate (L/kg-day))	461
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	1
age sensitivity factor (age third trimester to 2 ye	10
age sensitivity factor (ages 2 to 16 years old)	3
weighted age sensitivity factor	2.6

This is completely incorrect. By relying on averaged daily breathing rates and a weighted ASF, the Applicant fails to actually calculate the health risk posed to the more sensitive third trimester, infant, and child receptors. As a result, the operational health risk is completely underestimated and the cancer risks posed to the more sensitive receptors is completely unknown, as a result, the HRA should not be used to determine Project significance.

Updated Analysis Demonstrates Potentially Significant Health Risk During Project Construction

To demonstrate the potential risk posed by Project construction to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction emissions may result in a potentially significant health risk impact that was not previously identified.

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Modeling Parameters

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model.[13] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[14] and the California Air Pollution Control Officers Associated (CAPCOA)[15] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, then more refined air modelling should be conducted to analyze the link between air emissions and the health risk.

We prepared a preliminary health risk screening assessment of the Project's health-related impact to sensitive receptors using the annual construction PM10 exhaust emissions from the SWAPE CalEEMod models. According to the Mobile Sources HRA, the closest sensitive receptor is a future residential sensitive receptor located approximately 10 feet east if the Project site (Appendix B-2, p. 2). Additionally, as previously mentioned, construction of the Project would occur in three phases over the course of 2.3 years, or 856 days (Appendix B-1, Table 3-2, p. 37). Consistent with recommendations set forth by OEHHA, we used a residential exposure duration of 30 years, starting from the infantile stage of life. We also assumed that construction and operation of the Project would occur in quick succession, with no gaps between each Project phase.

F-18 CONT.

The AERSCREEN model relies on a continuous average emissions rate to simulate maximum downwind concentrations from point, area, and volume emission sources. To account for the variability in construction equipment usage over the phases of Project construction, we calculated an average DPM emission rate by the following equation for each of the phases of construction and operation.

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{lbs\ of\ DPM}{Number\ of\ days} \times \frac{453.6\ grams}{lb} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds}$$

Because the duration, start year, year of completion, and activity type vary between each phase of construction, we calculated a specific emission rate for each of the phases (see table below).

Project Construction Phase Emission Rates

Phase	DPM Emissions (tons/year)	Number of Days	Emission Rate (g/s)
Phase 1	0.2821	300	0.0098735
Phase 2	0.2062	272	0.0079599
Phase 3	0.1127	272	0.0043506

[13] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
[15] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

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Construction activity was simulated as a 72-acre rectangular area source in AERSCREEN, with dimensions of 755 meters by 386 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

Modeling Outputs

The AERSCREEN model generated maximum reasonable estimates of single hour downwind DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant may be estimated by multiplying the single-hour concentration by 10%.[16] For example, for the Maximum Exposed Individual at an Existing Residential Receptor (MEIR) the single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.606 µg/m^3 DPM at approximately 1 meter downwind. Multiplying this single-hour concentration by 10%, we get an annual average concentration of 0.1606 µg/m^3 for Project construction at the MEIR. We estimated the annualized average concentration for the remaining phases of construction in this same fashion for the MEIR (see table below).

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Phase	Maximum Single Hour DPM Concentration (µg/m^3)	Annualized Average DPM Concentration (µg/m^3)
Phase 1	1.606	0.1606
Phase 2	1.294	0.1294
Phase 3	0.7076	0.07076

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Exposure Assumptions

We calculated the excess cancer risk at the MEIR for children, infant, and third trimester receptors during the 2.32 year construction period using applicable HRA methodologies prescribed by OEHHA and the SCAQMD. Consistent with OEHHA guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[17] The annualized average concentration for Phase 1 of construction was used for the 3rd trimester of pregnancy (0.25 years) and the first 0.57 years of the infantile stage of life (0-2 years). The annualized average concentration for Phase 2 of construction was used for the next 0.75 years of the infantile stage of life (0-2 years). Finally, the annualized average concentration for Phase 3 of construction was used for the remainder of the infantile stage of life and the first 0.07 years of the child stage of life (2 to 16 years). According to the updated guidance, quantified cancer risk should be multiplied by a factor of ten during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with guidance set forth by OEHHA, we used 95th

[16] http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf
[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

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percentile breathing rates for infants.[18] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the 3rd trimester, infant, and child.[19] We used a cancer potency factor of 1.1 $(mg/kg\text{-}day)^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR) During Construction					
Activity	**Duration (years)**	**Concentration ($\mu g/m^3$)**	**Breathing Rate (L/kg-day)**	**ASF**	**Cancer Risk**
Phase 1	0.25	0.1606	361	10	2.2E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***2.2E-06***
Phase 1	0.57	0.1606	1090	10	1.5E-05
Phase 2	0.75	0.1294	1090	10	1.6E-05
Phase 3	0.68	0.07076	1090	10	7.9E-06
Infant Exposure Duration	***2.00***			***Infant Exposure***	***3.9E-05***
Phase 3	0.07	0.07076	572	3	1.3E-07
Child Exposure Duration	***0.07***			***Child Exposure***	***1.3E-07***
Construction Exposure Duration	**2.32**			**Lifetime Exposure**	**4.1E-05**

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The excess cancer risk posed to children, infants, and during the 3rd trimester of pregnancy at the MEIR located approximately 1 meter away, over the course of Project construction are approximately .13, 39, and 2.2 in one million. Furthermore, the excess cancer risk over the course of Project construction is approximately 41 in one million. The infant and overall construction cancer risks exceed the SCAQMD's threshold of 10 in one million.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level construction HRA, which is known to be more conservative, and tends to err on the side of health protection. The purpose of the screening-level HRA shown above is to demonstrate this link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening model HRA finds a potentially significant impact, the Project Applicant should include a reasonable effort to connect the Project's construction air quality emissions and the potential health risks posed to nearby receptors; for example, by preparing a more refined health risk assessment. Additionally, an updated operational HRA should be prepared that evaluates the risk posed to each age bin.

[18] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[19] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7

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Moreover, our screening-level analysis only evaluated the health risk posed to nearby sensitive receptors as a result of exposure to DPM, which makes up approximately 70% of diesel exhaust.[20] Diesel exhaust is compromised of more than 40 toxic air contaminants (TACs), which include benzene, arsenic and formaldehyde in addition to DPM.[21] Furthermore, in 2012 the International Agency for Research on Cancer (IARC), which is a portion of the World Health Organization (WHO), classified diesel exhaust as a carcinogenic to humans due to evidence that exposure can lead to an increased risk of lung cancer.[22] Additionally, the EPA has classified diesel exhaust as likely being carcinogenic to humans.[23] As a result, our health risk is likely underestimated as It only evaluates a portion of diesel exhaust. Prior to Project Approval, the Applicant should assess the link between pollutant emissions such as diesel exhaust and the health risk posed to nearby sensitive receptors.

F-18 CONT.

Failure to Evaluate the Cumulative Health Risk

Furthermore, review of the Project documents demonstrates that the Project Applicant failed to evaluate the cumulative health risk posed to the nearest sensitive receptors as a result of the construction and operation of the Altitude Business Centre in conjunction with the nearby stationary and mobile sources. It is critical that the Applicant consider the surrounding existing and foreseeable sources of toxic air contaminants (TAC), namely the industrial facilities that are currently proposed or operating adjacent to the proposed Project.

According to CEQA Guidelines Section 15355, "'Cumulative impacts'" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts".[24] CEQA Guidelines Section 15064(h)(1) goes onto say,

> "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time".[25]

F-19

Thus, regardless of the Project's individual health risk impact significance, the proposed Project may result in a cumulatively considerable impact when considered in conjunction with nearby industrial facilities. Review of the surrounding land uses demonstrates that the proposed Project is located near several existing industrial facilities including: 0.4 miles from the Walmart Fulfillment Center[26], 0.4 miles

[20] https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts
[21] https://oehha.ca.gov/air/health-effects-diesel-exhaust
[22] "IARC: Diesel Engine Exhaust Carcinogenic," June 12,2012, *available at:* https://www.iarc.fr/wp-content/uploads/2018/07/pr213_E.pdf
[23] https://www.cancer.org/cancer/cancer-causes/diesel-exhaust-and-cancer.html
[24] "CEQA Guidelines for Cumulative and Indirect Impacts." *California Department of Transportation*, March, 2016, *available at:* http://www.dot.ca.gov/ser/cumulative_guidance/ceqa_guidelines.htm
[25] "CEQA Guidelines for Cumulative and Indirect Impacts." California Department of Transportation, March, 2014, *available at*: http://www.dot.ca.gov/ser/cumulative_guidance/ceqa_guidelines.htm
[26] Located at: 6780 Kimball Ave. Chino, CA 91708.

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from an existing industrial business park,[27] 1.1 miles from the Kimball Business Park,[28] and across the street from the Chino Airport.[29] Additionally, the City has proposed to construct several industrial facilities near the Project site: the Chino Parcel Delivery Facility proposed approximately 1.25 miles from the Project site,[30] the Watson Industrial Park proposed approximately 1.7 miles from the Project site,[31] and the Rodriguez Warehouse Project located approximately 2.25 miles from the Project site (see excerpt below).[32]

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[27] Review of Google Earth demonstrates that there are approximately 15 industrial buildings along Euclid Avenue and Fern Avenue that include packaging and fulfillment centers.
[28] The Kimball Business Park includes 1.1 million square feet of industrial buildings, located at 15640 Hellman Ave and 8561 Enterprises Chino, CA 91708, *see:* https://www.oltmans.com/projects/chino-kimball-industrial-business-park
[29] Located at: 7000 Merrill Ave, Chino, CA 91710.
[30] Chino Parcel Delivery Facility Draft Environmental Impact Report, SCH No. 2016121057, *available at:* https://www.cityofchino.org/UserFiles/Servers/Server_10382578/File/City%20Hall/Departments/Community%20Development/Environmental%20Documents/Chino%20Parcel%20Delivery%20Facility%20(AG)/Chino%20Parcel%20Delivery%20Facility%20-%20Public%20Review%20Draft%20EIR%20(February%202019).pdf
[31] Watson Industrial Park Environmental Impact Report, SCH NO. 2014041001, *available at:* https://www.cityofchino.org/city_hall/departments/community_development/planning/environmental_documents
[32] Rodriguez Warehouse Project Initial Study, *available at:* https://www.cityofchino.org/UserFiles/Servers/Server_10382578/File/City%20Hall/Departments/Community%20Development/Environmental%20Documents/Rodriguez%20Warehouse%20Project/040819%20Rodriguez%20Warehouse%20Admin%20Draft.pdf

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Therefore, construction and operation of the proposed project will occur in conjunction with these other uses. Per CEQA Guidance, the cancer risk associated with these existing sources should be quantified and assessed with the lifetime cancer risk of the Project. Failure to quantify the cumulative risk leads to an underestimation of the actual risk posed to the nearby sensitive receptors. Prior to Project Approval, the cumulative health risk should be evaluated and compared to SCAQMD thresholds.

F-19 CONT.

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Paul Rosenfeld

Paul E. Rosenfeld, Ph.D.

Kaitlyn Heck

Kaitlyn Heck

LETTER F Blum Collins LLP

F-1: The City of Chino acknowledges that the written comments from Blum Collins LLP (hereafter "commenter") are provided on behalf of the Golden State Environmental Justice Alliance.

F-2: "Light industrial" is a broad classification of business- and employment-related land uses. The long-term activities expected to occur as part of the Project fall within the "light industrial" category thus the general description of the Project as providing light industrial buildings is accurate. However, as the commenter alludes, there are different sub-categories of light industrial land uses and each sub-category correlates to different operational activities, traffic generation, air pollution, etc. The specific light industrial sub-categories assigned to each of the Project's buildings, and used in the traffic and air quality analysis, is summarized in Draft EIR Table 3-1. Accordingly, the Draft EIR included a thorough evaluation of the Project-related traffic and air quality effects. No revision to the EIR is required.

F-3: The City's CEQA expert disagrees with the commenter's assertion and, other than providing a generalized opinion statement, the commenter does not provide substantial evidence to support their claim that the alternatives analysis in the EIR is insufficient. Firstly, CEQA Guidelines Section 15126.6(a) requires an EIR to provide an evaluation of a "reasonable range" of alternative to a project. The Project site is planned for "Airport Related" land uses by The Preserve Specific Plan. Per The Preserve Specific Plan, "Airport Related" land uses include a range of light industrial, business park, office, and/or commercial land uses. Because the Project site is already planned for "Airport Related" land uses, it is reasonable to assume that any alternative that may be developed in lieu of the Project also would be consistent with the "Airport Related" designation; it would be contrary to the City's adopted land use policy/vision to the develop the Project site with any use other than an "Airport Related" land use. Accordingly, the "Business Park Alternative" and the "High-Cube Warehouse Alternative" evaluated in the Draft EIR constitute a reasonable range of alternative development proposals for the Project site. Secondly, CEQA Guidelines 15126.6(e)(3)(B) requires that an EIR provide an analysis of a "no project alternative." The Draft EIR provides a "No Project Alternative" analysis beginning on Page 6-4. In summary, the alternatives analysis provided in the Draft EIR complies with the requirements of the CEQA Guidelines and no revisions to the EIR are needed.

F-4: For the reasons previously summarized in Response C-4, the City disagrees with the commenter's assertion that the Draft EIR did not provide adequate support its conclusion that no feasible mitigation was available to address the Project's impact to agricultural resources and the City notes that commenter does not provide substantial evidence to support their assertion or rebut the conclusions in the Draft EIR. The City also disagrees with the commenter's assertion that the discussion related to the decline of dairy farms in San Bernardino County is not relevant to the Project. As disclosed in the Draft EIR (refer to Section 4.8), the entire Project site was historically occupied by dairy farms; therefore, the unsustainability of dairy farming in The Preserve area – which has directly led to the closure of three on-site dairies – is directly relevant to the analysis of the Project. The economic challenges facing the agriculture industry in the Inland Empire area are well documented in reports prepared by Chang & Adams Consulting (2011) and Andrew Chang & Co (2018). Furthermore, the Draft EIR cites data from the City of Chino General Plan and the California Department of Conservation demonstrating the ongoing decline of agricultural production in San Bernardino County and the expectation that agricultural production will further decline in the future as the region becomes more urbanized (see Draft EIR p. 4.2-1).

F-5: Responses to SWAPE's individual comments are provided as Responses F-14 through F-19.

F-6: For the reasons explained in Responses D-20 and D-21 the mitigation measures requested by the commenter are not feasible. No revisions to the EIR are necessary.

F-7: The City's CEQA and air quality experts disagree with the commenter's assertion that the Draft EIR did not adequately address health impacts from air pollution. The Draft EIR (refer to p. 4.3-29) and the Supplemental Air Quality Analysis (Technical Appendix B3) provide a detailed explanation of the reasons why regional health risks cannot be accurately modeled for development projects at the scale of the proposed Project, citing specific information provided by and supported by the SCAQMD. Furthermore, the commenter does not provide any evidence to support their assertion. Based on the detailed information already provided in the Draft EIR and the lack of information provided by the commenter to support their assertion, the City determines that no revisions to the EIR are warranted.

F-8: The Draft EIR (refer to pp. 4.3-22 and 4.3-23) provides an in-depth analysis of the diesel particulate matter health risk effects associated with the Project using methodology and significance thresholds supported by the SCAQMD. As disclosed in the Draft EIR, the Project-related diesel emissions would result in a less-than-significant health risk impact to nearby residential, worker, and school child receptors. No revisions to the EIR are required.

F-9: The commenter's assertion regarding the Health Risk Assessment is fully addressed by Response E-5. No revisions to the EIR are warranted.

F-10: The commenter's assertion that the Draft EIR failed to attach the results of the focused surveys for the burrowing owl is incorrect. The methodology and results of the focused burrowing owl survey are documented in detail in the *Biological Resources Assessment and Burrowing Owl Report* that was provided as Technical Appendix C to the Draft EIR (refer to pp. 17-18 of the Report). Also, MM 4.4-1 in the Draft EIR addresses the Project's cumulative impact to the burrowing owl. After application of MM 4.4-1, potential cumulative impacts to the burrowing owl would be less than significant (refer to Draft EIR pp. 4.4-15 and 4.4-17). No revisions to the EIR are required.

F-11: The commenter misrepresents the information disclosed in the Draft EIR related to Global Climate Change (GCC). The Draft EIR acknowledges the phenomena of GCC and discusses the impact of GCC on California (refer to Draft EIR pp. 4.7-1 and 4.7-4 through 4.7-6) but also contains the factual statements that GCC has occurred throughout Earth's history and that there is no consensus in the scientific community regarding the magnitude of human activities on GCC (refer to Draft EIR p. 4.7-1).

F-12: The Draft EIR includes an analysis of the Project's consistency with SB 32 (refer to Draft EIR p. 4.7-21). As disclosed in the Draft EIR, the Project would not interfere with the State's ability to achieve the Year 2030 GHG-reduction target established by SB 32. No revisions to the EIR are required.

F-13: The City will provide a copy of the Final EIR to Blum Collins LLP, including written responses to all comments regarding the Draft EIR, a minimum of 10 days prior to considering the Project for approval and certification of the Final EIR.

F-14: SWAPE's modeling assumptions are incorrect and flawed. Although it is unlikely that asphalt surfaces would be used in the parking area (concrete is anticipated to be used, which have no VOC emissions from off-gassing), an updated model run was performed to quantify construction emissions that would occur with asphalt parking areas. See Table F-1, below. As shown, if asphalt parking areas are provided on-site, peak Project construction VOC emissions would be higher than reported in the Draft EIR (38.89 pounds per

day versus the 28.99 pounds per day that was disclosed in the Draft EIR) but would still remain well below the SCAQMD's applicable threshold for VOC emissions. The modeling files for the supplemental construction emissions modeling are included in the Final EIR as Technical Appendix B4.

Table F-1: Construction Emissions Summary with Asphalt Parking

Construction Emissions (with Parking)						
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1 (2018)	39.89	86.07	87.67	0.16	12.16	7.38
Phase 2 (2018)	4.36	73.78	88.42	0.16	11.50	6.80
Phase 2 (2019)	6.99	73.17	88.11	0.15	11.44	6.75
Phase 3 (2019)	6.89	73.17	88.11	0.15	1.44	6.75
Phase 3 (2020)	32.11	57.21	54.92	0.15	8.79	3.92
Maximum Daily Emissions	**39.89**	**86.07**	**88.42**	**0.16**	**12.16**	**7.38**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

F-15: SWAPE's modeling assumptions do not accurately represent proposed Project construction activities. The Project is not anticipated to import the 102,000 cubic yards of soil using haul trucks. The 102,000 cubic yards of import soil would be pushed onto the Project site from the approved TM 20008 site which is located north of Bickmore Avenue and abuts Project site. The equipment that would be used to push the dirt onto the Project site is the same construction equipment that would utilized on the Project site during grading and the emissions from this equipment and from the import activities was already accounted for in the construction air emissions modeling performed as part of the Air Quality Analysis (Technical Appendix B1) and disclosed in the Draft EIR (refer to Draft EIR p. 4.3-19). No revisions to the EIR are required.

F-16: Comment noted. The typographic error was corrected in CalEEMod. The CalEEMod inputs were revised to reflect the correct start and end dates for architectural coatings and the updated emissions totals are presented in Table F-1, above. The modeling files for the supplemental construction emissions modeling are included in the Final EIR as Technical Appendix B4. The correction to the CalEEMod inputs did not alter the significance conclusions drawn in the Draft EIR.

F-17: The commenter's assertion about purported errors in the air quality analysis are fully addressed by Responses F-14 and F-15.

F-18: The commenter's assertion regarding purported errors in the analysis of diesel particulate matter emissions are shown to be incorrect for the reasons explained in Responses D-11, E-3, and E-6. Also, it should be noted that SWAPE's modeling assumptions are incorrect and flawed. Firstly, SWAPE inappropriately averages the diesel particulate matter emissions from construction-related activity. Secondly, SWAPE uses the AERSCREEN model to perform a screening health risk calculation for construction activities – which is not the appropriate modeling tool for a health risk analysis. Unlike AERSCREEN, AERMOD estimates the air quality impacts of single or multiple sources using actual meteorological conditions and, therefore, provides more precise results than AERSCREEN. It should be noted that the analysis presented in the Draft EIR and the Final EIR appropriately utilized the AERMOD dispersion model in the health risk analysis for both construction and operational activities.

F-19: The commenter's assertion regarding the Health Risk Assessment is fully addressed by Response E-5. No revisions to the EIR are required.

COMMENT LETTER G

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Gavin Newsom
Governor

Kate Gordon
Director

June 4, 2019

COMMUNITY DEVELOPMENT
RECEIVED
JUN 07 2019

Andrea Gilbert
Chino, City of
13220 Central Avenue
Chino, CA 91710

Subject: Altitude Business Centre
SCH#: 2017051060

Dear Andrea Gilbert:

The State Clearinghouse submitted the above named EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on 6/3/2019, and the comments from the responding agency (ies) is (are) available on the CEQA database for your retrieval and use. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

Check the CEQA database for submitted comments for use in preparing your final environmental document: https://ceqanet.opr.ca.gov/2017051060/2 . Should you need more information or clarification of the comments, **we recommend that you contact the commenting agency directly**.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

G-1

Sincerely,

Scott Morgan
Director, State Clearinghouse

cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL 1-916-445-0613 state.clearinghouse@opr.ca.gov www.opr.ca.gov

LETTER G Governor's Office of Planning and Research

G-1: The City of Chino acknowledges this letter indicating that the review period for the Draft EIR closed on June 3, 2019, and confirming that the City complied with the State Clearinghouse's review requirements for draft environmental documents. Two State agencies, the Department of Conservation and the Air Resources Board, submitted comments concerning the Draft EIR. Responses to the letters from the Department of Conservation and the Air Resources Board are provided in the Final EIR (refer to Responses to Letters C and E, respectively).

F.3 ADDITIONS, CORRECTIONS, AND REVISIONS TO THE DEIR

Changes made to the text, tables and/or exhibits of the DEIR in response to public comments on the DEIR are itemized in Table F-2, *Errata Table of Additions, Corrections, and/or Revisions to EIR*. Additions are shown in Table F-2 as underline text and deletions shown as ~~stricken~~ text. Minor changes to the DEIR (e.g., corrections of non-substantive typographical errors) are not listed in Table F-2. No corrections or additions made to the DEIR are considered substantial new information requiring recirculation or additional environmental review under CEQA Guidelines § 15088.5.

Table F-2 Errata Table of Additions, Corrections, and/or Revisions to EIR

PAGE(S)	SECTION(S)	ADDITIONS, CORRECTIONS, AND/OR REVISIONS
4.3-26 S-12	*4.3, Air Quality* *S.0, Executive Summary*	In response to a comment from the South Coast Air Quality Management District, a new mitigation measure – MM 4.3-3a – has been added to the EIR to address Project-related nitrogen oxide (NO_X) emissions. *MM 4.3-3a Project construction contractors shall assure that all construction equipment complies with all applicable California Air Resources Board (CARB) air quality regulations. Also, Project construction contractors shall tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications. Maintenance records for all pieces of equipment shall be kept on-site for the duration of construction activities and shall be made available for periodic inspection by City of Chino staff or their designee.* The addition of MM 4.3-3a merely amplifies the mitigation already provided in the Draft EIR and does not warrant re-circulation of the EIR.
4.3-27 S-12	*4.3, Air Quality* *S.0, Executive Summary*	In response to a comment from the South Coast Air Quality Management District, a new mitigation measure – MM 4.3-3b – has been added to the EIR to address Project-related nitrogen oxide (NO_X) emissions. *MM 4.3-3b The Project Applicant shall encourage construction contractors to apply for South Coast Air Quality Management District "SOON" funds. The "SOON" program provides funds to qualifying off-road diesel construction fleets for the purchase of commercially-available, low-emission heavy-duty engines.* The addition of MM 4.3-3b merely amplifies the mitigation already provided in the Draft EIR and does not warrant re-circulation of the EIR.

Table F-2 Errata Table of Additions, Corrections, and/or Revisions to EIR

PAGE(S)	SECTION(S)	ADDITIONS, CORRECTIONS, AND/OR REVISIONS
4.3-28	*4.3, Air Quality*	In response to a comment from the South Coast Air Quality Management District, a new mitigation measure – MM 4.3-9 – has been added to the EIR to address Project-related nitrogen oxide (NO_X) emissions. *MM 4.3-9 Legible, durable, weather-proof signs shall be placed at driveways where delivery trucks exit onto public streets that direct truck drivers to designated truck routes. The City of Chino shall confirm the required signs are installed prior to issuance of an occupancy permit.* The addition of MM 4.3-9 merely amplifies the mitigation already provided in the Draft EIR and does not warrant re-circulation of the EIR.
4.3-28 S-14	*4.3, Air Quality* *S.0, Executive Summary*	In response to comments from the California Air Resources Board, new mitigation measures – MM 4.3-10 and MM 4.3-11 – have been added to the EIR to place restrictions on potential refrigerated warehouse development on the Project site to minimize potential nitrogen oxide (NO_X) emissions. *MM 4.3-10 A maximum of 154,500 square feet of refrigerated warehouse space shall be permitted within the Project. The refrigerated warehouse space shall only be permitted west of Mayhew Avenue, at the approximate locations of proposed Buildings 4, 5, and/or 6. For purposes of this mitigation measure, refrigerated warehouse space shall include all areas kept at a sustained temperature of 55 degrees Fahrenheit or lower.* *MM 4.3-11 Prior to the issuance of a building permit and/or tenant improvement permit for any warehouse building that contains refrigerating storage, an electrical hookup for refrigeration units on delivery trucks shall be provided at all loading dock spaces servicing the refrigerated storage spaces. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.* The addition of MM 4.3-10 ensures that any future refrigerated warehouse development does not exceed the assumptions from the supplemental analysis provided in the Final EIR and the addition of MM 4.3-11 assures that on-site air emissions related to refrigerated warehouse space would be minimized. The inclusion of these mitigation measures do not warrant re-circulation of the EIR.

Table F-2 Errata Table of Additions, Corrections, and/or Revisions to EIR

PAGE(S)	SECTION(S)	ADDITIONS, CORRECTIONS, AND/OR REVISIONS
4.11-2	*4.11, Transportation and Traffic*	In response to a comment from the City of Ontario, a typographic error was corrected in the discussion of passenger car equivalent (PCE) factors used in the Project traffic analysis: *For purposes of this analysis, a PCE factor of 1.5 is applied to 2-axle truck trips, 2.0~~2.5~~ is applied to 3-axle truck trips, and 3.0 is applied to 4-or-more-axle truck trips.*
--	*Technical Appendix B4*	In response to comments from the South Coast Air Quality Management District, California Air Resources Board, and Blum Collins LLP, supplemental air quality calculations were prepared by Urban Crossroads, Inc. to confirm the Draft EIR's conclusions regarding Project-related air quality effects. The results of the supplemental air quality calculations are disclosed on the preceding pages as part of the responses to Letters D, E, and F.

F.4 NO RECIRCULATION OF DEIR REQUIRED

CEQA Guidelines § 15088.5 describes the conditions under which a DEIR that was circulated for public review is required to be re-circulated for additional public review and comment. CEQA Guidelines § 15088.5 states that new information added to a DEIR is not significant unless the DEIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented;
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance;
3. A feasible project alternative or mitigation measure considerably different from the others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it; and/or
4. The DEIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Based on the comment letters received by the City of Chino and the responses thereto (presented in Subsection F.2, above) and the minor revisions and corrections made to the DEIR (presented in Subsection F.3, above), there were no public comments or changes to the text or analysis contained in the DEIR that resulted in the identification of any new significant environmental effect or a substantial increase in the severity of an environmental effects that were disclosed in the DEIR. Additionally, the DEIR was fundamentally and basically adequate, and all conclusions within the DEIR were supported by evidence provided within the DEIR or the administrative record for the proposed Project. Furthermore, public

comment letters on the DEIR did not identify any alternatives to the proposed Project considerably different from those analyzed in the DEIR that would substantially lessen the significant environmental impacts of the proposed Project while still attaining the Project's basic objectives. Based on the foregoing, recirculation of the DEIR is not warranted according to the guidance set forth in § 15088.5 of the CEQA Guidelines.

S.0 EXECUTIVE SUMMARY

S.1 INTRODUCTION

The California Environmental Quality Act (CEQA), Public Resources Code § 21000, *et seq.* requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.

This Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2017111042 was prepared in accordance with CEQA Guidelines Article 9, § 15120 to § 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Brewer Site Project (hereafter, the "Project" or "proposed Project"). This EIR does not recommend approval, approval with modification, or denial of the proposed Project; rather, this EIR is a source of factual information regarding potential impacts that the Project may cause to the physical environment. The Draft EIR will be available for public review for a minimum period of 45 days. After consideration of public comment, the City of Chino will consider certifying the Final EIR and adopting required findings.

This Executive Summary complies with CEQA Guidelines § 15123, "Summary." This EIR document includes a description of the proposed Project and evaluates the physical environmental effects that could result from Project implementation. The City of Chino determined that the scope of this EIR should cover 12 subject areas. The scope was determined through the completion of an Initial Study accepted by the City of Chino's independent judgment pursuant to CEQA Guidelines § 15063, and in consideration of public comment received by the City in response to this EIR's Notice of Preparation (NOP). The Initial Study, NOP, and written comments received by the City in response to the NOP, are attached to this EIR as *Technical Appendix A*. As determined by the Initial Study and in consideration of public comment on the NOP, the 12 environmental subject areas that could be reasonably and significantly affected by planning, constructing, and/or operating the proposed Project are analyzed herein, including:

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources & Tribal Cultural Resources
6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Noise
11. Transportation and Traffic
12. Utilities and Service Systems

Refer to EIR Section 4.0, *Environmental Analysis*, for a full account and analysis of the subject matters listed above. Subject areas for which the Initial Study concluded that impacts would be clearly less than significant and that do not warrant detailed analysis in this EIR are addressed in EIR Section 5.0, *Other CEQA Considerations*.

For each of the 12 subject areas analyzed in detail in Section 4.0, this EIR describes: 1) the physical conditions that existed at the approximate time this EIR's NOP was filed with the California State Clearinghouse (May 20, 2017); 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible

mitigation measures that would reduce or avoid significant adverse environmental impacts that the proposed Project may cause. A summary of the proposed Project's significant environmental impacts and the mitigation measures imposed by the City of Chino on the Project to lessen or avoid those impacts is included in this Executive Summary as Table S-1, *Mitigation Monitoring and Reporting Program*. The City of Chino applies mitigation measures which it determines 1) are feasible and practical for project applicants to implement, 2) are feasible and practical for the City of Chino to monitor and enforce, 3) are legal for the City to impose, 4) have an essential nexus to the Project's impacts, and 4) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to apply mitigation measures that are duplicative of mandatory regulatory requirements.

S.2 PROJECT OVERVIEW

S.2.1 LOCATION AND SETTING

As defined in EIR Section 1.0, *Introduction,* for purposes of analysis in this EIR, the "Project site" consists of approximately 72 acres in the southern portion of the City of Chino, in an area known as "The Preserve" in the southwestern San Bernardino County, California – south of the City of Ontario, west of the City of Eastvale, and east of the City of Chino Hills. The Project site is approximately 5.2 miles west of Interstate 15 (I-15), approximately 1.8 miles east of State Route 71 (SR-71), and approximately 4.3 miles south of State Route 60 (SR-60). The Project site location is illustrated on Figure 3-1, *Regional Map*, in EIR Section 3.0, *Project Description*.

At the local scale, the Project site is located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 600 feet west of Rincon Meadows Avenue as illustrated on Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographical Map*, in Section 3.0 of this EIR.

The City's General Plan and The Preserve Specific Plan currently designate the Project site for "Airport-Related (AR)" land uses. The AR land use is intended to provide industrial and commercial land uses that support and/or complement the nearby Chino Airport. Within the AR land use designation, the General Plan permits a maximum floor area ratio (FAR) of 0.45 for light industrial uses; 0.35 for business park uses, offices, and hotels; and 0.25 for commercial uses. (Chino, 2010a, p. LU-18)

The Preserve Specific Plan also applies the Chino Airport Overlay (CAO) "Airport Safety Zone III" overlay to the Project site (Chino, 2011, Figure 9A). The CAO is intended to ensure the viability of airport operations at the Chino Airport, and to protect the health, safety, and welfare of the residents of Chino. Any development within the CAO must comply with the development standards contained within City of Chino Zoning Ordinance Section 20.09.050, Airport Overlay District (Chino, 2011, p. 122).

Finally, the Preserve Specific Plan applies the Agricultural Overlay (AO) to the Project site (Chino, 2011, Figure 9B). The AO allows for the continuation of agricultural uses that existed at the time The Preserve Specific Plan was approved in 2003 until the time the affected property is ultimately developed in a manner consistent with the land use designations applied by the Specific Plan. Development within the AO must comply with the development standards contained within City of Chino Zoning Ordinance Section 20.09.040, *Agricultural Overlay District* (Chino, 2011, p. 124).

S.2.2 PROJECT OBJECTIVES

The underlying purpose of the Project and its primary goal is to develop a vacant or underutilized property with a warehouse building to provide an employment-generating use that helps to grow the economy and fulfill regional market demand for this land use type in Chino. The Project would achieve this goal through the following specific objectives.

A. To implement The Preserve Specific Plan by developing Class A building space that meets industry standards for modern, operational design criteria and can accommodate a variety of users.

B. To provide a viable reuse plan for former agricultural property that maximizes feasible development of the site so that the property continues to be economically productive when agricultural activities cease.

C. To diversify the City of Chino economy by developing a large property with a mix of employment-generating land uses with long-term economic viability.

D. To create employment-generating business in the City of Chino thereby reducing the need for members of the local workforce to commute outside the area for employment.

E. To develop employment-generating business in close proximity to regional transportation routes, including designated truck routes, to minimize traffic congestion on surface streets and minimize concomitant air pollution emissions from vehicle sources.

F. To develop a project with an architectural design and operational characteristics that are consistent with the development standards and the design guidelines established by The Preserve Specific Plan and complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.

G. To develop the subject property with land uses that are harmonious with the adjacent Chino Airport.

H. To develop a property that has access to available infrastructure.

S.2.3 PROJECT SUMMARY DESCRIPTION

Implementation of the Project includes demolition of the property's existing residential and agricultural/dairy structures, and construction and operation of a business center complex with up to 25 light industrial buildings. The principal discretionary actions requested by the Project Applicant to implement the proposed Project include a Tentative Parcel Map (PL16-0456), a Master Site Approval (PL16-0457), a Site Approval (PL17-0044) for six buildings, and a Special Conditional Use Permit (PL17-0042). Additional, subsequent discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-2, *Matrix of Approvals/Permits*.

Tentative Parcel Map (TPM) (PL16-0456) proposes to subdivide an approximately 61-acre portion of the Project site into 21 numbered lots ranging in size from 0.35-acre to 11.19 acres. TPM No. 19756 also would create five (5) landscape lots ranging in size from 0.02-acre to 0.22-acre.

Master Site Approval (MSA) (PL16-0457) proposes the key development features and characteristics of the Project, including its conceptual site layout, architectural character, and landscape design. As mentioned above, the Project would feature 25 buildings, which would range in size from 5,000 s.f. to 200,000 s.f. of floor area. The Project's total floor area would be 1,219,015 s.f.

Site Approval (PL17-0044) provides a specific development plan for Buildings 1 through 6 of proposed MSA (PL16-0457). The buildings are designed to accommodate a warehouse distribution, business park, or light industrial operator(s); but at this time, the future user(s) of the buildings are unknown.

The City of Chino requires the approval of a Special Conditional Use Permit (SCUP) to allow the construction of buildings over 50,000 s.f. Because all the buildings proposed by SA (PL17-0044) would exceed 50,000 s.f., SCUP (PL17-0042) is required to implement the Project.

Refer to EIR Section 3.0, *Project Description*, for a detailed description of the proposed Project.

S.3 EIR PROCESS

As a first step in complying with the procedural requirements of CEQA for an EIR, an Initial Study was prepared by the City of Chino to determine whether any aspect of the proposed Project, either individually or cumulatively, may cause a significant adverse effect on the physical environment (refer to *Technical Appendix A* for a copy of the Initial Study). For this Project, the Initial Study indicated that this EIR should focus on 12 environmental subject areas listed above in Subsection S.1. After completion of the Initial Study, the City filed a NOP with the California Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared. In turn, the Initial Study and NOP were distributed for a 30-day public review period, which began on May 20, 2017. The City of Chino received written comments on the scope of the EIR during those 30 days, which were considered by the City during the preparation of this EIR.

This EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day review period. During the 45-day public review period, public notices announcing availability of the Draft EIR will be mailed to interested parties, an advertisement will be published in the Press Enterprise (a newspaper of general circulation in the Project area), and copies of the Draft EIR and its Technical Appendices will be available for review at the locations indicated in the public notices.

After the close of the 45-day Draft EIR public comment period, the City will prepare and publish responses to written comments it received on the environmental effects of the proposed Project. The Final EIR will then be considered for certification by the Chino City Council. Certification of the Final EIR would be accompanied by the adoption of written findings and a statement of overriding considerations for any significant unavoidable environmental impacts identified in the Final EIR. In addition, the City must adopt a Mitigation, Monitoring, and Reporting Program (MMRP), which describes the process to ensure implementation of the mitigation measures identified in the Final EIR. The MMRP will ensure CEQA compliance during Project construction and operation.

S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines § 15123(b)(2) requires that areas of controversy known to the Lead Agency (City of Chino) be identified in the Executive Summary. The Lead Agency has not identified any issues of controversy associated with the Project after consideration of all comments received in response to the NOP.

Notwithstanding, the Lead Agency has identified several issues of local concern including, but not limited to, potential impacts to air quality, cultural resource, hazards and hazardous materials, and traffic.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City, that are identified in the Initial Study prepared for the Project, and that were identified in the comment letters that the City of Chino received on this EIR's NOP (refer to *Technical Appendix A*). Environmental topics raised in written comment to the NOP are summarized in Table 1-1, *Summary of NOP Comments*, in Section 1.0 of this EIR and include, but are not limited, to the topics of air quality, biological resources, cultural resources & tribal cultural resources, hazardous materials, hydrology and water quality, transportation/traffic, and utilities and service systems.

S.5 ALTERNATIVES TO THE PROPOSED PROJECT

In compliance with CEQA Guidelines § 15126.6, an EIR must describe a range of reasonable alternatives to the Project or to the location of the Project. Each alternative must be able to feasibly attain most of the Project's objectives and avoid or substantially lessen the Project's significant effects on the environment. A detailed description of each alternative evaluated in this EIR, as well as an analysis of the potential environmental impacts associated with each alternative, is provided in EIR Section 6.0, *Alternatives*. Also described in Section 6.0 is a list of alternatives that were considered but rejected from further analysis.

S.5.1 NO DEVELOPMENT ALTERNATIVE

The No Development Alternative considers no development on the Project site beyond that which occurs under existing conditions. As such, the two (2) dairy farms, four (4) residential homes, ornamental landscape nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use would remain on-site, and the rest of the Project site would remain undeveloped. Under this alternative, no improvements would be made to the Project site. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the property in its existing condition.

Implementation of the No Development Alternative would result in no physical environmental impacts beyond those that have historically occurred on the property. All significant effects of the proposed Project would be avoided or lessened by the selection of this alternative. The No Development Alternative would fail to meet all of the Project's objectives.

S.5.2 BUSINESS PARK ALTERNATIVE

The Business Park Alternative would develop the Project solely with business park land uses. The Business Park Alternative would develop the Project site with multiple buildings that offer a combined 850,000 s.f. of building area on the Project site (0.27 FAR). The business park land uses proposed by this Alternative are permitted by The Preserve Specific Plan. This alternative was selected by the Lead Agency to evaluate the environmental effects of an alternative that eliminates the Project's large warehouse uses in favor of smaller-scale office and industrial uses and, also, reduces to total amount of building area on-site.

The Business Park Alternative would not avoid or lessen the Project's significant and unavoidable impacts and would, actually, increase the severity of the Project's significant and unavoidable air quality and traffic impacts. The Business Park Alternative would slightly reduce the Project's demands for utilities and service systems; but, all other impacts would be similar or identical to the Project.

The Business Park Alternative would meet all of the Project's objectives except for Objective "C." Although the Business Park Alternative would develop the site with employment-generating land uses, this Alternative would develop the entire Project site with a single land use and would not provide a mix of employment-generating uses.

S.5.3 High-Cube Warehouse Alternative

The High-Cube Warehouse Alternative would develop the portion of the Project located east of future Mayhew Avenue and abutting Kimball Avenue with 500,000 s.f. of business park land uses and the portion of the Project site located west of future Mayhew Avenue with 700,000 s.f. of high-cube warehouse uses (0.38 FAR across total Project site). The business park land uses proposed by this alternative are permitted by The Preserve Specific Plan; the high-cube warehouse land uses proposed by this alternative are permitted by The Preserve Specific Plan subject to approval of a conditional use permit. This alternative was selected by the Lead Agency to evaluate an alternative that provides approximately the same amount of building area as the proposed Project but replaces the Project's proposed standard warehouse uses with high-cube warehouse uses (which have more efficient operations than standard warehouses) and focuses the on-site warehouse uses west of Mayhew Avenue to maximize the distance between on-site warehouse uses and existing/planned residential land uses.

The High-Cube Warehouse Alternative would not avoid the Project's significant and unavoidable impacts. The High-Cube Warehouse Alternative would slightly reduce the amount of building area constructed on-site relative to the Project, thereby incrementally reducing the amount of operational air pollutant emissions and traffic; however, the reductions would be marginal and the alternative would be required to implement the same mitigation for air quality and traffic as the proposed Project. The High-Cube Warehouse Alternative would result in an impact to aesthetics that would not occur under the Project (due to a conflict with local visual character). All other impacts would be similar to the Project. The High-Cube Warehouse Alternative is identified as the environmentally superior alternative.

The High-Cube Warehouse Alternative would not meet the Project's Objective "F" (due to a conflict with the local visual character) and would meet Objective "C" less effectively than the Project (due to this alternative offering a narrower range of employment land uses). The High-Cube Warehouse Alternative would meet all other Project objectives.

S.6 Summary of Impacts, Mitigation Measures and Conclusions

S.6.1 Effects Found Not to be Significant

The scope of detailed analysis in this EIR includes 12 subject areas determined through the completion of an Initial Study prepared by the City of Chino pursuant to CEQA Guidelines § 15063 and CEQA Statute § 21002(e), as well as consideration of public comments received by the City on this EIR's NOP. The Initial Study, NOP, and public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A*. Subject areas for which the City concluded that impacts clearly would be less than significant and that do not warrant further analysis in this EIR include: Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Recreation. This EIR addresses these five (5) topics in EIR Subsection 5.0, *Other CEQA Considerations*.

S.6.2 IMPACTS OF THE PROPOSED PROJECT

Table S-1, *Mitigation Monitoring and Reporting Program*, provides a summary of the proposed Project's environmental impacts, as required by CEQA Guidelines § 15123(a). Also presented are the mitigation measures recommended by the City of Chino to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures, the Project would result in four (4) significant and unavoidable environmental effects, as summarized below.

- Agricultural Resources: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would convert Farmland with substantial agricultural production value to non-agricultural use. The loss of the Farmland on the Project site would be a significant direct and cumulatively-considerable impact in consideration of the past, ongoing, and projected future loss of farmland in the CBDA.

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. After the application of Project design features, mandatory regulatory requirements, and feasible mitigation measures, long-term operational-related NO_X emissions would still exceed the applicable SCAQMD regional threshold for daily emissions. The Project's NO_X emissions would cumulatively contribute to an existing air quality violation in the SCAB (i.e., NO_X and O_3 concentrations, which do not meet regional attainment status).

- Transportation/Traffic: Significant Direct and Cumulatively-Considerable Impact. The addition of Project-related traffic would cause and/or contribute to LOS deficiencies at numerous Study Area intersections and *CMP* facilities during Existing plus Project, Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.1 Aesthetics					
Summary of Impacts					
Threshold a: Less-than-Significant Impact. The Project site does not contain any designated scenic vistas or scenic corridors. The San Gabriel Mountains and Chino Hills would not be obstructed by the Project due to the distance between the Project site and mountain features. Furthermore, proposed buildings would reach a maximum height of up to approximately 45 feet tall. Impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: No Impact. The Project site is not located within or adjacent to a scenic highway corridor, and does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings. There are no State-designated or eligible scenic highways within the vicinity of the Project site. Thus, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c: Less-than-Significant Impact. The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during Project construction or operation. Although the Project would change the visual character of the site from dairy operations to an industrial park, the Project's surrounding area is transitioning from agricultural to non-agricultural land uses. Furthermore, the Project proposes a number of site design, architectural, and landscaping elements consistent with the requirements of The Preserve Specific Plan that would ensure the Project's character is consistent with the planned vision for the Specific Plan area. Impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold d: Less-than-Significant Impact. Project-related development would not create substantial light or glare. Compliance with Chino Municipal Code requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
4.2 Agriculture and Forestry Resources					
Summary of Impacts					
Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would convert Farmland with substantial agricultural production value to non-agricultural use. The loss of the Farmland on the Project site would be a significant direct impact and also would be cumulatively considerable in consideration of the past, ongoing, and projected future loss of farmland in the CBDA.	No feasible mitigation is available.	N/A	N/A	N/A	Significant Direct and Cumulatively-Considerable Impact
Threshold b: No Impact. The Project is not subject to a Williamson Act Contract and is not zoned for agricultural use; therefore, the Project would not conflict with a Williamson Act Contract or agricultural zoning.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c and d: No Impact. There are no forest lands, timberland, or Timberland Production zoned land on the Project site; therefore, implementation of the proposed Project would have no potential to conflict with forest land zoning or result in the loss or conversion of forest land to non-forest use. No impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold e: Significant Direct and Cumulatively-Considerable Impact. Implementation of the Project would not involve other changes to the existing environment, which, due to their location or nature, could result in	No feasible mitigation is available.	N/A	N/A	N/A	Significant Direct and Cumulatively-Considerable Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
conversion of off-site Farmland, to non-agricultural use or conversion of forest land to non-forest use. The Project would convert Farmland located on the Project site to non-agricultural use, which is a significant direct and cumulatively considerable impact.					
4.3 Air Quality					
Summary of Impacts					
Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would contribute to an existing air quality violation in the SCAB and, therefore, would conflict with the *2016 AQMP*.	**MM 4.3-1** The Project shall comply with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust." Rule 403 requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earth moving, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the City of Chino shall verify that the following notes are specified on the grading plan and within the construction management plan required in accordance with City of Chino Municipal Code Section 20.23.210. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Chino staff or its designee to confirm compliance. a) During grading and ground-disturbing construction activities, the construction contractor shall ensure that all unpaved roads, active soil stockpiles, and areas undergoing active ground disturbance are watered at least three (3) times per day during dry weather. Watering, with complete coverage of disturbed areas by water truck, sprinkler system, or other comparable means, shall achieve a minimum soil moisture of 12 percent. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. b) Temporary signs shall be installed on the construction site along all unpaved roads indicating a maximum speed limit of 15 miles per hour (mph). The signs shall be installed before construction activities commence and remain in place for the duration of construction activities that include vehicle activities on unpaved roads. c) Gravel pads must be installed at all access points to	Project Applicant; Project Construction Contractors	City of Chino Development Services Department (Planning and Building Divisions)	During grading and ground-disturbing construction activities	Significant and Unavoidable Direct and Cumulatively-Considerable Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	prevent tracking of mud onto public roads. d) Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect. e) If materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained. f) All street frontages adjacent to the construction site shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets. g) Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and initiate corrective action within 24 hours. h) Any vegetative cover to be utilized onsite shall be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil. i) Any on-site stock piles of debris, dirt, or other dusty material shall be covered or watered as necessary to minimize fugitive dust pursuant to SCAQMD Rule 403. j) A high wind response plan shall be formulated and implemented for enhanced dust control if winds are forecast to exceed 25 mph in any upcoming 24-hour period. **MM 4.3-2** The Project shall comply with the provisions of South Coast Air Quality Management District Rule 1186 "PM_{10} Emissions from Paved and Unpaved Roads and Livestock Operations" and Rule 1186.1, "Less-Polluting Street Sweepers" by complying with the following requirements. To ensure and enforce compliance with these requirements, prior to grading and building permit issuance, the City of Chino shall verify that the following notes are included on the grading and building plans and within the construction management plan required in accordance with City of Chino Municipal Code Section 20.23.210. Project	Project Applicant; Project Construction Contractors	City of Chino Development Services Department (Planning and Building Divisions)	Prior to grading and building permit issuance	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Chino staff or its designee to confirm compliance. a) If visible dirt or accumulated dust is carried onto paved roads during construction, the contractor shall remove such dirt and dust at the end of each work day by street cleaning. b) Street sweepers shall be certified by the South Coast Air Quality Management District as meeting the Rule 1186 sweeper certification procedures and requirements for PM10-efficient sweepers. All street sweepers having a gross vehicle weight of 14,000 pounds or more shall be powered with alternative (non-diesel) fuel or otherwise comply with South Coast Air Quality Management District Rule 1186.1.				
Thresholds b and c: Significant Direct and Cumulatively-Considerable Impact. The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during construction and VOC and NO_X emissions during long-term operation. As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of ozone standards in the SCAB, which is a significant direct and cumulatively-considerable impact.	**MM 4.3-3** Prior to grading permit issuance, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the following note. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of Chino staff to confirm compliance. a) During grading activity, all construction equipment with more than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified or better.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a building permit	Less-than-Significant Impact (Construction), Significant and Unavoidable Direct and Cumulative Impact (Operation)
	MM 4.3-3a Project construction contractors shall assure that all construction equipment complies with all applicable California Air Resources Board (CARB) air quality regulations. Also, Project construction contractors shall tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications. Maintenance records for all pieces of equipment shall be kept on-site for the duration of construction activities and shall be made available for periodic inspection by City of Chino staff or their designee.	Project Construction Contractors	City of Chino Development Services Department (Building Division)	On-going during construction	
	MM 4.3-3b The Project Applicant shall encourage construction contractors to apply for South Coast Air Quality Management District "SOON" funds. The "SOON" program provides funds to qualifying off-road diesel	Project Applicant	City of Chino Development Services Department (Building Division)	On-going during construction	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	construction fleets for the purchase of commercially-available, low-emission heavy-duty engines.				
	MM 4.3-4 Prior to grading permit issuance, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the following note. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of Chino staff to confirm compliance. a) Only "low-volatile organic compound" paint products (no more than 50 gram/liter of VOC) and/or High-Pressure Low Volume (HPLV) applications shall be used on-site. All other architectural coatings shall comply with the VOC limits prescribed by SCAQMD Rule 1113.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of permits that would allow the installation of landscaping	
	MM 4.3-5 Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than three (3) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to the issuance of an occupancy permit, the City of Chino shall conduct a site inspection to ensure that the signs are in place.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of an occupancy permit	
	MM 4.3-6 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Chino demonstrating that the Project is designed to exceed the California Energy Code (Title 24, Part 6) standards in effect at the time of building permit application submittal by three (3) percent and includes the energy efficiency design features listed below at a minimum. a) Preferential parking locations for carpool, vanpool, EVs and CNG vehicles;	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of an occupancy permit	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	b) All outdoor cargo handling equipment (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts) shall be electric-powered; and c) All fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent.				
	MM 4.3-7 Prior to the issuance of permits that would allow the installation of landscaping, the City of Chino shall review and approve landscaping plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; and 2) use of water-efficient irrigation technique. The City of Chino shall inspect for adherence to these requirements after landscaping installation.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of permits that would allow the installation of landscaping	
	MM 4.3-8 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Chino demonstrating that occupants/tenants of the Project site will be provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a building permit	
	MM 4.3-9 Legible, durable, weather-proof signs shall be placed at driveways where delivery trucks exit onto public streets that direct truck drivers to designated truck routes. The City of Chino shall confirm the required signs are installed prior to issuance of an occupancy permit.	Project Applicant	City of Chino Development Services Department (Building Division)	Prior to issuance of occupancy permit.	
	MM 4.3-10 A maximum of 154,500 square feet of refrigerated warehouse space shall be permitted within the Project. The refrigerated warehouse space shall only be permitted west of Mayhew Avenue, at the approximate locations of proposed Buildings 4, 5, and/or 6. For purposes of this mitigation measure, refrigerated warehouse space shall include all areas kept at a sustained temperature of 55 degrees Fahrenheit or lower.	Project Applicant	City of Chino Development Services Department (Planning and Building Divisions)	Prior to issuance of building permit.	
	MM 4.3-11 Prior to the issuance of a building permit and/or tenant improvement permit for any warehouse building that contains refrigerating storage, an electrical hookup for refrigeration units on delivery trucks shall be provided at all loading dock spaces servicing the refrigerated	Project Applicant	City of Chino Development Services Department (Building Division)	Prior to issuance of building permit.	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	storage spaces. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.				
Threshold d: Significant Direct and Cumulatively-Considerable Impact. The Project would exceed the applicable SCAQMD localized thresholds for particulate matter (PM_{10} and $PM_{2.5}$) emissions during construction.	Refer to MM 4.3-1 and MM 4.3-2, above.	N/A	N/A	N/A	Less-than-Significant Impact after Mitigation
Threshold e: Less-than-Significant Impact. The Project would not produce unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
4.4 Biological Resources					
Summary of Impacts					
Threshold a: Significant Direct and Cumulatively-Considerable Impact. There Project site contains suitable nesting habitat for the northern harrier and white-tailed kite and there is the potential that the Project could take individuals from these species during construction. The Project site also contains suitable foraging and nesting habitat for the burrowing owl. In the event the burrowing owl migrates onto the Project site before Project construction commences, the Project has the potential to take burrowing owl individuals.	**MM 4.4-1** No sooner than 30 days prior to and no later than 14 days prior to grading activities, a qualified biologist shall conduct a survey of the Project's impact footprint and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Chino prior to the issuance of a grading permit and subject to the following provisions: a) In the event that the pre-construction survey detects no burrowing owls in the impact area, a grading permit may be issued without restriction. b) In the event that the pre-construction survey detects the burrowing owl within the Project's impact footprint, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, the Project Applicant shall make reasonable efforts to consult with the California Department of Fish and	Project Applicant; Project Biologist	City of Chino Development Services Department (Planning and Building Divisions)	No sooner than 30 days prior to and no later than 14 days prior to grading activities	Less-than-Significant Impact after Mitigation

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	Wildlife (CDFW) regarding conservation strategies for the burrowing owl, although it is acknowledged that the Project Applicant cannot compel the CDFW to participate in the consultation process. Regardless of whether or not the CDFW engages in consultation the Project Applicant shall ensure at minimum that Project-related activities occur in conformance with the burrowing owl mitigation standards established by the City of Chino Subarea 2 Resources Management Plan. 1. Prior to disturbance of occupied burrows, natural or artificial replacement burrows shall be provided at a ratio of 2:1 within a City-designated relocation area. A qualified biologist shall confirm the replacement burrows are unoccupied and suitable for burrowing owl use prior to disturbance of occupied burrows. 2. No disturbance shall occur within 50 meters of occupied burrows during the non-breeding season (September 1 through January 31) or within 75 meters of occupied burrows during the breeding season (February 1 through August 31), until the Project Applicant provides evidence to the City of Chino that suitable replacement burrows have been provided. 3. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. 4. If burrowing owls are present at the time occupied burrows are to be disturbed, the owls shall be excluded from the site in accordance with CDFW relocation protocol and the protocol established in Table 4-6 of the City of Chino Subarea 2 Resources Management Plan. 5. Subject to the provisions of the Subdivision Map Act vesting map requirements, if the City of Chino has established a mitigation fee program for the long-term management of burrowing owl habitat as recommended by the City of Chino Subarea 2 Resources Management Plan, prior to issuance of a grading permit, the Project Applicant shall pay the appropriate mitigation fee to the City of Chino.				

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	MM 4.4-2 Vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (January 31 through September 1), unless a migratory bird nesting survey is completed in accordance with the following requirements: a) A migratory bird nesting survey of the Project site and the Project's off-site development area, including suitable habitat within a 250-foot radius, shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance. A copy of the migratory nesting bird survey results report shall be provided to the City of Chino. b) If the survey does not identify the presence of any nests, then construction activities can proceed without restriction. c) If the survey identifies the presence of active nests, then the qualified biologist shall provide the City with a copy of maps showing the location of all nests and a species-appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City and shall be no less than a 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors. 1. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing. No construction vehicles shall be permitted within restricted areas (i.e., bird protection zones), unless directly related to the management or protection of the legally protected species, until all nestlings have fledged and left the nest (or the nest has failed). 2. In the event that a nest is abandoned despite efforts to minimize disturbance and, if the nestlings are still alive, the Project Applicant/Developer shall contact the California Department of Fish and Wildlife (CDFW) and, subject to CDFW approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).	Project Applicant; Project Biologist	City of Chino Development Services Department (Planning and Building Divisions)	Within three (3) days prior to initiating vegetation clearing or ground disturbance	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold b: No Impact. The Project development area does not contain riparian and/or other sensitive natural habitats; therefore, the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c: No Impact. No federally protected wetlands are located within the Project development area; therefore, no impact to wetlands would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold d: Significant Direct and Cumulatively-Considerable Impact. There is no potential for the Project to interfere with the movement of fish or impede the use of a native wildlife nursery site. However, the Project would directly impact nesting migratory birds protected by the MBTA and California Fish and Game Code.	Refer to MM 4.4-1 and MM 4.4-2, above.	N/A	N/A	N/A	Less-than-Significant after Mitigation
Threshold e: Less-than-Significant Impact. The Project would not conflict with any local policies or ordinances protecting biological resources.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold f: No Impact. The Project impact area is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.5 Cultural Resources & Tribal Cultural Resources					
Summary of Impacts					
Threshold a: No Impact. The Project would not impact a historic resource. No historic resources are present on the Project site; therefore, no historic resources could be altered or destroyed by construction or operation of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold b: Significant Direct and Cumulatively Considerable Impact. Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact significant prehistoric archaeological resources that may be buried beneath the ground surface.	**MM 4.5-1** Prior the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that a professional archaeologist (hereafter "Project Archaeologist") has been retained to conduct monitoring of all mass grading activities. The Project Archaeologist shall have the authority to redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction.	Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a grading permit	Less-than-Significant after Mitigation
	MM 4.5-2 Prior the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that the Native American Tribe(s) that requested consultation with the City during the AB 52 process (hereafter referred to as "Native American Tribal Representatives") received a minimum of 30 days' advance notice of all mass grading and trenching activities. The Native American Tribal Representatives also shall be notified of and allowed to attend the pre-grading meeting with the City and Project construction contractors and/or monitor all Project mass grading and trenching activities. In the event that suspected archaeological resources are unearthed, the Native American Tribal Representatives shall have the authority to redirect earth moving activities in the affected area.	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a grading permit	
	MM 4.5-3 Prior to the issuance of a grading permit, the Project Applicant or construction contractor shall provide evidence to the City of Chino that the construction site supervisors and crew members involved with grading and trenching operations have received training by the Project Archaeologist to recognize tribal cultural resources should such resources be unearthed during ground-disturbing construction activities. Any Native American Tribal Representatives shall be allowed to attend the training session. The training will include a brief review of the cultural sensitivity of the Project site and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols.	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a grading permit	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	MM 4.5-4 If a suspected tribal cultural resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource by the Project Archaeologist and the Native American Tribal Representative. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure MM 4.5-5 shall apply.	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	If a suspected tribal cultural resource is identified on the property	
	MM 4.5-5 If a significant archaeological and/or tribal cultural resource is discovered on the property, ground disturbing activities shall be suspended 50 feet around the resource until a treatment plan is implemented. A treatment plan shall be prepared and implemented, subject to approval by the City of Chino, to protect the identified tribal cultural resource(s) from damage and destruction. The treatment plan shall contain a research design and data recovery program necessary to document the size and content of the discovery such that the resource(s) can be evaluated for significance under CEQA criteria. The research design shall list the sampling procedures appropriate to exhaust the research potential of the tribal cultural resource(s) in accordance with current professional archaeology standards. The treatment plan shall require monitoring by the appropriate Native American Tribe(s) during data recovery and shall require that all recovered artifacts undergo basic field analysis and documentation or laboratory analysis, whichever is appropriate. At the completion of the basic field analysis and documentation or laboratory analysis, any recovered tribal cultural resource(s) shall be processed and curated according to current professional repository standards. The collections and associated records shall be donated to an appropriate curation facility, or, the artifacts may be delivered to the appropriate Native American Tribe(s) if that is recommended by the City of Chino. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of Chino, the South Central Coastal Information Center	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	If a significant archaeological and/or tribal cultural resource is discovered on the property	

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THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	(SCCIC) at California State University (CSU), Fullerton, and the appropriate Native American Tribe(s).				
Threshold c: Significant Direct and Cumulatively Considerable Impact. The Project would not impact any known paleontological resource or unique geological feature. However, the Project site contains alluvium soils with a high sensitivity for paleontological resources. Accordingly, construction activities on the Project site have the potential to unearth and adversely impact paleontological resource that may be buried beneath the ground surface.	**MM 4.5-6** Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that a qualified paleontologist has been retained to conduct monitoring of grading and excavation operations in Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits.	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of a grading permit	
	MM 4.5-7 The paleontological monitor shall conduct full-time monitoring in areas of grading or excavation in the shallow subsurface of Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits. The paleontological monitor shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that may contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow the removal of abundant and large specimens in a timely manner. The significance of the discovered resources shall be determined by the paleontologist. If the resource is significant, Mitigation Measure MM 4.5-8 shall apply. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	During paleontological monitoring	
	MM 4.5-8 If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist. Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable	Project Applicant; Project Archaeologist	City of Chino Development Services Department (Planning and Building Divisions)	If a significant paleontological resource is discovered on the property	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	paleontological storage. Prior to grading permit inspection approval, a qualified paleontologist shall prepare a final report that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and contains evidence that the resources were curated by an established museum repository. The report shall be submitted to the City of Chino.				
Threshold d: Less-than-Significant Impact. In the unlikely event that human remains are discovered during Project grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 *et. seq.* Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: No Impact. The Project site does not contain any recorded Native American cultural resources; therefore, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold f: Significant Direct and Cumulatively Considerable Impact. Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact tribal cultural resources that may be buried beneath the ground surface.	Refer to MM 4.5-1 through MM 4.5-5, above.				Less-than-Significant after Mitigation
4.6 Geology and Soils					
Summary of Impacts					
Threshold a: Less-than-Significant	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Impact. The Project would not expose people or structures to substantial adverse effects related to liquefaction or fault rupture. the Project site is subject to seismic ground shaking associated with earthquakes; however, mandatory compliance with local and state ordinances and building codes including, but not limited to, the CBSC (Chapter 18) and the Chino Municipal Code (Section 19.08.010), would ensure that the Project minimizes potential hazards related to seismic ground shaking.					Impact
Threshold b: Less-than-Significant Impact. The Project would not result in substantial soil erosion or loss of topsoil. The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP) and SCAQMD Rule 403 to minimize water and wind erosion. Following completion of development, the Project would be required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Less-than-Significant Impact. There is no potential for the Project to cause on- or off-site landslides or lateral spreading. Potential hazards associated with unstable soils would be precluded through mandatory adherence to the recommendations contained in the site-specific geologic engineering report.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold d: Less-than-Significant Impact. The Project site contains soils with low susceptibility to expansion. Thus, potential hazards associated with expansive soils would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: No Impact. No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.7 Greenhouse Gas Emissions					
Summary of Impacts					
Threshold a: Less-than-Significant Impact. The GHG emissions generated by the Project would be consistent with the City of Chino CAP. As such, implementation of the Project would not generate substantial GHG emissions – either directly or indirectly – that would have a significant impact on the environment.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Less-than-Significant Impact. The Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce GHG emissions.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
4.8 Hazards and Hazardous Materials					
Summary of Impacts					
Threshold a and b: Less-Than-Significant Impact. During Project construction and operation, mandatory compliance to federal, State and local regulations would ensure that the proposed Project would not create a significant hazard to the environment due to routine transport, use, disposal, or upset of hazardous materials.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: No Impact. The Project site is not located within one-quarter	No mitigation is required.	N/A	N/A	N/A	No Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
mile of any existing or proposed school. Accordingly, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts to schools located more than one-quarter mile of the Project site would be less than significant.					
Threshold d: No Impact. The Project site is not listed on any list of hazardous materials compiled pursuant to Government Code § 65962.5.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold e: Less-Than-Significant Impact. The Project is consistent with the restrictions and requirements of the Chino Airport Land Use Compatibility Plan. As such, the Project would not result in an airport safety hazard for people residing or working in the Project area.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold f: No Impact. The Project site is not located within the vicinity of a private airstrip or a helipad. Accordingly, implementation of the Project would have no potential to expose on-site workers to safety hazards associated with a private airfield or an airstrip.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold g: No Impact. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency vehicle access is required to be provided. Accordingly, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.	No mitigation is required.	N/A	N/A	N/A	No Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold h: No Impact. The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a significant wildfire risk.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.9 Hydrology and Water Quality					
Summary of Impacts					
Threshold a: Less-than-Significant Impact. The Project would not violate any water quality standards or waste discharge requirements on a direct or cumulative basis. SWPPPs and WQMPs are required for future development to address construction-related water quality issues.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Less-than-Significant Impact. The Project site would not physically impact any of the major groundwater recharge facilities in the Basin. The Project does not propose potable water wells and would not substantially impact the availability of potable groundwater in the Project area.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Less-than-Significant Impact. The Project would retain the site's general drainage pattern and would be required to incorporate design features to minimize erosion and sediment within surface water runoff.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Less-than-Significant Impact. The Project site would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would development on the Project site provide substantial additional sources of polluted runoff.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: Less-than-Significant Impact. The Project's stormwater drainage systems have sufficient available capacity to accommodate anticipated surface runoff flows on the	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Project site. Additionally, the Project would be required to be designed in accordance with the City of Chino Storm Drain Master Plan, and comply with a SWPPP and a site-specific WQMP.					
Threshold f: No Impact. There are no other components of the Project that would substantially degrade water quality.	No mitigation is required.	N/A	N/A	N/A	No Impact
Thresholds g and h: No Impact. The Project would not construct housing within a 100-year flood hazard area; nor is the Project site located within a 100-year flood hazard area.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold i: No Impact. The Project site would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold j: No Impact. The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.10 Noise					
Summary of Impacts					
Thresholds a and d: Significant Direct Impact and Cumulatively-Considerable Impact. Noise generated by short-term construction activities would result in a significant, temporary, direct impact to noise-sensitive receivers in proximity to the Project site. In the event that construction activities occur on properties neighboring the Project site simultaneously, a cumulative impact could occur to one or more of the noise-sensitive receivers that would be affected by the Project.	**MM 4.10-1** Prior to issuance of any grading and building permits, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the noise abatement measures listed below. Project contractors shall be required to comply with these abatement measures and maintain written records of such compliance that can be inspected by the City of Chino upon request. a) An eight (8)-foot-tall construction noise barrier shall be constructed along portions of the Project's south-facing and east-facing property boundary and along a portion of the Project's off-site development area (near the future intersection of Mayhew Avenue and Pine Avenue) that abut property with occupied residences. The location and	Project contractor	City of Chino Development Services Department (Planning and Building Divisions)	Prior to issuance of any grading and building permits	Less-than-Significant after Mitigation

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	maximum extent of the construction noise barrier is illustrated on EIR Figure 4.10-4 and Exhibit ES-A from the report titled "Altitude Business Centre Noise Impact Analysis," prepared by Urban Crossroads and dated May 30, 2018. The construction noise barrier shall meet the following minimum standards: i.) The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to a construction site perimeter fence or equivalent temporary fence posts or barrier materials; ii.) The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired; and iii.) The noise control barrier and associated elements shall be completely removed upon the conclusion of the construction activity. b) The construction contractor shall prohibit the use of construction equipment with a sound power level greater than 100 dBA within 150-feet of occupied residences along the Project site's east-facing boundary. The location and maximum extent of the construction noise buffer area is illustrated on EIR Figure 4.10-4 and Exhibit ES-A from the report titled "Altitude Business Centre Noise Impact Analysis," prepared by Urban Crossroads and dated May 30, 2018. If all equipment used during Project construction has a sound power level rating of 100 dBA or less, then the 150-foot buffer is not required. c) The construction contractor shall install sound dampening mats or blankets capable of a minimum 5 dBA noise reduction to the engine compartments of heavy mobile equipment operating within the portion of the Project's off-site development area that abuts the future intersection of Mayhew Avenue and Pine Avenue. The sound dampening mats, which shall only be required in the event that the existing residences that abut the location of the future Mayhew Avenue/Pine Avenue intersection are occupied at				

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	the time construction occurs, can be made from commercially-available sound dampening materials, including but not limited to, polyurethane foam and vinyl sheeting. d) Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer's standards. e) Construction contractors shall place all stationary construction equipment so that all emitted noise is generated toward the center of the site and away from the noise sensitive receivers nearest the Project site. f) Construction contractors shall locate equipment staging areas on the Project site in locations that will create the greatest feasible distance between construction related noise sources and noise sensitive receivers nearest the Project site. g) Construction contractors shall ensure that delivery trucks use designated truck route(s).				
Threshold b: Less-than-Significant Impact. The Project's construction and operational activities would not result in a perceptible groundborne vibration or noise.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Less-than-Significant Impact. Noise generated during operation of the Project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the Project site.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: Less-than-Significant Impact. The Project site is not located within an area exposed to high levels of noise from the Chino Airport. As such, the Project would not expose people to excessive noise levels associated with a public airport or public use airport.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold f: No Impact. The Project site is not located near any private airfields or airstrips.	No mitigation is required.	N/A	N/A	N/A	No Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.11 Transportation and Traffic					
Summary of Impacts					
Threshold a: Significant Direct and Cumulatively Considerable Impact. The addition of Project-related traffic would contribute to LOS deficiencies at numerous Study Area intersections during Existing plus Project, Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions.	**MM 4.11-1** Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall assure the improvement of the Central Avenue / El Prado Road intersection as follows: a) Modify the traffic signal to implement overlap phasing on the northbound right turn lane.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 2 of Project development	Less-than-Significant Direct Impact after Mitigation and Significant and Unavoidable Cumulative Impact
	MM 4.11-2 Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall assure the improvement of the Euclid Avenue (SR-83) / Kimball Avenue intersection as follows: a) Install a southbound right turn lane with overlap phasing; and b) Install a second eastbound left turn lane.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 2 of Project development	
	MM 4.11-3 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall assure the improvement of the Euclid Avenue (SR-83) / Kimball Avenue intersection as follows: a) All improvements identified in MM 4.11-2; and b) Install a second southbound left turn lane.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of building permits	
	MM 4.11-4 Prior to the issuance of building permits, the Project Applicant/Developer shall comply with the applicable requirements of City of Chino Sub-Area II (The Preserve) Development Impact Fee Preserve (DIF) program, which requires fee payment to the City of Chino (less any fee credits), a portion of which is used by the City to fund the installation of road and intersection improvements to reduce traffic congestion.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of building permits	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	MM 4.11-5 Prior to the issuance of the first occupancy permit for Phase 1 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 6-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. a) El Prado Road / Kimball Avenue; b) Euclid Avenue (SR-83) / Riverside Drive; c) Euclid Avenue (SR-83) / Schaefer Avenue; d) Euclid Avenue (SR-83) / Edison Avenue; e) Euclid Avenue (SR-83) / Merrill Avenue; and f) Euclid Avenue (SR-83 / Bickmore Avenue.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 1 of Project development	
	MM 4.11-6 Prior to the issuance of the first occupancy permit for Phase 1 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust for conveyance to Caltrans and the City of Ontario, for improvements to the intersections listed below. The required improvements are listed in Table 6-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Ontario and/or Caltrans have not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 1 of Project development	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	a) Euclid Avenue (SR-83) / SR-60 Eastbound Ramps. **MM 4.11-7** Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 7-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. a) Central Avenue / Chino Hills Parkway; and b) Street B / Kimball Avenue.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 2 of Project development	
	MM 4.11-8 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 8-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. a) Mayhew Avenue / Kimball Avenue; and b) Flight Avenue / Kimball Avenue.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 3 of Project development	

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THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	MM 4.11-9 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. a) SR-71 Northbound Ramps / Chino Hills Parkway; b) Ramona Avenue / Chino Hills Parkway; c) Monte Vista Avenue West / Chino Hills Parkway; d) Euclid Avenue (SR-83) / Chino Avenue e) Euclid Avenue (SR-83) / Schaefer Avenue; f) Euclid Avenue (SR-83) / Edison Avenue; g) Euclid Avenue (SR-83) / Merrill Avenue; and h) Euclid Avenue (SR-83) / Bickmore Avenue.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 3 of Project development	
	MM 4.11-10 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-8 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. This mitigation measure	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 3 of Project development	

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	shall only apply if, at the time of occupancy permit issuance, Limonite Avenue has been extended over the Cucamonga Creek Channel to connect Hellman Avenue and Archibald Avenue. a) Meadow Valley Avenue / Kimball Avenue. **MM 4.11-11** Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust for conveyance to the City of Eastvale, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Tables 1-7 and 1-8 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Eastvale have not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. This mitigation measure shall only apply if, at the time of occupancy permit issuance, Limonite Avenue has been extended over the Cucamonga Creek Channel to connect Hellman Avenue and Archibald Avenue. a) Hellman Avenue / Kimball Avenue; b) Harrison Avenue / Limonite Avenue; c) Sumner Avenue / Limonite Avenue; d) Scholar Way / Limonite Avenue; and e) Hamner Avenue / Limonite Avenue.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	Prior to the issuance of the first occupancy permit for Phase 3 of Project development	
Threshold b: Significant Direct and Cumulatively Considerable Impact. The Project would cause the merge/diverge performance at the SR-71 Northbound On-Ramp at Central Avenue to operate at a deficient LOS under the E+P Phases 1+2+3 condition. Also, the addition of Project-related	**MM 4.11-12** In the event that Caltrans prepares a valid study, as defined below, that identifies fair share contribution funding sources attributable to and paid from private and public development to supplement other regional and State funding sources necessary undertake improvements to SR-60 and SR-71 in the Project study area, then the Project Applicant/Developer shall use reasonable efforts to pay the applicable fair share amount to Caltrans.	Project Applicant/Developer	City of Chino Development Services Department (Planning and Building Divisions)	In the event that Caltrans prepares a valid study	Significant and Unavoidable Direct and Cumulative Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
traffic would contribute to LOS deficiencies at seven *CMP* intersections within the Project Study Area, and numerous *CMP* freeway facilities under E+P, Opening Year (2018, 2019, and 2020), and Horizon Year (2040) traffic conditions.	The study shall include fair share contributions related to private and or public development based on nexus requirements contained in the Mitigation Fee Act (Govt. Code § 66000 et seq.) and 14 Cal. Code of Regs. § 15126.4(a)(4) and, to this end, the study shall recognize that development projects within the City of Chino have no fair-share payment obligation for impacts to SR-60 and SR-71 that are not attributable to development located within the City of Chino. The fee study shall also be compliant with Government Code § 66001(g) and any other applicable provisions of law. The study shall set forth a timeline and other relevant criteria for implementation of the recommendations contained within the study to the extent the other agencies agree to participate in the fee study program. In the event the study has been prepared, the Project Applicant/Developer shall use reasonable efforts to pay the fair-share fee to Caltrans. If Caltrans chooses to accept the Project Applicant's/Developer's fair-share payment, Caltrans shall apply the payment to the fee program adopted by Caltrans or agreed upon by the Project Applicant/Developer and Caltrans as a result of the fair-share fee study. Caltrans shall only accept the fair-share payment if the fair-share fee study has been completed. If, within five years from the date that the first building permit is issued for the Project, Caltrans has not completed the fair share fee study, then the Project Applicant/Developer shall have no further obligation to comply with this mitigation measure.				
Threshold c: Less-than-Significant Impact. There is no potential for the Project to change air traffic patterns or create substantial air traffic safety risks.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold d: Less-than-Significant Impact. No significant transportation safety hazards would be introduced as a result of the proposed Project.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: Less-than-Significant Impact. Adequate emergency access would be provided to the Project site during construction and long-term operation. The Project would not result	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
in inadequate emergency access to the site or surrounding properties.					
Threshold f: Less-than-Significant Impact. Future Project-related development would be required to comply with applicable City of Chino General Plan goals and policies related to pedestrian and bicycle facilities and would not adversely impact the expansion of non-vehicular/alternative transportation in the City of Chino.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
4.12 Utilities and Service Systems					
Summary of Impacts					
Threshold a: Less-than-Significant Impact. The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. IEUA would provide wastewater treatment and collection services to the Project, and IEUA is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold b: Less-than-Significant Impact. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c: Less-than-Significant Impact. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold d: Less-than-Significant Impact. The City of Chino is expected to have sufficient water supplies to service the Project. The Project would not exceed the City's available supply of water during normal years, single-dry years, or multiple-dry years.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e: Less-than-Significant Impact. The IEUA would provide wastewater treatment services to the Project site via RP-5. This facility has adequate capacity to service the Project and no new or expanded facilities would be needed.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold f: Less-than-Significant Impact. There is adequate capacity available at the El Sobrante Landfill to accept the Project's solid waste during both construction and long-term operation. Landfill capacity would not be exceeded as a result of the proposed Project.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold g: Less-than-Significant Impact. The Project would comply with all applicable federal, State, and local statutes and regulations related to solid waste disposal, reduction, and recycling.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

1.0 INTRODUCTION

This Environmental Impact Report (EIR) is an informational document that represents the independent judgment of the City of Chino (acting as the CEQA Lead Agency) and evaluates the physical environmental effects that could result from planning, constructing, and operating the proposed Altitude Business Centre project (hereafter, the "Project"). Approvals requested from the City of Chino by the Project Applicant to implement the Project include a Tentative Parcel Map No. 19756 (PL16-0456), Master Site Approval (PL16-0457), Site Approval (PL17-0044), and other related discretionary and administrative actions that are required to construct and operate the Project described in this EIR.

1.1 PURPOSES OF CEQA AND THIS EIR

As stated by CEQA Guidelines § 15002(a), the basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities (including the discretionary approval of private development projects);

2. Identify the ways that environmental damage can be avoided or significantly reduced;

3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant effects are involved.

As the first step in the CEQA compliance process, the City of Chino prepared an Initial Study pursuant to CEQA Guidelines § 15063. The Initial Study determined that the Project has the *potential* to cause or contribute to significant environmental effects, and a Project EIR, as defined by CEQA Guidelines § 15161, would be required. Accordingly, this document serves as a Project EIR. As required by CEQA Guidelines § 15161, this Project EIR shall "…focus primarily on the changes in the environment that would result from the development project," and "…examine all phases of the project including planning, construction, and operation." Also, in conformance with CEQA Guidelines § 15121(a), the purposes of this EIR are to: (1) disclose information by informing public agency decision makers and the public generally of the significant environmental effects associated with all phases of the Project, (2) identify possible ways to minimize or avoid those significant effects, and (3) to describe a reasonable range of alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects.

1.2 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR

For purposes of this EIR, the term "Project" refers to the discretionary actions required to implement the proposed Altitude Business Centre and all of the activities associated with its implementation including planning, construction, and ongoing operation. The Project site comprises an approximately 72-acre property located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 660 feet west of Rincon Meadows Avenue in the City of Chino, San Bernardino County, California. In summary, the Project involves the demolition of the property's existing residential and agricultural/dairy land uses and the construction and operation of a business center complex

with up to 25 buildings totaling up to 1,219,015 square feet (s.f.) of building space. The Project Applicant also would construct off-site roadway improvements to Kimball Avenue and Bickmore Avenue, and may construct off-site utility improvements beneath the future alignment of Mayhew Avenue between Bickmore Avenue and Pine Avenue.

The Project Applicant has requested the following discretionary actions, which are under consideration by the City of Chino:

- **Tentative Parcel Map No. 19756 (PL16-0456)** proposes to subdivide an approximately 61.2-acre portion of the Project site into 21 numbered lots ranging in size from 0.35-acre to 11.19 acres and five (5) landscape lots ranging in size from 0.02-acre to 0.22-acre.

- **Master Site Approval (PL16-0457)** details the key features and characteristics of the Project, including conceptual site layout, vehicular and pedestrian circulation networks, architectural character, and landscape design, for development of the Project site. The Project would entail the development of 25 buildings ranging in size from 5,000 s.f. to 200,000 s.f. of floor area. Collectively all of the buildings' total floor area would be 1,219,015 s.f. However, many of the buildings proposed by the Master Site Approval are designed for potential future expansion – subject to future permit approval by the City of Chino – therefore, for purposes of the CEQA analysis contained in this EIR, the Project is evaluated as containing up to 1,313,000 s.f. of total floor area.

- **Site Approval (PL17-0044)** details the key features and characteristics of Buildings #1-6 of the Master Site Approval and their associated parking lots. The buildings consist of two (2) light industrial buildings and four (4) warehouse buildings, and would range in size from 88,500 s.f. to 200,000 s.f. with a total floor area of 876,900 s.f. The Project's remaining buildings would be subject to future Site Approval actions by the City of Chino, and are not proposed at this time.

- **Special Conditional Use Permit (PL17-0042)** is proposed to ensure the Project conforms with The Preserve Specific Plan, which requires the approval of a SCUP for buildings that exceed 50,000 s.f. of floor area.

1.3 PRIOR CEQA REVIEW

The Project site is located within the geographical limits of the City of Chino and as such is covered by the City's General Plan. The General Plan was approved by the City of Chino in 2010 and provides the fundamental basis for the City's land use and development policies through the Year 2025. The City's General Plan designates the Project site for development with "Airport Related" land uses (Chino, 2010a, Figure LU-2). The City's General Plan was the subject of a previous environmental review under CEQA; a Program EIR for the City's General Plan was certified by the City of Chino in 2010 (State Clearinghouse Number 2008091064). The Program EIR contains information relevant to the Project site. Thus, the Program EIR for the City's General Plan is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for public review at the City of Chino Development Services Department, Planning Division, located at 13220 Central Avenue, Chino CA 91710 and the website link found in EIR Section 7.0, *References*.

Additionally, the Project site lies within the geographical limits of The Preserve Specific Plan. The Preserve Specific Plan was approved by the City of Chino in 2003 and guides development within an approximately

5,435-acre portion of the City. The Preserve Specific Plan designates the Project site for future development with "Airport Related" land uses (Chino, 2011, Figure 1A). To-date, no development has occurred on the Project site pursuant to The Preserve Specific Plan. Implementation of The Preserve Specific Plan was the subject of previous environmental review under CEQA as part of a Program EIR that was certified by the City of Chino in 2003 (State Clearinghouse Number 2000121036) (Chino, 2003). The Program EIR contains information relevant to the portions of the Project site located within The Preserve Specific Plan boundary. Thus, the Program EIR for The Preserve Specific Plan is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for public review at the City of Chino Development Services Department, Planning Division, 13220 Central Avenue, Chino, CA 91710, and the website link found in EIR Section 7.0, *References.*

In summary, the Project site was the subject of previous environmental reviews conducted under CEQA as part of the EIR certified in 2003 for The Preserve Specific Plan (Chino, 2003) and the EIR certified in 2010 for the City of Chino General Plan (Chino, 2010b). As previously stated, these previously certified EIRs are herein incorporated by reference pursuant to CEQA Guidelines § 15150. Both of these EIRs analyzed development of the Project site with airport-related land uses, inclusive of industrial development; as such, use of the property for industrial purposes does not need to be re-evaluated. This EIR focuses on the potential impacts to the environment resulting from the Project described in this EIR, which is the proposed implementation of a specific development project on the Project site, inclusive of on-site development and associated off-site infrastructure improvements, in conformance with the property's General Plan land use designation and The Preserve Specific Plan land use designation and zoning. The Tentative Parcel Map, Master Site Approval, and Site Approval proposed by the Project Applicant are described in more detail in EIR Section 3.0, *Project Description*.

1.4 LEGAL AUTHORITY

This EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code § 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, § 15000 *et seq.*).

Pursuant to CEQA § 21067 and CEQA Guidelines Article 4 and § 15367, the City of Chino is the Lead Agency under whose authority this EIR has been prepared. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action to approve the Project, the City of Chino has the obligation to: (1) ensure that this EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision making process; (3) make a statement that this EIR reflects the City of Chino's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines §§15090 through 15093).

Pursuant to CEQA Guidelines §§15040 through 15043, and upon completion of the CEQA review process, the City of Chino will have the legal authority to do any of the following:

- Approve the Project;

- Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;

- Deny approval of the Project, if necessary, in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or

- Approve the Project even through the Project would cause a significant effect on the environment if the City makes a fully informed and publicly disclosed decision that: 1) there is no feasible way to avoid or further lessen the effect; and 2) the expected benefits from the Project will outweigh its significant and unavoidable environmental impacts.

This EIR fulfills the CEQA environmental review requirements for the proposed Tentative Parcel Map (PL16-0456), Master Site Approval (PL16-0457), Site Approval (PL17-0044), and all other governmental discretionary and administrative actions related to the Project.

1.5 Responsible and Trustee Agencies

The California Public Resource Code (§ 21104) requires that all EIRs be reviewed by responsible and trustee agencies (see also CEQA Guidelines § 15082 and § 15086(a)). As defined by CEQA Guidelines § 15381, "the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power over the project." A Trustee Agency is defined in CEQA Guidelines § 15386 as "a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California."

For the proposed Project, the Santa Ana Regional Water Quality Control Board (RWQCB) is identified as a Trustee Agency that is responsible for the protection of water resources and water quality. The Santa Ana RWQCB is responsible for issuance of a National Pollutant Discharge Elimination System (NPDES) Permit to ensure that during and after Project construction, on-site water flows do not result in siltation, other erosional actions, or degradation of surface or subsurface water quality. In addition, the California Department of Fish and Wildlife (CDFW) is identified as a Trustee Agency that is responsible for the protection of fish, wildlife, plant, and native habitats. Consultation with the CDFW may be required for pre-construction burrowing owl surveys. There are no other agencies that are identified as known Responsible or Trustee Agencies for the proposed Project.

1.6 EIR Scope, Format, and Content

1.6.1 EIR Scope

An Initial Study was prepared by the City of Chino to preliminarily identify the environmental issue areas that may be adversely impacted by the Project. Following completion of the Initial Study, the City filed a Notice of Preparation (NOP) with the California Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared to evaluate the Project's potential to impact the environment. The NOP was filed with the State Clearinghouse and distributed to Responsible Agencies, Trustee Agencies, and other interested parties on May 20, 2017, for a 30-day public review period. The NOP was distributed for public review to solicit responses to help the City identify the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR. In addition, a publicly-noticed EIR Scoping Meeting was held at the City of Chino City Council Chambers on June 5, 2017, which provided members of the general public an additional opportunity to comment on the scope of environmental issues to be addressed in this EIR.

Based on the information contained in the Initial Study and in consideration of all comments received by the City on the NOP and during the Scoping Meeting, Section 4.0, *Environmental Analysis*, of this EIR evaluates in detail the Project's potential to cause adverse effects to the following environmental issue areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources & Tribal Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Noise
- Transportation and Traffic
- Utilities/Service Systems

Refer to EIR Subsection 5.5, *Effects Found not to be Significant as Part of the Initial Study Process*, the Initial Study contained in *Technical Appendix A*, and the reference sources cited therein, for the evidence upon which the City made its determination that detailed analyses of the other environmental topics addressed in CEQA are not warranted in this EIR. The City also determined that the topic of Energy does not warrant a detailed analysis for the reasons cited in EIR Subsection 5.4, *Energy Consumption*.

The Initial Study, NOP, public review distribution list, and written comments received by the City during the NOP public review period are provided in *Technical Appendix A* to this EIR. Substantive issues raised in response to the NOP are summarized below in Table 1-1, *Summary of NOP Comments*. The purpose of this table is to present the primary environmental issues of concern raised by public agencies and the general public during the NOP review period and Scoping Meeting. The table is not intended to list every comment received by the City during the NOP review period. Regardless of whether or not a comment is listed in the table, all applicable comments received in responses to the NOP are addressed in this EIR.

Table 1-1 Summary of NOP Comments

Issue Area	Comments Received During NOP Review Period and/or EIR Scoping Meeting	Location in EIR Where Comment(s) Addressed
Air Quality	– Request for any potential adverse air quality impacts that could occur from all phases of the Project and all air pollutant sources related to the Project be identified. – Request for an analysis of the air quality effects from the Project's temporary construction activity. – Request for criteria pollutant emissions from the Project be quantified and compared against the recommended regional significance thresholds. – Recommendation to perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling. – Request for the CalEEMod land use emissions software be used for the Project's air quality analysis.	– Subsection 4.3, *Air Quality*
Airport Land Use Compatibility	– Request to analyze, address, and mitigate potential impacts to/from Chino Airport in accordance with the California Airport Land Use Planning Handbook.	– Subsection 4.8, *Hazards and Hazardous Materials* – Subsection 4.11,

Table 1-1 Summary of NOP Comments

Issue Area	Comments Received During NOP Review Period and/or EIR Scoping Meeting	Location in EIR Where Comment(s) Addressed
		Transportation and Traffic
Biological Resources	– Request for a complete assessment of the flora and fauna within and adjacent to the Project site, particularly, special candidate plant and animal species. – Recommendation to provide a Burrowing Owl survey report. – Request for a thorough discussion of the direct, indirect, and cumulative impacts to biological resources that would result from the Project, and to provide mitigation measures to address all Project impacts. – Request that potential impacts to the lake, stream, or riparian resources be identified, and in the event the Project would affect such resources, to provide adequate avoidance, mitigation, and monitoring and reporting commitments.	– Subsection 4.4, *Biological Resources*
Cultural Resources	– Request for an analysis of the historical relevance of the buildings/structures proposed to be removed from the Project site. – Request for an assessment of whether the Project will have an impact on historical resources and if so, to provide mitigation for such effects. – Request for a records search to be performed through the appropriate regional Archaeological Information Center. – Request to include a mitigation plan with provisions for the identification and evaluation of accidently discovered prehistoric archeological resources, for the disposition of recovered cultural items that are not burial associated, and for the discovery of Native American human remains.	– Subsection 4.5, *Cultural Resources & Tribal Cultural Resources*
Hazardous Materials	– Request for any current or historic uses at the Project site that may result in the release of hazardous wastes/substances be identified. – Request for proper investigation, sampling, and remedial actions of any recognized environmental conditions, if recognized environmental conditions present on the subject property. – Request for existing residential and agricultural/dairy land uses to be removed from the subject property in accordance with all applicable laws and regulations. – Request to evaluate soil contamination if the Project involves soil import/export, and if contamination is suspected, to implement appropriate health and safety procedures as needed.	– Subsection 4.8, *Hazards and Hazardous Materials*
Public Health	– Request for the EIR to evaluate the potential for Project design features (e.g., water quality detention basins) to result or contribute to significant vector impacts.	– Subsection 4.8, *Hazards and Hazardous Materials*
Traffic	– Request for a Traffic Impact Analysis that evaluates the	– Subsection 4.11,

Table 1-1 Summary of NOP Comments

Issue Area	Comments Received During NOP Review Period and/or EIR Scoping Meeting	Location in EIR Where Comment(s) Addressed
	Project's potential impacts to existing local arterial and regional/state roadway facilities in the vicinity of the Project site.	*Transportation and Traffic*
Tribal Cultural Resources	– Request for an assessment of whether the Project will have an impact on tribal cultural resources and if so, to mitigate for such effects. – Request for the City consult with all California Native American tribes traditionally and culturally affiliated with the geographic area of the Project.	– Subsection 4.5, *Cultural Resources & Tribal Cultural Resources*
Public Utilities	– Request for an analysis of the Project's potential effect to existing master plan drainage facilities in the vicinity of the Project site.	– Subsection 4.9, *Hydrology and Water Quality* – Subsection 4.13, *Utilities and Service Systems*

The Lead Agency has not identified any issues of controversy associated with the proposed Project after consideration of all comments received in response to the NOP. Notwithstanding, the Lead Agency has identified several issues of local interest including, but not limited to, potential impacts to air quality, biological resources, and transportation (particularly impacts to roadway facilities under the jurisdiction of the City of Chino Hills, the City of Ontario, and the California Department of Transportation).

1.6.2 EIR Format and Content

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, § 21000 *et. seq.* and California Code of Regulations, Title 14, Chapter 5). CEQA requires that an EIR contain, at a minimum, certain specified content. Table 1-2, *Location of CEQA-Required Topics*, provides a quick reference guide for locating the CEQA-required sections within this document.

In summary, the content and format of this EIR is as follows:

- **Section S.0, Executive Summary,** provides an overview of the EIR document and the CEQA compliance process. The Project, including its objectives, is described, and the location and regional setting of the Project site is documented. In addition, the Executive Summary discloses that there are no potential areas of controversy related to the Project and identifies the potential alternatives to the proposed Project as required by CEQA. Finally, the Executive Summary provides a summary of the Project's environmental impacts, mitigation measures, and conclusions, in a table that forms the basis of the EIR's Mitigation, Monitoring, and Reporting Program.

Table 1-2 Location of CEQA-Required Topics

CEQA Required Topic	CEQA Guidelines Reference	Location in this EIR
Table of Contents	§ 15122	Table of Contents
Summary	§ 15123	Section S.0
Project Description	§ 15124	Section 3.0
Environmental Setting	§ 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	§ 15126	Section 4.0
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	§ 15126.2(c)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented	§ 15126.2(d)	Subsection 5.2
Growth-Inducing Impact of the Proposed Project	§ 15126.2(e)	Subsection 5.3
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	§ 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Proposed Project	§ 15126.6	Section 6.0
Effects Not Found to be Significant	§ 15128	Subsection 5.4
Organizations and Persons Consulted	§ 15129	Section 7.0 & *Technical Appendices*
Discussion of Cumulative Impacts	§ 15130	Section 4.0
Energy Conservation	§ 15126.2(b) & Appendix F	Subsection 5.4

- **Section 1.0, Introduction,** provides introductory information about the CEQA process and the responsibilities of the City of Chino, serving as the Lead Agency for this EIR, a brief description of the Project, the purpose of the EIR, and an overview of the EIR format.

- **Section 2.0, Environmental Setting,** describes the environmental setting, including descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review (May 20, 2017). The setting discussion also addresses the relevant regional planning documents that apply to the Project site and vicinity.

- **Section 3.0, Project Description,** serves as the EIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project's applications on file with the City of Chino, including the summary requirements pursuant to CEQA Guidelines § 15123. This section provides a detailed description of the Project, including its purpose, main objectives, design features, construction characteristics, and operational characteristics expected over the Project's lifetime, should development occur on the property as proposed. In addition, the discretionary actions required of the City of Chino and other government agencies to authorize implementation of the Project are discussed.

- **Section 4.0, Environmental Analysis,** provides an analysis of potential direct, indirect, and cumulative impacts that may occur with implementation of the proposed Project. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also describe the terms "effects" and "impacts" as being synonymous (CEQA Guidelines § 15358).

  In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementing the proposed Project. Impacts are evaluated on a direct, indirect, and cumulatively considerable basis. Direct impacts are those that would occur directly as a result of the proposed Project. Indirect impacts represent secondary effects that would result from Project implementation. Cumulative effects are defined in CEQA Guidelines § 15355 as "…two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

  The analyses in Section 4.0 are based in part upon technical reports that are appended to this EIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the proposed Project and are cited in Section 7.0, *References*. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation, feasible mitigation measures are recommended to reduce or avoid the significant effect. Mitigation measures must be fully enforceable, have an essential nexus to a legitimate governmental interest, and be "roughly proportional" to the impacts of the Project. The discussion then indicates whether the identified mitigation measures would reduce impacts to below a level of significance. In most cases, implementation of the mitigation measures would reduce the adverse environmental impacts to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a Statement of Overriding Considerations would need to be adopted by the City of Chino pursuant to CEQA Guidelines § 15093.

- **Section 5.0, Other CEQA Considerations,** includes specific topics that are required by CEQA. These include a summary of the Project's significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, an analysis of the Project's energy consumption, as well as potential growth-inducing impacts of the proposed Project. Section 5.0 also includes a discussion of the potential environmental effects that were found not be significant during preparation of the Initial Study, thereby not warranting the inclusion of detailed analyses in this EIR.

- **Section 6.0, Project Alternatives,** describes and evaluates alternatives to the proposed Project that could reduce or avoid the Project's adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. A range of three (3) alternatives is presented in Section 6.0.

- **Section 7.0, References,** cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted in preparing this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

1.6.3 Incorporation of Reference

CEQA Guidelines § 15147 states that the "information contained in an EIR shall include summarized…information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public," and that the "[p]lacement of highly technical and specialized analysis and data in the body of an EIR shall be avoided through the inclusion of supporting information and analyses as appendices to the main body of the EIR." CEQA Guidelines § 15150 allows for the incorporation "by reference all or portions of another document…[and is] most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this EIR. Where this EIR incorporates a document by reference, the document is identified in the body of the EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this EIR.

This EIR relies on a number of Project-specific technical appendices that are bound separately as *Technical Appendices*. The *Technical Appendices* are available for review at the City of Chino Development Services Department, Planning Division, 13220 Central Avenue, Chino, CA 91710, during the City's regular business hours, or can be requested in electronic form by contacting the City Planning Division. The individual technical studies, reports, and supporting documentation that comprise the *Technical Appendices* are as follows:

A: Initial Study, Notice of Preparation, and Written Comments on the NOP
B1: Air Quality Impact Analysis
B2: Mobile Source Diesel Health Risk Assessment
B3: Supplemental Air Quality Assessment
B4: Supplemental Air Quality Calculations
C: Biological Resources Assessment and Burrowing Owl Survey Report
D1: Phase I Cultural Resources Survey
D2: Paleontological Resource and Monitoring Assessment
E: Geotechnical Investigation
F: Greenhouse Gas Analysis
G1: Phase I Environmental Site Assessment
G2: Phase II Environmental Site Assessment
H1: Preliminary Drainage Study
H2: Preliminary Water Quality Management Plan
I: Noise Impact Analysis
J: Traffic Impact Analysis
K: Water Supply Assessment Report

L: Energy Analysis

Other reference sources that are incorporated into this EIR by reference are listed in Section 7.0, *References*, of this EIR. In most cases, documents or websites not included in the EIR's Technical Appendices are cited by a link to the online location where the document/website can be viewed. References relied upon by this EIR and which are part of the Project's administrative record will be available for public review at the City of Chino Development Services Department, Planning Division, 13220 Central Avenue, Chino, CA 91710, during the CEQA-required public review period of the EIR.

1.6.4 CEQA Guidelines Revisions

In November 2018, the California Natural Resources Agency finalized updates to the CEQA Guidelines. The changes were approved by the Office of Administrative Law on December 28, 2018. The revisions to the CEQA Guidelines implemented legislative changes, clarified rules that govern the CEQA procedural process, and limited duplicative analyses. The revisions also resulted in re-organization and consolidation of the environmental checklist offered by CEQA Guidelines Appendix G, which forms the basis of the environmental analyses presented in this EIR.

Prior to release of this EIR for public review, the substantive content of the revised CEQA Guidelines was reviewed to ensure this EIR complies with the revised CEQA Guidelines. Of note, revised Appendix G to the CEQA Guidelines suggests presenting an analysis of Wildfire and Energy as independent analysis sections, whereas this EIR addresses these topics but not in individual subsections (refer to EIR Subsections 4.8 and 5.4 for analysis related to Wildfire and Energy, respectively). Regardless of format and location of analyses in this EIR, the substantive content of the revised CEQA Guidelines is addressed herein.

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL SETTING

The approximately 72-acre Project site is located in the City of Chino, in southwestern San Bernardino County, California. The City of Chino is located south of the City of Ontario, west of the City of Eastvale, and east of the City of Chino Hills. The Project site is located approximately 5.2 miles west of Interstate 15 (I-15), approximately 1.8 miles east of State Route 71 (SR-71), and approximately 4.3 miles south of State Route 60 (SR-60). The site's location in a regional context is shown on Figure 3-1, *Regional Map*, in EIR Section 3.0, *Project Description*.

The Project site is located in an urbanizing area of southern California commonly referred to as the "Inland Empire." The Inland Empire is an approximate 28,000 square mile region comprising San Bernardino County, Riverside County, and the eastern tip of Los Angeles County. According to U.S. Census data, the estimated 2016 population of San Bernardino County was 2,140,096 (U.S. Census Bureau, 2016). Southern California Association of Governments (SCAG) forecast models predict that the population of San Bernardino County will grow by 28 percent, to approximately 2.73 million persons by the year 2040 (SCAG, 2016a).

2.2 LOCAL SETTING

The Project site is located in the southern portion of the City of Chino, in an area known as "The Preserve." The Project site is located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 660 feet west of Rincon Meadows Avenue. The Project site includes Assessor Parcel Numbers (APNs) 1055-231-01 & -02; 1055-541-01 & -02; 1055-241-05, -07 & -08; 1056-101-02; 1056-111-04; and 1056-121-04. Figure 3-2, *Vicinity Map*, in EIR Section 3.0, *Project Description*, identifies the location of the Project site.

2.3 SURROUNDING LAND USES AND DEVELOPMENT

As previously noted, the Project site is located within the area of Chino known as "The Preserve." In 2003, the City of Chino adopted a master plan (The Preserve Specific Plan) to guide development of the 5,435 acres within The Preserve. Land uses within The Preserve were historically dominated by agricultural and dairy land uses; however, the area is transitioning to more urban land uses as prescribed by The Preserve Specific Plan. The Preserve Specific Plan designates the northern portion of its planning area (i.e., the areas surrounding the Chino Airport) for industrial and business park land uses, the central portion of its planning area for a variety of residential land uses, and the southern central portion of its planning area for open space land uses. A majority of the residential development within The Preserve occurred prior to The Great Recession, although the pace of residential development in The Preserve has increased over the last few years, with several master-planned communities actively under construction as of the writing of this EIR. The pace of industrial development within The Preserve was very slow until approximately 2014; since 2014, one large-scale industrial project (Watson Industrial Park Chino) has been constructed within The Preserve and several approved large-scale industrial projects are under construction or pending construction.

Land uses in the immediate vicinity of the Project site are illustrated on Figure 2-1, *Surrounding Land Uses and Development*, and described below.

North: Property located to the north of the Project site (north of Kimball Avenue) is occupied by Chino Valley Independent Fire District (CVIFD) Station 63 and the Chino Airport.

South: Properties located south of the Project site (south of Bickmore Avenue) are occupied by dairy farms and pastures. Vacant, undeveloped land is located southeast of the Project site.

West: Properties located west of the Project site are occupied by a recreational vehicle (RV) storage lot and gas station. Vacant, undeveloped land also is located west of the Project site.

East: Landscape nurseries are located east of the Project site. Farther east of the Project site include single-family residential land uses and a public park. An under-construction residential community is located adjacent to the northeast portion of the Project site. Established residential communities, a public school (Cal Aero Preserve Academy), and public infrastructure facilities (stormwater detention basin) are located farther east of the Project site.

2.4 PLANNING CONTEXT

2.4.1 CITY OF CHINO GENERAL PLAN

The City of Chino's prevailing planning document is its General Plan, dated July 2010. As depicted on Figure 2-2, *Existing General Plan Land Use Designations*, the City's General Plan designates the majority of Project site for "Airport-Related (AR)" land uses and a small sliver of the site for "Medium Density Residential" (MDR) land uses. The AR land use is intended to provide industrial and commercial land uses that support and/or complement the nearby Chino Airport. Within the AR land use designation, the General Plan permits a maximum floor area ratio (FAR) of 0.45 for light industrial uses; 0.35 for business park uses, offices, and hotels; and 0.25 for commercial uses. (Chino, 2010a, p. LU-18) The MDR land use allows for single-family detached and attached, and multi-family products, including duplexes, townhouses, and clustered homes. The permitted density ranges for the MDR land use is between 8 and 12 units per adjusted gross acre. (Chino, 2010a, LU-17)

2.4.2 THE PRESERVE SPECIFIC PLAN

The Project site is located within the geographic boundaries of The Preserve Specific Plan. The Preserve Specific Plan establishes specific zoning designations and development standards for private development projects located within The Preserve's geographic boundaries.

As shown on Figure 2-3, *The Preserve Specific Plan Land Use Map*, the Specific Plan applies the AR and MDR designations to the Project site. The AR designation is intended to provide a range of uses that are directly related to and/or complement the Chino Airport (Chino, 2011, p. 95). Within the AR land use designation, the Specific Plan permits a maximum FAR of 0.45 for light industrial uses; 0.35 for business park uses, offices, and hotels; and 0.25 for commercial uses. (Chino, 2011, p. 31)

The Preserve Specific Plan also applies the Chino Airport Overlay (CAO) "Airport Safety Zone III" overlay to the Project site (Chino, 2011, Figure 9A). The CAO is intended to ensure the viability of airport operations at the Chino Airport, and to protect the health, safety, and welfare of the residents of Chino. Any development within the CAO must comply with the development standards contained within City of Chino Zoning Ordinance Section 20.09.050, Airport Overlay District (Chino, 2011, p. 122).

Figure 2-1

SURROUNDING LAND USES AND DEVELOPMENT

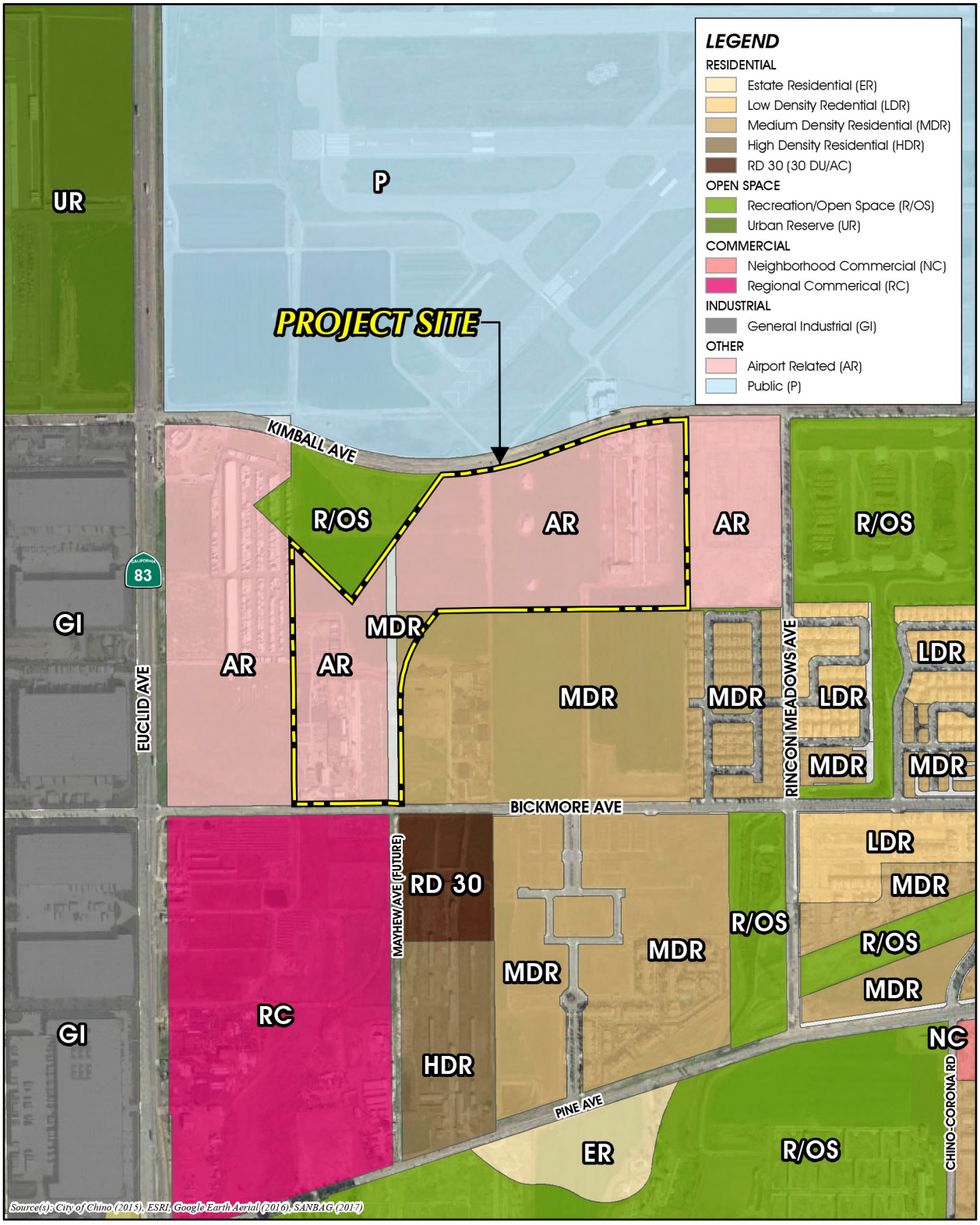


Figure 2-2

EXISTING GENERAL PLAN LAND USE DESIGNATIONS

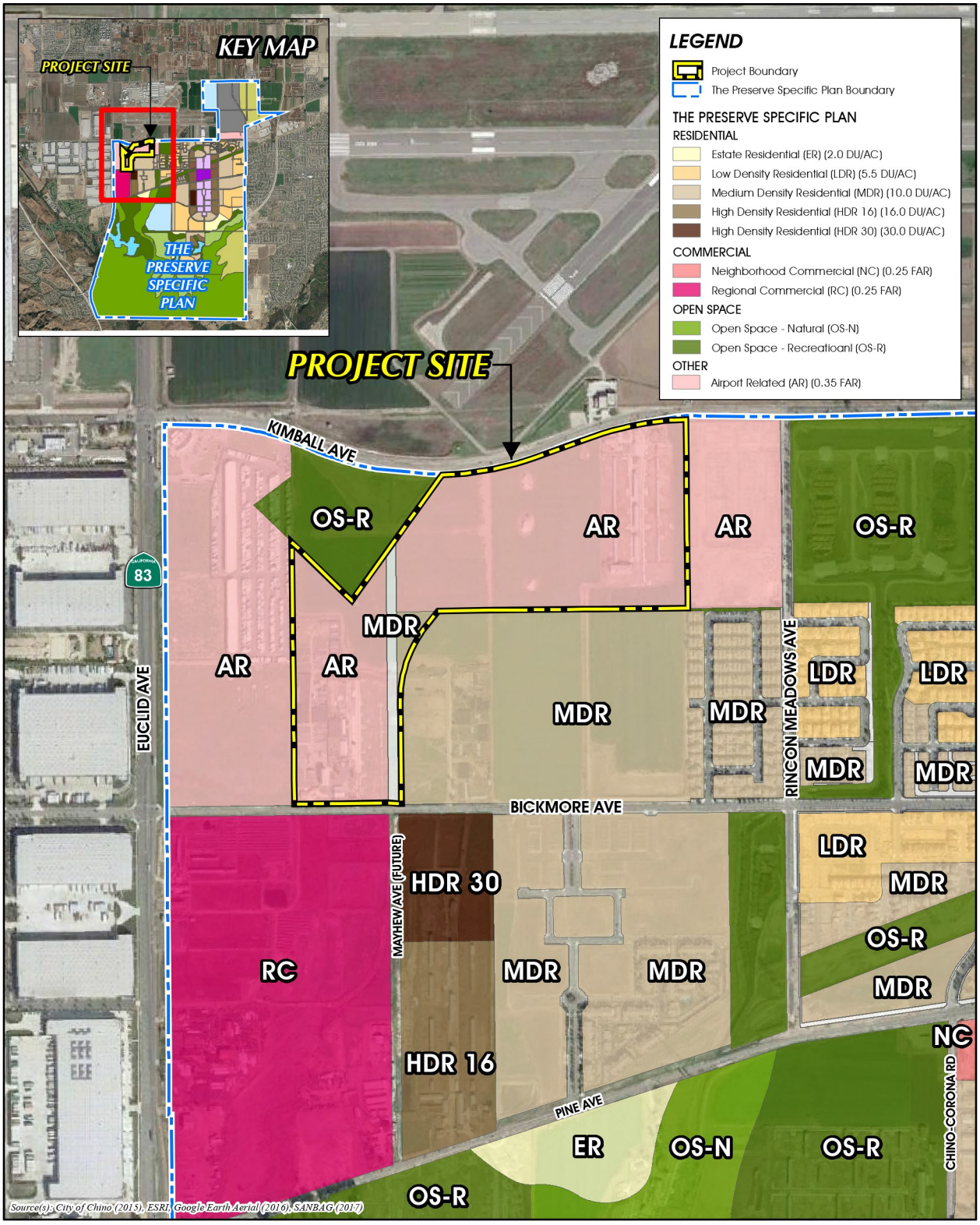


Figure 2-3

THE PRESERVE SPECIFIC PLAN LAND USE MAP

Finally, the Preserve Specific Plan applies the Agricultural Overlay (AO) to the Project site (Chino, 2011, Figure 9B). The AO allows for the continuation of agricultural uses that existed at the time The Preserve Specific Plan was approved in 2003 until the time the affected property is ultimately developed in a manner consistent with the land use designations applied by the Specific Plan. Development within the AO must comply with the development standards contained within City of Chino Zoning Ordinance Section 20.09.040, *Agricultural Overlay District* (Chino, 2011, p. 124).

2.4.3 ZONING

The development regulations and design standards contained within The Preserve Specific Plan supersede the zoning standards contained in the City's Zoning Ordinance. Refer to The Preserve Specific Plan Section V, *Development Plan,* and Section VI, *Design Guidelines,* for more information on the specific development regulations and design standards that apply to the Project (Chino, 2011). The Preserve Specific Plan is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for review at the City of Chino Community Development Department, Planning Division, located at 13220 Central Avenue, Chino, CA 91710 and online at the website link provided in EIR Section 7.0, *References.*

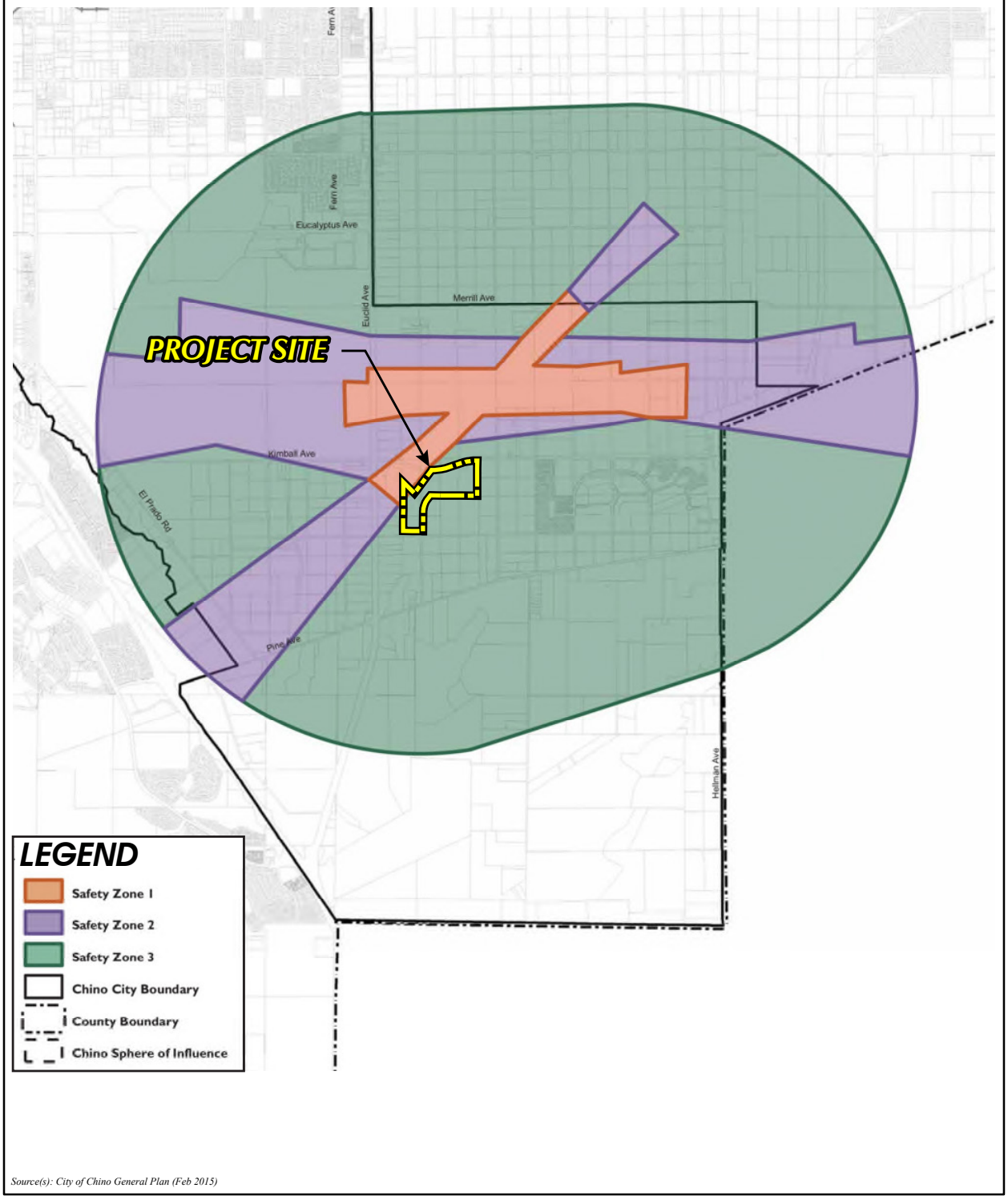
2.4.4 CHINO AIRPORT LAND USE COMPATIBILITY PLANS

The Project site is located approximately 0.1-mile south of the nearest runway at the Chino Airport and is located within the Airport's Airport Influence Area (AIA). At present, there is no valid Airport Land Use Compatibility Plan (ALUCP) applicable to the City of Chino that addresses the Chino Airport, as the adopted 1991 Plan does not reflect the current Airport Master Plan for the Chino Airport. Regardless, based on the 1991 ALUCP, the City of Chino General Plan establishes safety zones for areas within the Chino Airport AIA. As shown on Figure 2-4, *Chino Airport Safety Zones*, the northwestern corner of the Project site located within Airport Safety Zone I, the southwestern portion of the Project site located within Airport Safety Zone II, and the remainder of the property located within Airport Safety Zone III. Within Safety Zone I, the City of Chino General Plan recommends no residential and industrial development and the General Plan Land Use Element designates this area for public uses. Within Safety Zone II the General Plan discourages residential development and recommends that non-residential uses in enclosed structures be limited to no more than 25 persons per acre. Within Safety Zone III, the General Plan recommends no restrictions on residential or other land uses. (Chino, 2010a, Figure LU-4; ALUC, 1991, Figure III-7; Chino, 2003, Exhibit 5.6-1)

Due to the proximity of the Chino Airport to communities within Riverside County, the Riverside County Airport Land Use Commission (ALUC) adopted an ALUCP for the Chino Airport in 2008. According to the Riverside County ALUC's ALUCP for the Chino Airport, the majority of the Project site is located within Compatibility Zone "C," while small portions of the Project site are located within Compatibility Zones "B1" and "D." Very tall buildings and noise sensitive land uses are prohibited within Compatibility Zones B1, C, and D; however, industrial land uses are generally permissible within these Compatibility Zones (RCALUC, 2008, Exhibit CH-6) This information is presented for informational purposes only, as the Riverside County ALUC has no jurisdictional authority over the Project site or Project.

2.4.5 SCAG REGIONAL TRANSPORTATION PLAN / SUSTAINABLE COMMUNITIES STRATEGY

The Southern California Association of Governments (SCAG) is a Joint Powers Authority (JPA) under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning



Source(s): City of Chino General Plan (Feb 2015)

Figure 2-4

NOT TO SCALE

CHINO AIRPORT SAFETY ZONES

Organization (MPO) and under state law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region.

SCAG's *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region. The *RTP/SCS* also provides objectives for meeting air pollutant emissions reduction targets set forth by the California Air Resources Board (CARB); these objectives were provided in direct response to Senate Bill 375 (SB 375) which was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The Subregional Sustainable Communities Strategies identifies the Project site as being located in an area with a "Standard Suburban" land use pattern, which is defined as auto-oriented development with a minimal mix of land uses, and assumes this land use pattern will continue until at least the year 2040. (SCAG, 2016b)

2.5 EXISTING PHYSICAL SITE CONDITIONS

CEQA Guidelines § 15125(a)(1) recommends that the physical environmental condition as it existed at approximately the time the EIR's NOP was released for public review should normally be used as the comparative baseline for the EIR. The NOP for this EIR was released for public review on May 20, 2017, and the following subsections provide a description of the Project site's physical environmental condition ("existing conditions") as of that approximate date. Unless otherwise noted, the environmental setting of the Project's potential off-site infrastructure improvement alignments is generally the same as the Project site itself. More information regarding the Project's site's environmental setting is provided in the various subsections of EIR Section 4.0, *Environmental Analysis*.

2.5.1 LAND USE

As shown on Figure 2-5, *Aerial Photograph*, the Project site is heavily disturbed by residential, agricultural, and dairy farm uses. The southern portion of the site, abutting Bickmore Avenue, is occupied by two residential structures, ornamental landscape nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use. The northeastern portion of the site, which abuts Kimball Avenue, is occupied by two residential structures, a non-operational dairy farm, and ancillary structures/facilities associated with the shuttered dairy farm. The north-central portion of the Project site is comprised of agricultural fields and vacant land that has been subject to weed abatement activities (i.e., discing/tilling). The Project's off-site impact area includes Kimball Avenue and Bickmore Avenue, which are paved roads.

2.5.2 AESTHETICS AND TOPOGRAPHIC FEATURES

The topography of the Project site is relatively flat with elevations ranging from approximately 575 feet above mean sea level (amsl) along the site's southwestern boundary to approximately 600 feet amsl near the site's northeastern boundary. Ornamental landscaping, including trees and groundcover, is scattered across the Project site. In addition, several debris piles (remnants of a demolished dairy) are located in the north-central portion of the Project site. There are no rock outcroppings or other unique topographic, geologic, or

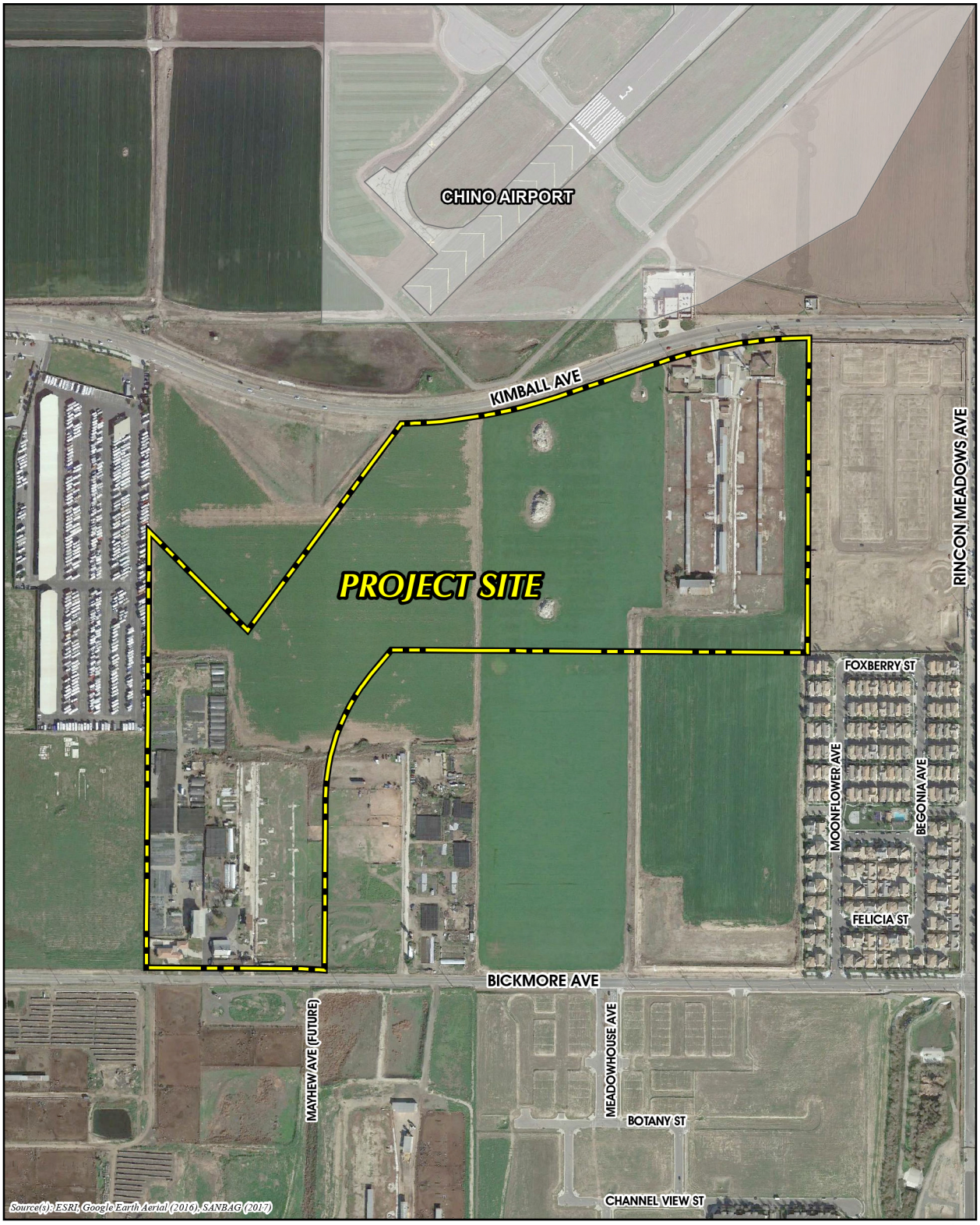


Figure 2-5

AERIAL PHOTOGRAPH

aesthetic features present on the property or in the Project's potential off-site infrastructure improvement alignments. Figure 3-2, *USGS Topographic Map*, in EIR Section 3.0, *Project Description*, depicts the Project site's existing topographic conditions.

2.5.3 Air Quality and Climate

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, the San Jacinto Mountains to the north and east, and San Diego County to the south. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and State air quality standards. As documented in the Project's air quality report (*Technical Appendix B1* to this EIR), although the climate of the SCAB is characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. More than 90% of the SCAB's rainfall occurs from November through April. Temperatures during the year range from an average minimum of 36°F in January to over 100°F maximum in the summer. 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 Ana(s)" each year.

At the regional level, air quality in the SCAB has improved over the past several decades, however, the SCAB is currently not in attainment of State and/or federal standards established for Ozone (O_3) one-hour and eight-hour, and particulate matter (PM_{10} and $PM_{2.5}$) (CARB, 2015). Numerous scientific studies have demonstrated that air pollution is impactful to human health. The SCAQMD predicts that the excess carcinogenic risk in the Project area due to air pollution and toxic air contaminants is approximately 721.78 in one million persons (SCAQMD, 2015).

Refer to EIR Subsections 4.3, *Air Quality*, and 4.7, *Greenhouse Gas Emissions*, for a more detailed discussion of the Project's site existing air quality and climate setting.

2.5.4 Cultural Resources & Tribal Cultural Resources

Under existing conditions, the Project site contains numerous structures, including several single-family residences, barns, agriculture/dairy support structures, and a trinquet court. Prehistoric and historic resources are low to moderate within the vicinity of the Project site (BFSA, 2016a, p. 6.0-1) According to archival research and the pedestrian survey conducted by BFSA, no tribal cultural resources are present within the Project site and within one-mile of the Project site (BFSA, 2016a, p. 5.0-2).

Refer to EIR Subsection 4.5, *Cultural Resources & Tribal Cultural Resources*, for a more thorough discussion of the Project's site existing cultural setting.

2.5.5 Geology and Soils

Regionally, the Project site is located in the Peninsular Ranges geomorphic province, a prominent natural geomorphic province that extends from the Santa Monica Mountains approximately 900 miles south to the tip of Baja California, Mexico, and is bounded to the east by the Colorado Desert. The Peninsular Ranges province is composed of plutonic and metamorphic rock, lesser amounts of Tertiary Volcanic and sedimentary rock, and Quaternary drainage in-fills and sedimentary veneers.

The geologic structure of the entire southern California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The Project site is located in a seismically active region. No known active or potentially active faults exist on or near the Project site nor is the site situated within an "Alquist-Priolo" Earthquake Fault Zone. The nearest known faults to the Project site are the Chino-Central Avenue Fault, located approximately 3.4 miles to the south, and the Whittier Fault, located approximately 7.1 miles to the southwest. Similar to other properties throughout southern California, the Project site is located within a seismically active region and is subject to ground shaking during seismic events. (LGC, 2016, p. 6)

The Project site is underlain by organic soils, undocumented fill, alluvium, and older alluvium soils. The northern and southeastern portions of the Project site is generally partially covered by between 0.3-foot to 1.2 feet of manure or partially organic soils. The area of thickest previous manure coverage is located in the northwest corner of the site where an abandoned dairy is present. Undocumented fill materials, consisting of silty sand, clayey sand and sandy silt, are scattered over the majority of the Project site. The approximate depth of these fill soils is estimated to range in depth from approximately 0.5-foot to 6.5 feet, to as much as 9.0 feet. Alluvium is found below the undocumented artificial fill and topsoil, ranging in depth from 0.5-foot to 3.0 feet. Older alluvium (Pleistocene) is found below alluvium ranging in depth from 0.8 foot to 20.0 feet, and is assigned by the Transportation and Land Management Agency of the County of Riverside as "High paleontological sensitivity" (LGC, 2016, p. 5; BFSA, 2016b, p. 2).

2.5.6 Hydrology

The Project site is located in the Santa Ana River watershed, which drains an approximately 2,650-square-mile area and is the principal surface flow water body within the region. The Santa Ana River starts in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The Project site and vicinity are within the purview of the Santa Ana Regional Water Quality Control Board (RWQCB). The Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan* is the governing water quality plan for the region, which sets forth goals and objectives for protecting water quality within the region (Santa Ana RWQCB, 2016, p. 1-1).

Under existing conditions, the entire Project site slopes gently from the northeast corner to the southwest corner. Runoff from the site flows south towards the existing north-south oriented Mayhew Access Road Channel, which is located south of the Mayhew-Bickmore intersection. Offsite runoff from the airport and Kimball Avenue is currently routed to three existing detention basins (North Basin West, Basin East, and Airport South Basin). The existing peak stormwater runoff volume on the Project site during the 100-year storm event is approximately 212.0 cubic feet per second (cfs). (ProActive, 2017b, pp. 1-2, 7)

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06071C9335H, dated August 28, 2008, the Project site is not located within a special flood hazard area subject to inundation by the 1-percent annual flood (100-year flood). The entirety of the Project site is located within FEMA Flood Zone D, which includes area where flood hazards have not been determined, but may be possible (FEMA, 2008).

2.5.7 Noise

Primary sources of noise in the Project vicinity include vehicle noise from residential traffic, truck traffic from the nearby landscape materials yard, and vehicles traveling to and from nearby commercial centers.

Urban Crossroads, Inc. collected 24-hour noise measurements at eight locations in the Project site's vicinity on June 14, 2017, to determine the baseline for the existing noise environment. Measured hourly noise levels in the area ranged from 47.1 average medium decibel (dBA L_{50}) to 67.5 dBA L_{50} during daytime, and 44.7 dBA L_{50} to 57.0 dBA L_{50} during nighttime, which correlates to a Community Noise Level (CNEL) ranging from 57.6 CNEL to 78.3 CNEL. The background ambient noise levels in the Project site's vicinity is dominated by the transportation-related noise associated with the existing transportation network, including aircraft flyovers from the Chino Airport. (Urban Crossroads, 2018d, pp. 37-38)

Refer to EIR Subsection 4.11, *Noise*, for a more detailed discussion of the Project's site existing noise setting.

2.5.8 Transportation

The Project site is located south of Kimball Avenue, north of Bickmore Avenue, west of Rincon Meadows Avenue, and east of existing Euclid Avenue. Regional vehicular travel routes in the Project area include I-15, SR-60, SR-71, and SR-83 (Euclid Avenue). The Project site is located approximately 5.5 miles southwest of the Limonite Avenue on/off ramp to I-15, approximately 2.4 miles east of the Central Avenue on/off ramp to SR-71, and approximately 4.3 miles south of the Euclid Avenue on/off ramp to SR-60. Existing traffic on nearby roadways consists of both passenger vehicles and trucks accessing the existing residential, agricultural, dairy farm, airport, commercial, and industrial uses located near the Project site.

There is nominal pedestrian and bicycle activity in the area. (Urban Crossroads, 2019b, p. 85) Public transit service in the Project region is provided by Omnitrans and the Riverside Transit Authority; however, there are no public transit stops in the vicinity of the Project site under existing conditions. The Chino Airport is located approximately 0.1-mile north of the Project site and provides for general aviation uses.

Refer to EIR Subsection 4.13, *Transportation*, for a more detailed discussion of the Project's site existing transportation setting.

2.5.9 Utilities and Service Systems

Domestic water and wastewater conveyance services are provided by the City of Chino Water Utility. Wastewater treatment services are provided by the Inland Empire Utilities Agency (IEUA). Under existing conditions, the Project site is not served by any water or sewer lines. According to the Phase I ESA conducted by Hillman Consulting, the Project site contains at least two (2) septic systems under the residences on the northeastern portion of the Project site (HMC, 2017a, p. 25).

2.5.10 Vegetation

The Project site is disturbed/developed with a mix of primarily non-native plant species (cultivated crops such as alfalfa, sorghum, barley), non-native weeds, and ornamental/horticultural species, and a low number of native species. The entire Project site has been highly disturbed by ongoing agricultural and nursery operations, residential uses, and former dairy operations. The Project's off-site impact area includes Kimball Avenue and Bickmore Avenue, which are paved roads and devoid of vegetation. The Project site does not contain special-status vegetation or support sensitive vegetation communities. (MJK, 2018, p. 10)

Refer to EIR Subsection 4.4, *Biological Resources*, for a more detailed discussion of the Project's site existing biological setting.

2.5.11 WILDLIFE

Two special-status wildlife species, the Northern Harrier and the Burrowing Owl, were observed on the Project site during biological surveys. No other special-status wildlife species were observed on the Project site. (MJK, 2018, p. 16) During field surveys, 67 additional, non-special status wildlife species were observed on the Project site, primarily consisting of numerous avian species, as well as several small mammal and reptile species (MJK, 2018, Appendix D). The complete list of wildlife species observed on the Project site is documented in *Technical Appendix D*.

Refer to EIR Subsection 4.4, *Biological Resources*, for a more detailed discussion of the Project's site existing biological setting.

3.0 PROJECT DESCRIPTION

This section provides all of the information required of an EIR Project Description by CEQA Guidelines § 15124, including a description of the Project's precise location and boundaries; a statement of the Project's objectives; a description of the Project's technical, economic, and environmental characteristics; and a description of the intended uses of this EIR, including a list of the government agencies that are expected to use this EIR in their decision-making processes; a list of the permits and approvals that are required to implement the Project; and a list of related environmental review and consultation requirements.

3.1 PROJECT LOCATION

The Project site is located in the southern portion of the City of Chino, which is located south of the City of Ontario, west of the City of Eastvale, and east of the City of Chino Hills, in the southwestern portion of San Bernardino County, California. As shown on Figure 3-1, *Regional Map*, the Project site is approximately 5.2 miles west of Interstate 15 (I-15), approximately 1.8 miles east of State Route 71 (SR-71), and approximately 4.3 miles south of State Route 60 (SR-60).

At the local scale, the Project site is located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 660 feet west of Rincon Meadows Avenue as illustrated on Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographic Map*. The Project site includes Assessor Parcel Numbers (APNs) 1055-231-01, -02, 1055-541-01, -02, 1055-241-05, -06, -07, 1056-101-02, 1056-111-04, and 1056-121-04.

Refer to EIR Section 2.0, *Environmental Setting*, for more information related to the regional and local setting of the Project site.

3.2 STATEMENT OF OBJECTIVES

The underlying purpose of the Project and its primary goal is to develop an underutilized property with a business center complex to provide an employment-generating use that helps to grow the economy and fulfill regional market demand for industrial, warehouse, and business park land in the City of Chino. The Project would achieve this goal through the following specific objectives.

A. To implement The Preserve Specific Plan by developing Class A building space that meets industry standards for modern, operational design criteria and can accommodate a variety of users.

B. To provide a viable reuse plan for former agricultural property that maximizes feasible development of the site so that the property is economically productive when agricultural activities cease.

C. To diversify the City of Chino economy by developing a large property with a mix of employment-generating land uses with long-term economic viability.

D. To create employment-generating business in the City of Chino thereby reducing the need for members of the local workforce to commute outside the area for employment.

E. To develop employment-generating business in close proximity to regional transportation routes, including designated truck routes, to minimize traffic congestion on surface streets and minimize concomitant air pollution emissions from vehicle sources.

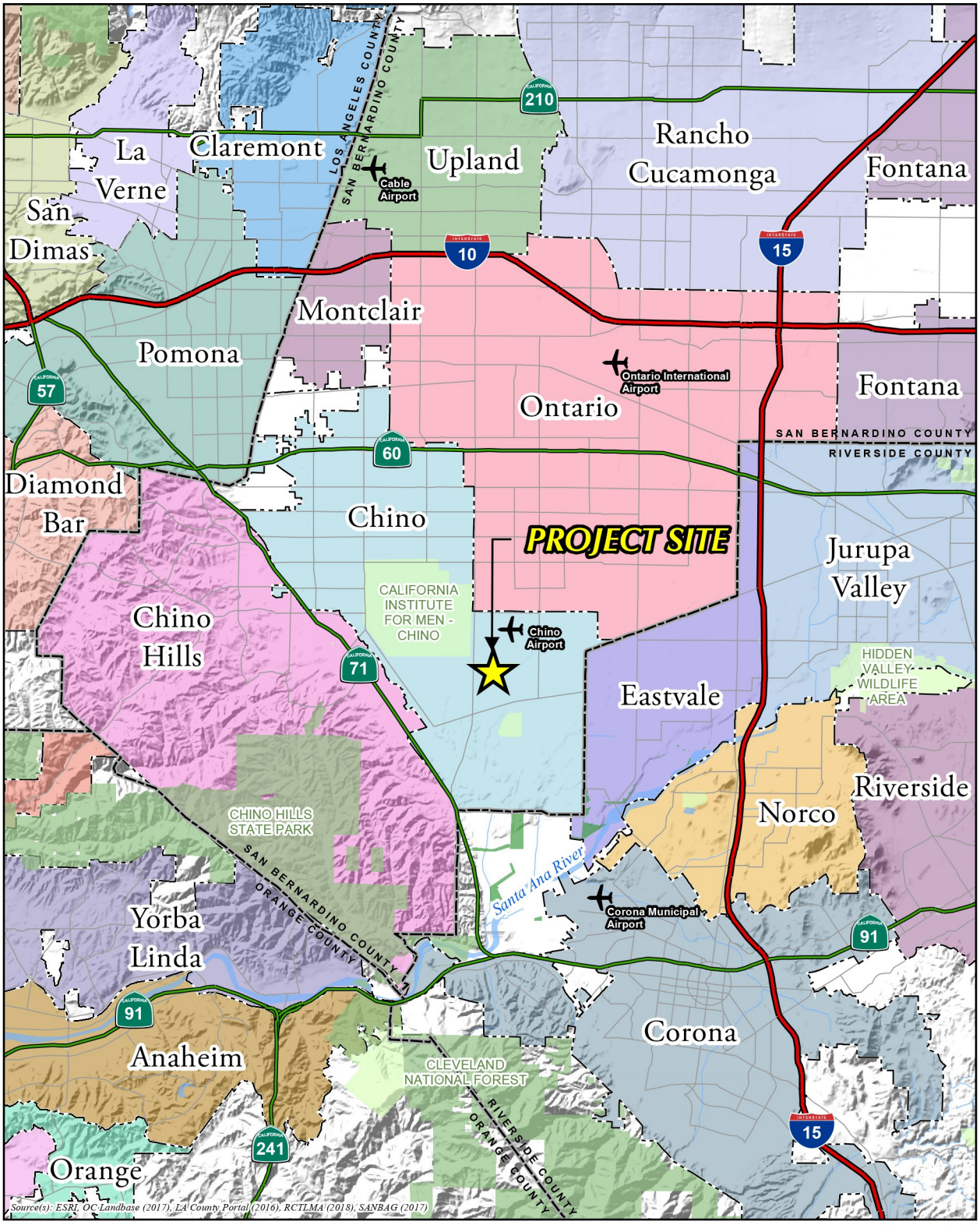


Figure 3-1

REGIONAL MAP

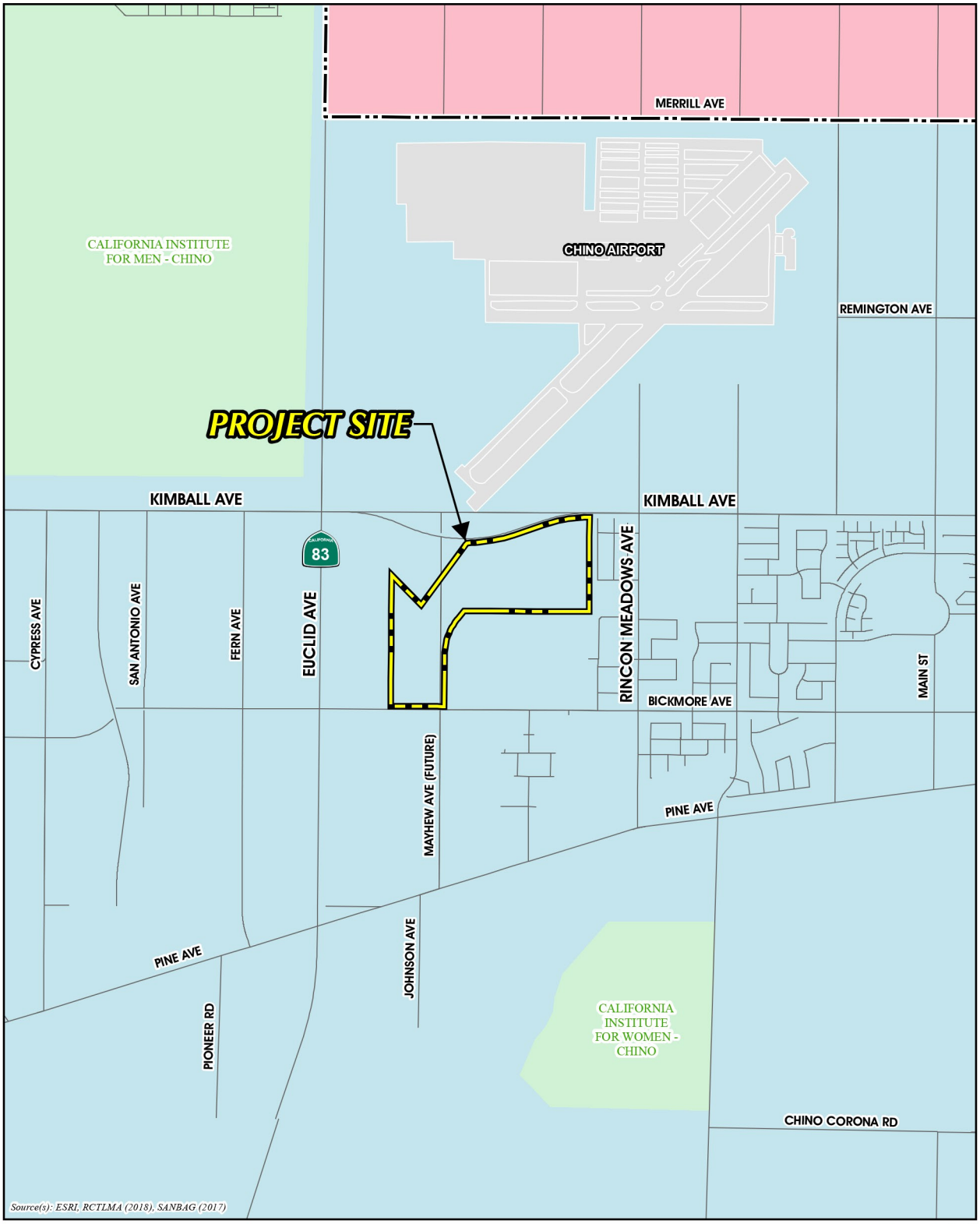


Figure 3-2

VICINITY MAP

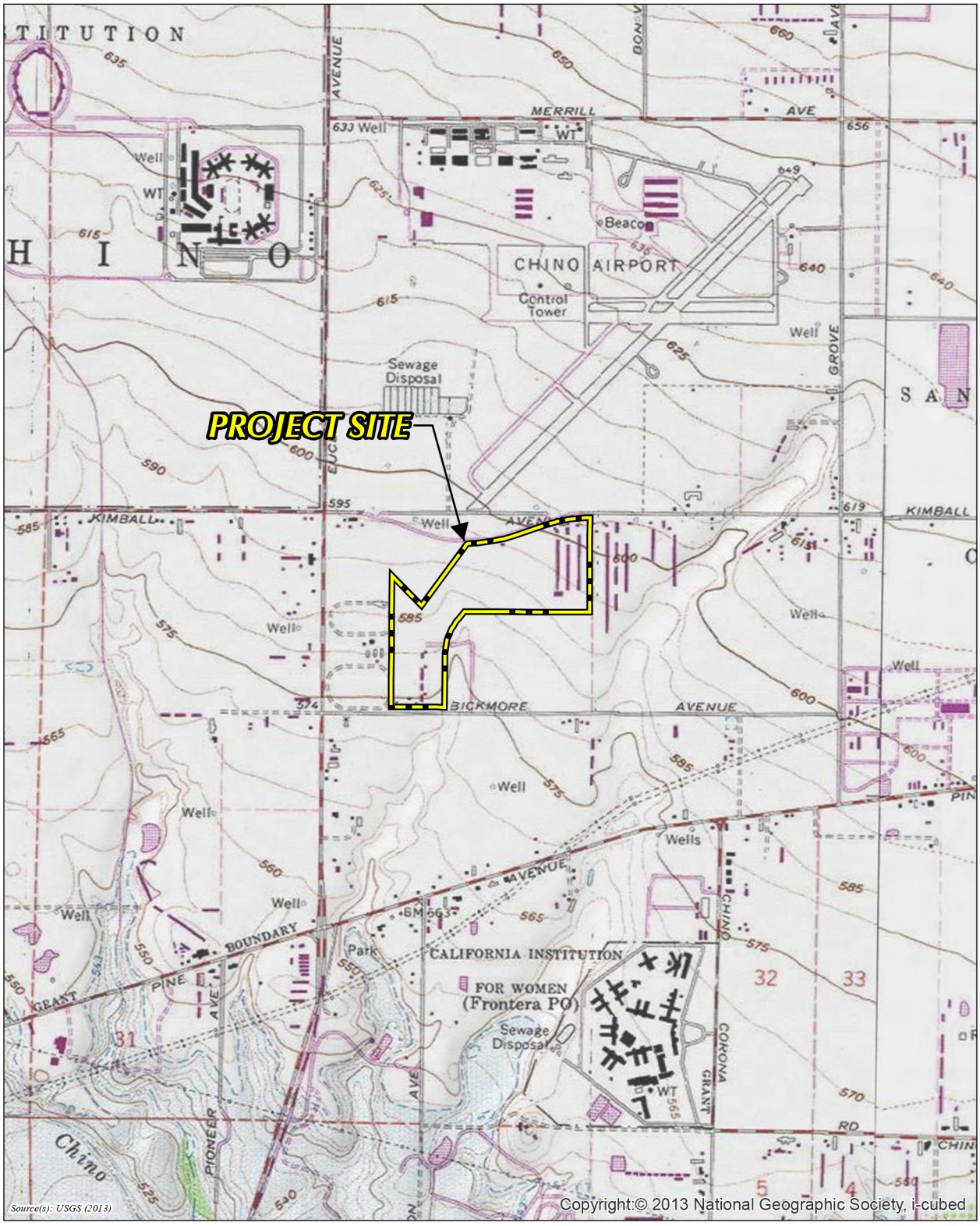


Figure 3-3

0 500 1,000 2,000 Feet

USGS TOPOGRAPHIC MAP

F. To develop a project with an architectural design and operational characteristics that are consistent with the development standards and the design guidelines established by The Preserve Specific Plan and complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.

G. To develop the subject property with land uses that are harmonious with the adjacent Chino Airport.

H. To develop a property that has access to available infrastructure.

3.3 PROJECT'S COMPONENT PARTS

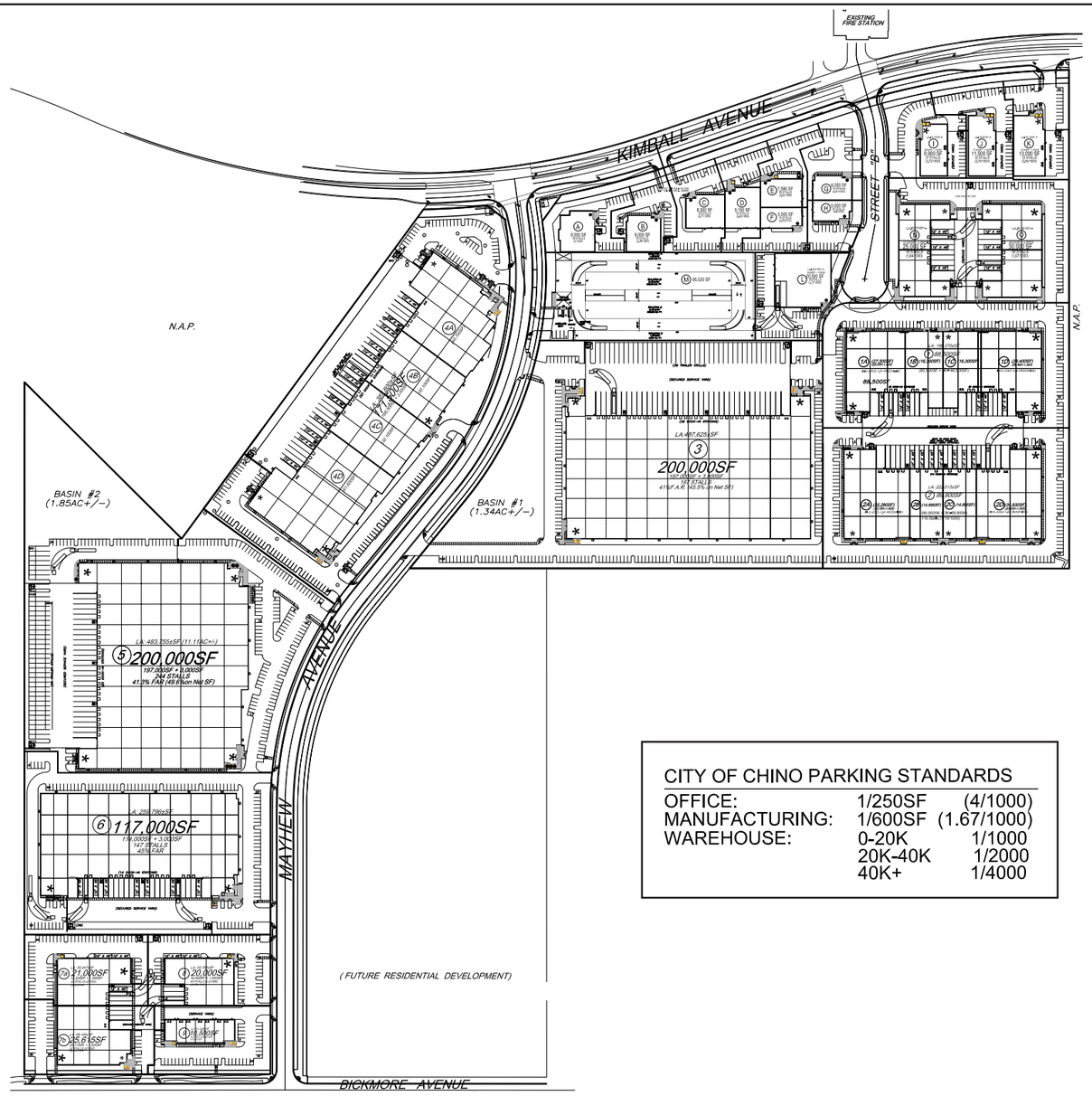
Implementation of the Project includes demolition of the existing residential and agricultural/dairy structures on the approximately 72-acre project site, and the construction and operation of a business center complex with up to 25 buildings ranging in size from 5,000 s.f. to 200,000 s.f. and totaling 1,219,015 s.f. of building space. However, many of the proposed buildings are designed for potential future expansion – subject to future permit approval by the City of Chino – therefore, for purposes of the CEQA analysis contained in this EIR, the Project is evaluated as containing up to 1,313,000 s.f. of total floor area. No building occupants are yet identified for the Project, but could include business park, light industrial, mini-warehousing (self-storage), and warehousing users. Associated improvements to the Project site would include, but not be limited to, surface parking areas, truck courts, vehicle drive aisles, utility infrastructure, landscaping, exterior lighting, signage, and water quality/detention basins.

This EIR analyzes the physical environmental effects associated with all components of the Project, including planning, construction, and ongoing operation. Approvals requested from the City of Chino to implement the Project include a Tentative Parcel Map (PL16-0456), a Master Site Approval (PL16-0457), a Site Approval (PL17-0044) for six buildings, and a Special Conditional Use Permit (PL17-0042). These applications, as submitted to the City of Chino by the Project Applicant, are herein incorporated by reference pursuant to CEQA Guidelines § 15150 and are available for review at the City of Chino Development Services Department, 13220 Central Avenue, Chino, CA 91710. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-3, *Matrix of Approvals/Permits*, at the end of this EIR section. All discretionary and administrative approvals that would be required of the City of Chino or other government agencies to implement the Project are also within the scope of the Project analyzed in this EIR.

A. Master Site Approval (PL16-0457)

1. General Description

Master Site Approval (MSA) PL16-0457 proposes the key development features and characteristics of the Project, including its conceptual site layout, architectural character, and landscape design. As shown on Figure 3-4, *Master Site Approval*, the Project would feature 25 buildings. The Project's proposed buildings would range in size from 5,000 s.f. to 200,000 s.f. of floor area. The Project's total floor area would be 1,219,015 s.f. As previously noted, many of the buildings proposed by the MSA are designed for potential future expansion – subject to future permit approval by the City of Chino – therefore, for purposes of the analysis in this EIR, the Project is evaluated as containing up to 1,313,00 s.f. of total floor area. Although the Project Applicant is pursuing the Project on a speculative basis, meaning that the buildings' future occupants are not yet known, the Project is expected to operate as a business center with light industrial, business park, warehouse, and mini-warehouse (self-storage) land uses. Table 3-1, *Master Site Approval Summary*, lists the proposed size and anticipated use for each of the buildings proposed by MSA PL16-0457.



Source(s): MacDavid Aubort (02-22-2019)

SITE DATA TABLE

BLDG.	BLDG. USE	1ST FLR.	MEZZ.	BLDG TOTAL	LAND AREA	F.A.R.	COVERAGE	LANDSCP AREA	LANDSCP COV.	PARKING REQ.	PARKING PROV.
A	GENERAL LIGHT INDUSTRIAL	9,000SF	N/A	9,000SF	26,262SF	34.3%	34.3%	10,210SF	38.9%	9,000SF/400 =23 Stalls	18 STALLS
B	GENERAL LIGHT INDUSTRIAL	8,000SF	N/A	8,000SF	23,206SF	34.5%	34.5%	5,016SF	21.6%	8,000SF/400 =20 Stalls	19 STALLS
C	GENERAL LIGHT INDUSTRIAL	8,300SF	N/A	8,300SF	28,522SF	29.1%	29.1%	6,775SF	23.7%	8,300SF/400 =21 Stalls	23 STALLS
D	GENERAL LIGHT INDUSTRIAL	9,150SF	N/A	9,150SF	24,566SF	37.3%	37.3%	5,427SF	22.1%	9,100SF/400 =23 Stalls	24 STALLS
E	GENERAL LIGHT INDUSTRIAL	7,580SF	N/A	7,580SF	21,834SF	34.7%	34.7%	4,815SF	22.0%	7,580SF/400 =19 Stalls	20 STALLS
F	GENERAL LIGHT INDUSTRIAL	5,500SF	N/A	5,500SF	15,224SF	36.1%	36.1%	2,116SF	13.9%	5,500SF/400 =14 Stalls	14 STALLS
G	GENERAL LIGHT INDUSTRIAL	6,050SF	N/A	6,050SF	27,418SF	22.0%	22.0%	9,825SF	35.8%	6,050SF/400 =15 Stalls	14 STALLS
H	GENERAL LIGHT INDUSTRIAL	5,000SF	N/A	5,000SF	17,100SF	29.2%	29.2%	4,970SF	29.1%	5,000SF/400 =13 Stalls	14 STALLS
I	GENERAL LIGHT INDUSTRIAL	8,900SF	1,000SF	9,900SF	37,374SF	26.5%	23.8%	10,775SF	28.9%	9,900SF/400 =25 Stalls	27 STALLS
J	GENERAL LIGHT INDUSTRIAL	10,500SF	1,000SF	11,500SF	33,057SF	34.8%	31.1%	6,994SF	21.2%	11,500SF/400 =29 Stalls	32 STALLS
K	GENERAL LIGHT INDUSTRIAL	12,000SF	1,000SF	13,000SF	37,126SF	35.0%	32.3%	9,635SF	26.0%	13,000SF/400 =33 Stalls	33 STALLS
SUB TOTAL	BUILDINGS A–K	89,980SF	3,000SF	92,980SF	291,689SF	31.9%	30.8%	76,558SF	26.2%	235 STALLS	238 STALLS 2.56/1000

BLDG.	BLDG. USE	1ST FLR.	MEZZ.	BLDG TOTAL	LAND AREA	F.A.R.	COVERAGE	LANDSCP AREA	LANDSCP COV.	PARKING REQ.	PARKING PROV.
L	GENERAL LIGHT INDUSTRIAL	19,000SF	1,500SF	20,500SF	46,310SF	44.2%	41.0%	9,418SF	20.3%	20,500SF/800 =34 Stalls	35 STALLS
M	PROPOSED MINI-STORAGE	95,520SF	N/A	95,520SF	118,800SF	80.4%	80.4%	7,130SF	6.0%	N/A	7 STALLS
N	GENERAL LIGHT INDUSTRIAL	23,000SF	2,000SF	25,000SF	62,975SF	39.7%	36.5%	14,903SF	23.7%	20,500SF/800 =35 Stalls	40 STALLS
O	GENERAL LIGHT INDUSTRIAL	28,000SF	2,000SF	30,000SF	81,591SF	36.8%	34.3%	14,877SF	18.2%	30,000SF/800 =50 Stalls	50 STALLS
1	GENERAL LIGHT INDUSTRIAL	85,500SF	3,000SF	88,500SF	196,370SF	45.0%	43.54%	25,534SF	13.0%	59	109 STALLS
2	GENERAL LIGHT INDUSTRIAL	96,900SF	3,000SF	99,900SF	222,013SF	45.0%	43.64%	32,833SF	14.8%	65	123 STALLS
3	WAREHOUSE/INDUSTRIAL	197,000SF	3,000SF	200,000SF	487,625SF	41.0%	40.39%	117,436SF	24.1%	108	197 STALLS
STREET 'B'	(PRIVATE STREET)				38,835SF						
SUB TOTAL	BUILDINGS L–O, 1–3 + STREET 'B'	544,920SF	14,500SF	559,420SF	1,254,519SF	44.59%	43.4%	222,131SF	17.7%	351 STALLS	561 STALLS

BLDG.	BLDG. USE	1ST FLR.	MEZZ.	BLDG TOTAL	LAND AREA	F.A.R.	COVERAGE	LANDSCP AREA	LANDSCP COV.	PARKING REQ.	PARKING PROV.
4	WAREHOUSE/INDUSTRIAL	168,500SF	3,000SF	171,500SF	387,800SF	44.2%	43.50%	66,149SF	17.0%	96	223 STALLS
5	WAREHOUSE/INDUSTRIAL	197,000SF	3,000SF	200,000SF	483,755SF	41.3%	40.72%	113,037SF	23.4%	108	244 STALLS
6	WAREHOUSE/INDUSTRIAL	114,000SF	3,000SF	117,000SF	259,796SF	45.0%	43.88%	35,678SF	13.7%	72	147 STALLS
SUB TOTAL	BUILDINGS 4–6	479,500SF	9,000SF	488,500SF	1,131,351SF	43.18%	42.4%	214,864SF	19.0%	276 STALLS	614 STALLS 1.26/1000

BLDG.	BLDG. USE	1ST FLR.	MEZZ.	BLDG TOTAL	LAND AREA	F.A.R.	COVERAGE	LANDSCP AREA	LANDSCP COV.	PARKING REQ.	PARKING PROV.
7a	GENERAL LIGHT INDUSTRIAL	19,500SF	1,500SF	21,000SF	55,047SF	38.1%	35.4%	7,239SF	13.2%	39	42 STALLS
7b	GENERAL LIGHT INDUSTRIAL	24,115SF	1,500SF	25,615SF	58,104SF	44.7%	41.5%	11,923SF	20.5%	47	52 STALLS
8	GENERAL LIGHT INDUSTRIAL	18,500SF	1,500SF	20,000SF	55,755SF	35.9%	33.2%	5,904SF	15.9%	37	50 STALLS
9	MULTI-TENANT	10,500SF	N/A	10,500SF	51,426SF	20.4%	20.4%	14,176SF	27.6%	30	40 STALLS
SUB TOTAL	BUILDINGS 7–9	72,615SF	4,500SF	77,115SF	220,332SF	35.0%	32.9%	42,242SF	19.2%	153 STALLS	194 STALLS 2.52/1000

BLDG.	BLDG. USE	1ST FLR.	MEZZ.	BLDG TOTAL	LAND AREA	F.A.R.	COVERAGE	LANDSCP AREA	LANDSCP COV.	PARKING REQ.	PARKING PROV.
SUB TOTAL	BUILDINGS A–K	89,980SF	3,000SF	92,980SF	291,689SF	31.9%	30.8%	76,558SF	26.2%	235 STALLS	238 STALLS 2.56/1000
SUB TOTAL	BUILDINGS L–O, 1–3 + STREET 'B'	544,920SF	14,500SF	559,420SF	1,254,519SF	44.59%	43.4%	222,131SF	17.7%	351 STALLS	561 STALLS 1/1000
SUB TOTAL	BUILDINGS 4–6	479,500SF	9,000SF	488,500SF	1,131,351SF	43.18%	42.4%	214,864SF	19.0%	276 STALLS	614 STALLS 1.26/1000
SUB TOTAL	BUILDINGS 7–9	72,615SF	4,500SF	77,115SF	220,332SF	35.17%	32.9%	42,242SF	19.2%	153 STALLS	194 STALLS 2.5/1000
TOTAL		1,187,015SF	31,000SF	1,218,015SF	2,897,891SF	42.0%	40.96%	555,795SF	19.2%	1,015 STALLS	1,607 STALLS 1.32/1000

CITY OF CHINO PARKING STANDARDS

OFFICE:	1/250SF	(4/1000)
MANUFACTURING:	1/600SF	(1.67/1000)
WAREHOUSE:	0-20K	1/1000
	20K-40K	1/2000
	40K+	1/4000

Figure 3-4

NOT TO SCALE

Table 3-1 Master Site Approval Summary

Building	Proposed Floor Area	Floor Area Utilized for CEQA Analysis	Proposed Use
A	9,000 s.f.	11,000 s.f.	Business Park
B	8,000 s.f.	10,000 s.f.	Business Park
C	8,300 s.f.	10,000 s.f.	Business Park
D	9,150 s.f.	12,000 s.f.	Business Park
E	7,580 s.f.	9,000 s.f.	Business Park
F	5,500 s.f.	7,500 s.f.	Business Park
G	6,050 s.f.	7,500 s.f.	Business Park
H	5,000 s.f.	7,500 s.f.	Business Park
I	9,900 s.f.	12,000 s.f.	Business Park
J	11,500 s.f.	15,000 s.f.	Business Park
K	13,000 s.f.	15,000 s.f.	Business Park
L	20,500 s.f.	23,500 s.f.	Business Park
M	95,520 s.f.	110,000 s.f.	Mini Warehouse
N	25,000 s.f.	28,000 s.f.	Light Industrial
O	30,000 s.f.	33,000 s.f.	Light Industrial
1	88,500 s.f.	91,500 s.f.	Light Industrial
2	99,900 s.f.	102,500 s.f.	Light Industrial
3	200,000 s.f.	200,000 s.f.	Warehouse
4	171,500 s.f.	185,000 s.f.	Warehouse
5	200,000 s.f.	200,000 s.f.	Warehouse
6	117,000 s.f.	130,000 s.f.	Warehouse
7a	21,000 s.f.	25,000 s.f.	Business Park
7b	26,615 s.f.	30,000 s.f.	Business Park
8	20,000 s.f.	25,000 s.f.	Business Park
9	10,500 s.f.	13,000 s.f.	Business Park
Total	**1,219,015 s.f.**	**1,313,000 s.f.**	--

2. Conceptual Architecture Plan

Figure 3-5, *Conceptual Architectural Elevations*, depicts conceptual building elevations that are representative of the Project's architectural style. The Project's buildings would be constructed with concrete tilt-up panels painted in various neutral/earth-tone colors (including shades of tan and white) and low-reflective blue/green glazed glass. Articulated building elements, including parapets, wall recesses, mullions, and aluminum louvered canopies, are proposed as decorative elements. Proposed buildings would

have a typical maximum height of 42 feet above finished floor elevation, although the buildings are designed with varied roof lines and architectural projections may slightly exceed that height.

3. Conceptual Landscape Plan

The conceptual landscape plan for the proposed Project is depicted in Figure 3-6, *Conceptual Landscape Plan*. Proposed landscaping would be ornamental in nature, and would feature drought-tolerant evergreen and deciduous trees, shrubs, and accent plants in addition to a variety of groundcovers. The landscape plan indicates that trees and groundcover are proposed along the Project sites' frontages with Kimball Avenue, Bickmore Avenue, and Mayhew Avenue, bordering on-site buildings, and in-and-around on-site water quality basins and automobile parking lots. Aeronautical-themed gateway (entry) monuments with accent landscaping would be constructed on the southwestern and southeastern corners of the Mayhew Avenue/Kimball Avenue intersection. Pursuant to City of Chino Municipal Code Chapter 20.19, proposed landscaping would be installed with automatic irrigation systems using water efficient irrigation equipment.

B. Tentative Parcel Map No. 19756 (PL16-0456)

1. General Description

Tentative Parcel Map (TPM) No. 19756 proposes to subdivide an approximately 61.2-acre portion of the Project site into 21 numbered lots ranging in size from 0.35-acre to 11.19 acres. Proposed Lots #1-21 would ultimately be developed with light industrial, business park, warehouse, and mini-warehouse land uses as contemplated by Master Site Approval (PL16-0457) for Buildings A through O and Buildings 1 through 6, as summarized above. TPM No. 19756 also would create five (5) landscape lots ranging in size from 0.02-acre to 0.22-acre. Proposed TPM No. 19756 is illustrated on Figure 3-7.

C. Site Approval (PL17-0044)

Site Approval (SA) PL17-0044 provides a specific development plan for Buildings 1 through 6 of proposed MSA (PL16-0457), as previously discussed in Subsection 3.3A. The buildings are designed to accommodate warehouse distribution, business park, or light industrial operator(s); but at this time, the future user(s) of the buildings are unknown. Details for Buildings 1 through 6 are provided below and illustrated on Figure 3-8 through Figure 3-12.

Building 1:
Building 1 would be located in the northeastern portion of the Project site, south of Kimball Avenue and adjacent to the Project site's eastern boundary. The structure would contain 88,500 s.f. of building space, 10 loading docks (on the south side of the building), (±) 109 automobile parking stalls, and ±6 truck trailer parking spaces. The number of automobile parking spaces and trailer spaces for Building 1 (and Buildings 2-6 below) are identified as approximate (±) to acknowledge the possibility of parking lot striping revisions in the future to accommodate the needs of building occupants. Building 1 also provides up to five (5) building entries. Each entry would include enhanced paving, employee patio, accessible table seating, and/or nearby bicycle parking. Vehicular access to Building 1 would be provided from Street "B."

Building 2:
Building 2 would be located immediately south of Building 1 and east of Building 3. The structure would contain 99,900 s.f. of building space, 14 loading docks (on the north side of the building), ±123 automobile parking stalls, and ±7 truck trailer parking spaces. Building 2 would include up to five (5) building entries. Each entry would include enhanced paving, employee patio with accessible table seating and/or nearby bicycle parking. Vehicular access to Building 2 would be provided from Street "B."

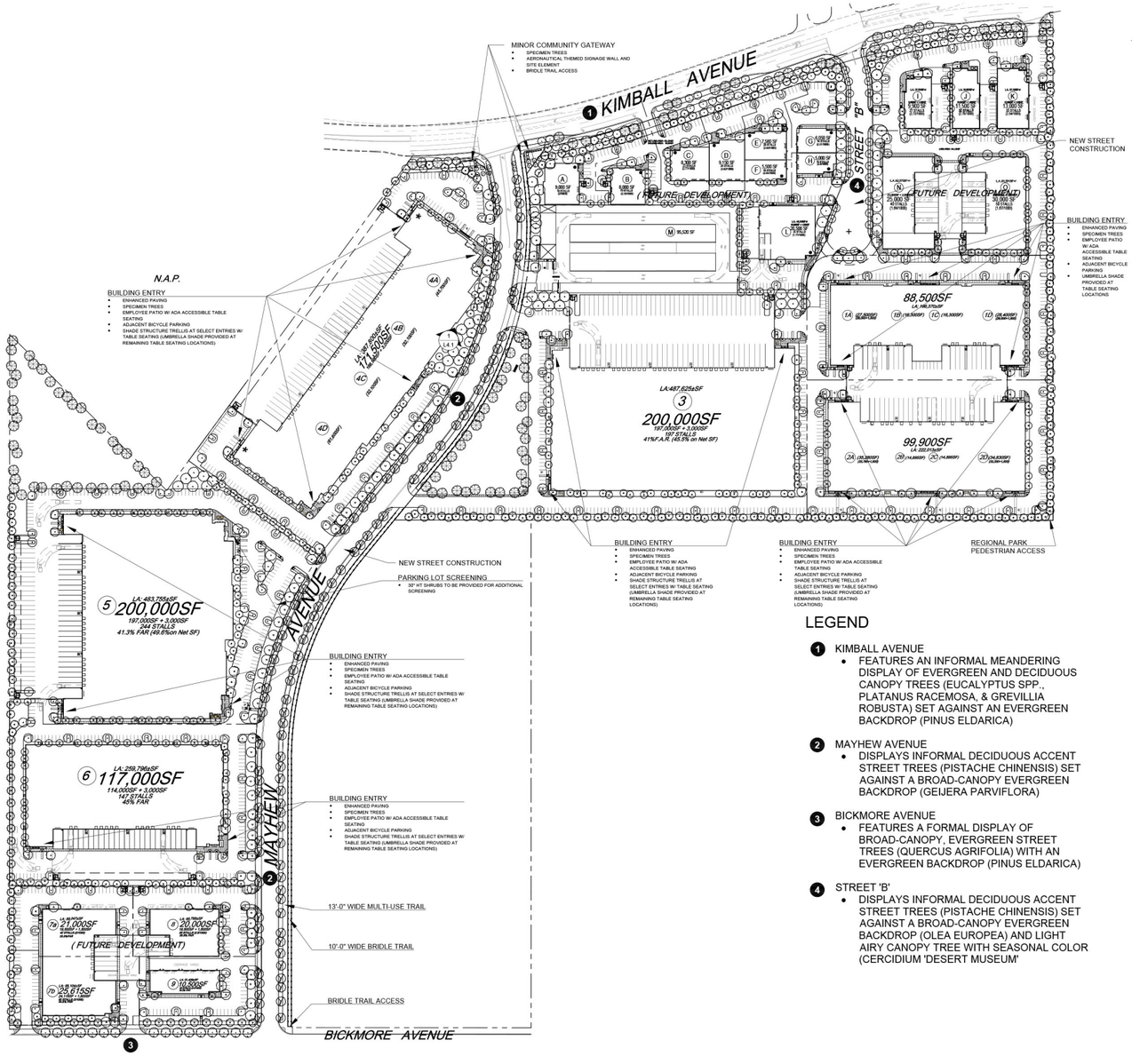
***Conceptual elevations for Building 1 are illustrated on this exhibit. These elevations are representative of the style, form, colors, and building materials that will be utilized on all Project buildings.*

Source(s): MacDavid Aubort (02-22-2019)

Figure 3-5

NOT TO SCALE

CONCEPTUAL ARCHITECTURAL ELEVATIONS



Source(s): MacDavid Aubort (02-22-2019)

Figure 3-6

NOT TO SCALE

CONCEPTUAL LANDSCAPE PLAN

LANDSCAPE LOT SUMMARY

LOT #	PARCEL AREA (SF)	PARCEL AREA (AC)
A	3,606	0.08
B	5,290	0.12
C	9,632	0.22
D	8,236	0.19
E	661	0.02

EARTHWORK QUANTITIES

	CUT	FILL
RAW	164,800	156,385
SUBSIDENCE–0.2'	21,908	
SHRINKAGE 15%	24,720	
MANURE REMOVALS	18,700	
BASIN LOSS	25,000	
OFFSITE SPOILS		18,400
MISC.	8,000	
TOTAL	66,472	174,785

NOTE: IMPORT (FROM BOUMA) 102,000 CY

PARCEL AREA SUMMARY

PARCEL #	PARCEL AREA (SF)	PARCEL AREA (AC)
1	259,800	5.96
2	483,751	11.11
3	387,800	8.90
4	487,639	11.19
5	46,309	1.06
6	118,803	2.73
7	26,258	0.60
8	23,498	0.54
9	28,740	0.66
10	24,512	0.56
11	21,813	0.50
12	15,223	0.35
13	17,094	0.39
14	27,389	0.63
15	37,330	0.86
16	33,060	0.76
17	37,862	0.87
18	81,579	1.87
19	62,987	1.45
20	196,371	4.51
21	222,019	5.10

LEGEND

- PROPOSED PARCEL BOUNDARY
- EXIST. FENCE
- EXIST. CONTOUR
- EXIST. DOMESTIC WATER LINE (SIZE AS NOTED)
- EXIST. SEWER LINE (SIZE AS NOTED)
- EXIST. RECYCLED WATER LINE (SIZE AS NOTED)
- EXIST. STORM DRAIN (SIZE AS NOTED)

R/W	RIGHT–OF–WAY	WQ	WATER QUALITY
N'LY	NORTHERLY	TC	TOP OF CURB
S'LY	SOUTHERLY	P	PAD ELEVATION
E'LY	EASTERLY	FL	FLOW LINE
W'LY	WESTERLY	GB	GRADE BREAK
P/L	PROPERTY LINE	FS	FINISHED SURFACE
℄	CENTERLINE	BW	BACK OF WALK
RCWL	RECYCLED WATER LINE	SD	STORM DRAIN
S	SEWER	W	WATER
C&G	CURB AND GUTTER		

GENERAL INFORMATION

1. GROSS AREA: 72.77 ACRES
2. ADJUSTED GROSS AREA: 66.51 ACRES
3. PROPOSED DENSITY: --
4. GENERAL PLAN DESIGNATION: AIRPORT RELATED (AR)
5. ZONING DESIGNATION: AIRPORT RELATED (AR)
6. SPECIFIC PLAN: THE PRESERVE
7. SURROUNDING ZONES:
   - NORTH: AR–AIRPORT RELATED
   - SOUTH: MDR–MEDIUM DENSITY RESIDENTIAL
   - EAST: MDR–MEDIUM DENSITY RESIDENTIAL
   - WEST: MDR–MEDIUM DENSITY RESIDENTIAL
8. LEGAL DESCRIPTION:

   PARCEL 'B' OF LLA 2014–04, RECORDED FEBRUARY 18, 2016 AS INSTRUMENT NO. 2016–0062918 O.R. TOGETHER WITH PARCEL 1 AND PORTIONS OF 3 OF PARCEL MAP 14612, FILED IN PARCEL MAP BOOK 174, PAGES 67–68 AND TOGETHER WITH A PORTION OF LOT 56 AND PORTIONS OF LOTS 40, 41, AND 54 OF THE MAP OF RANCHO SANTA ANA DEL CHINO, FILED IN MAP BOOK 6, PAGE 15, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

9. ASSESSOR'S PARCEL NUMBERS: 1055–101–02 ,1055–111–03 ,1055–121–01 ,1055–231–01 ,1055–231–02

10. MAP PREPARATION DATE: 5/30/17

DAIRY FARM SETBACK NOTE:

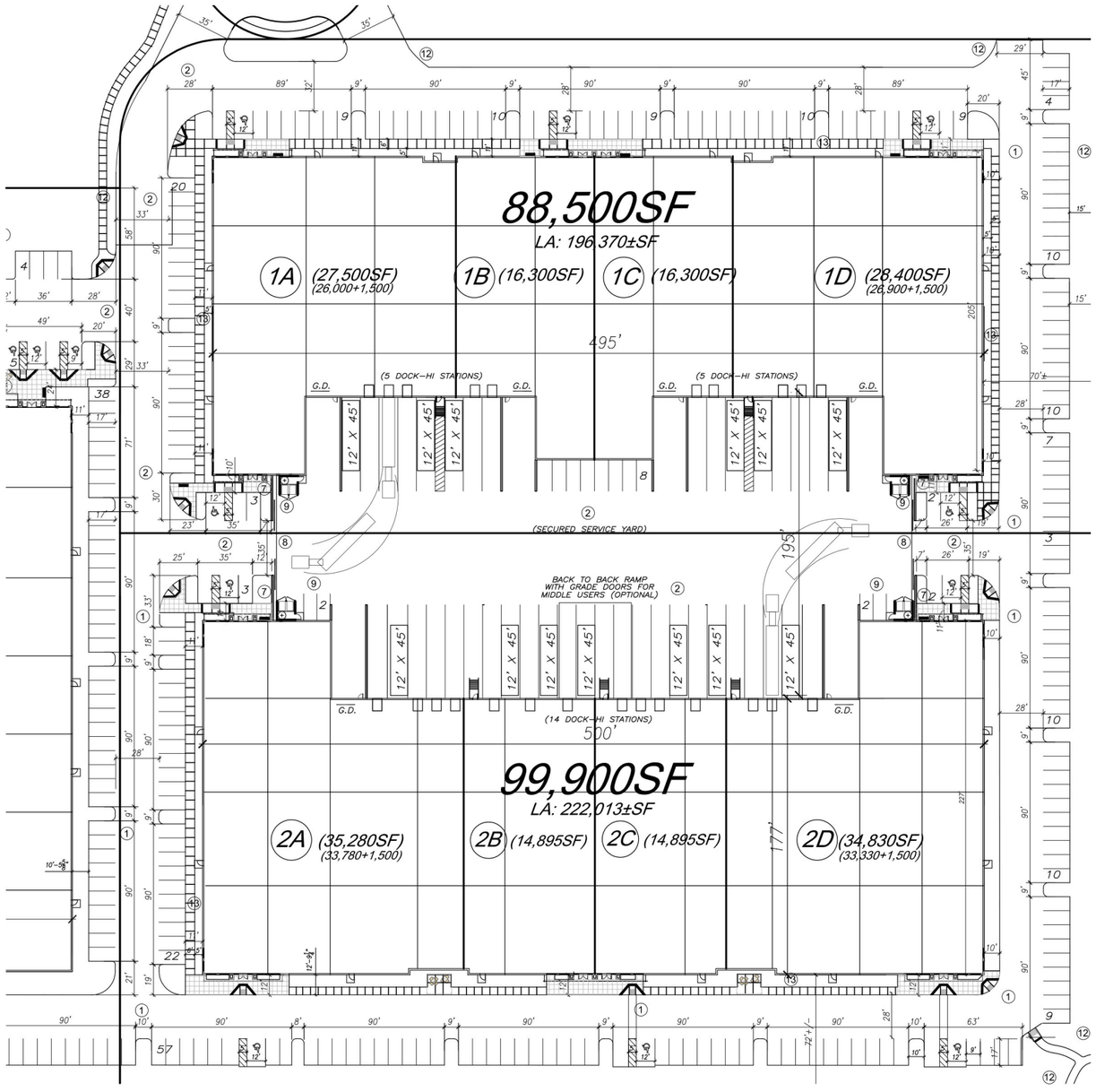
THERE ARE NO ACTIVE DAIRY FARM(S) LOCATED WITHIN 100' OF THE PROJECT BOUNDARIES.

Source(s): Proactive Engineering Consultants (April 2019)

Figure 3-7

NOT TO SCALE

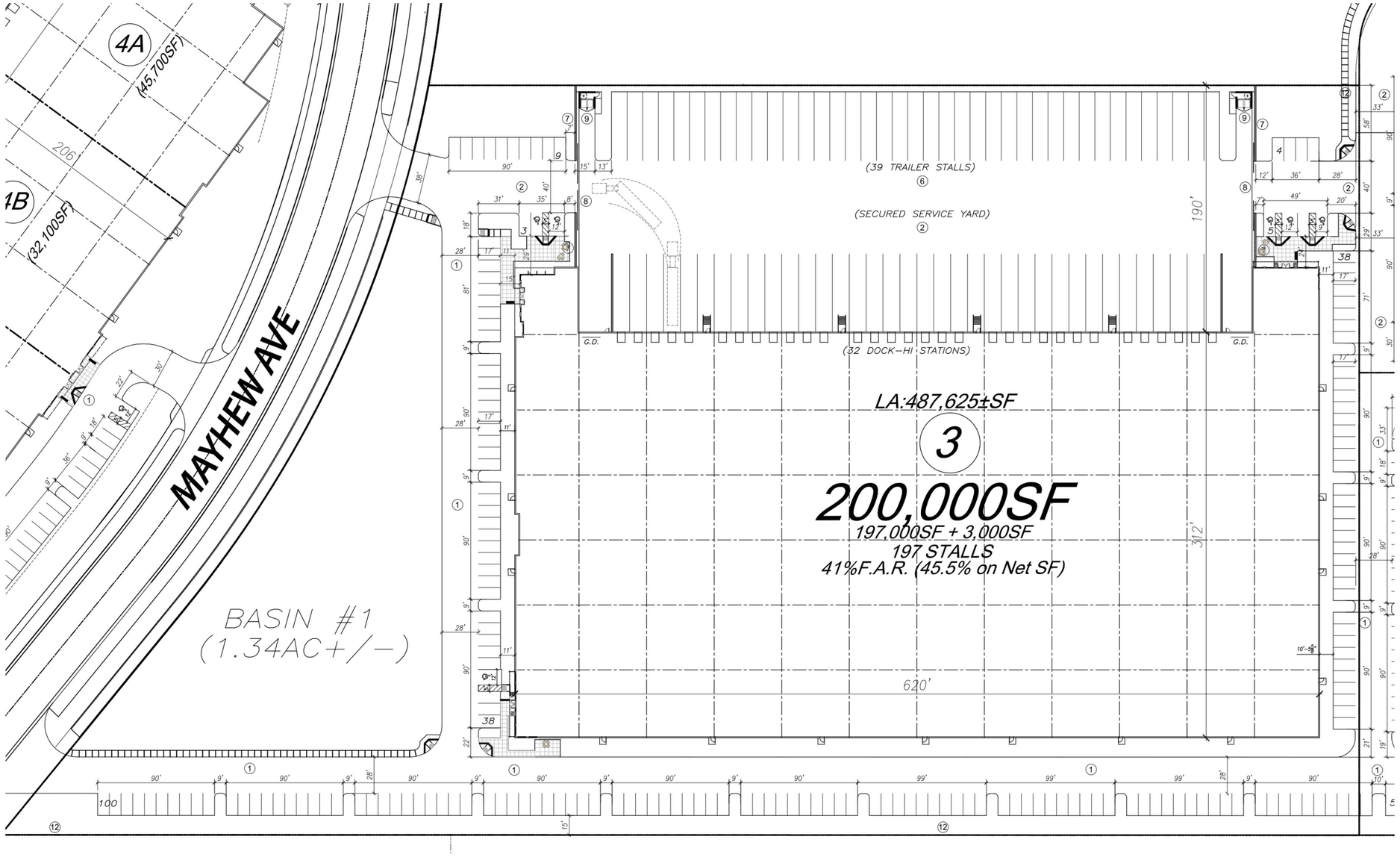
TENTATIVE PARCEL MAP NO. 19756 (PL16-0456)



Source(s): MacDavid Aubort (02-22-2019)

Figure 3-8

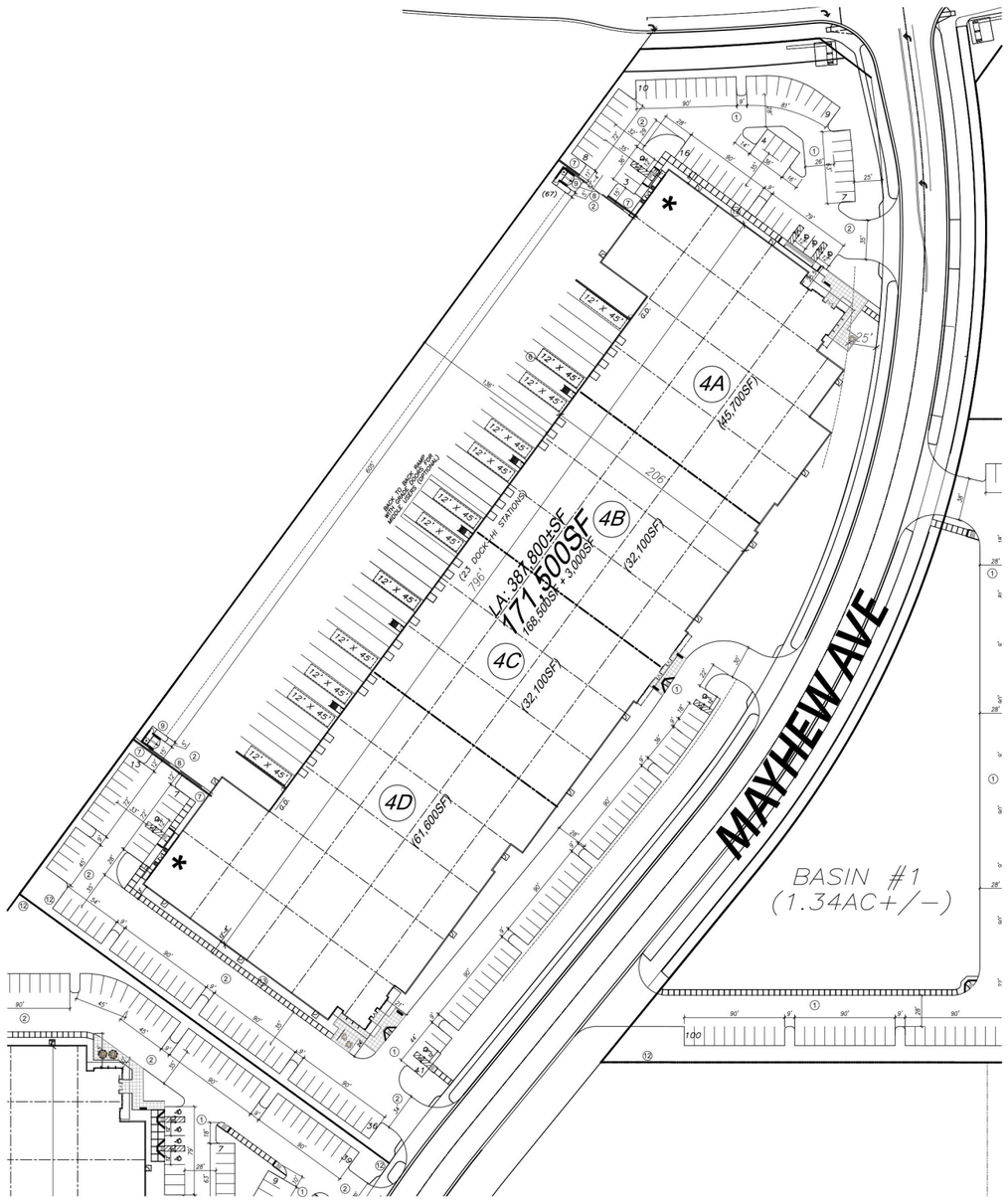
NOT TO SCALE



Source(s): MacDavid Aubort (02-22-2019)

Figure 3-9

NOT TO SCALE

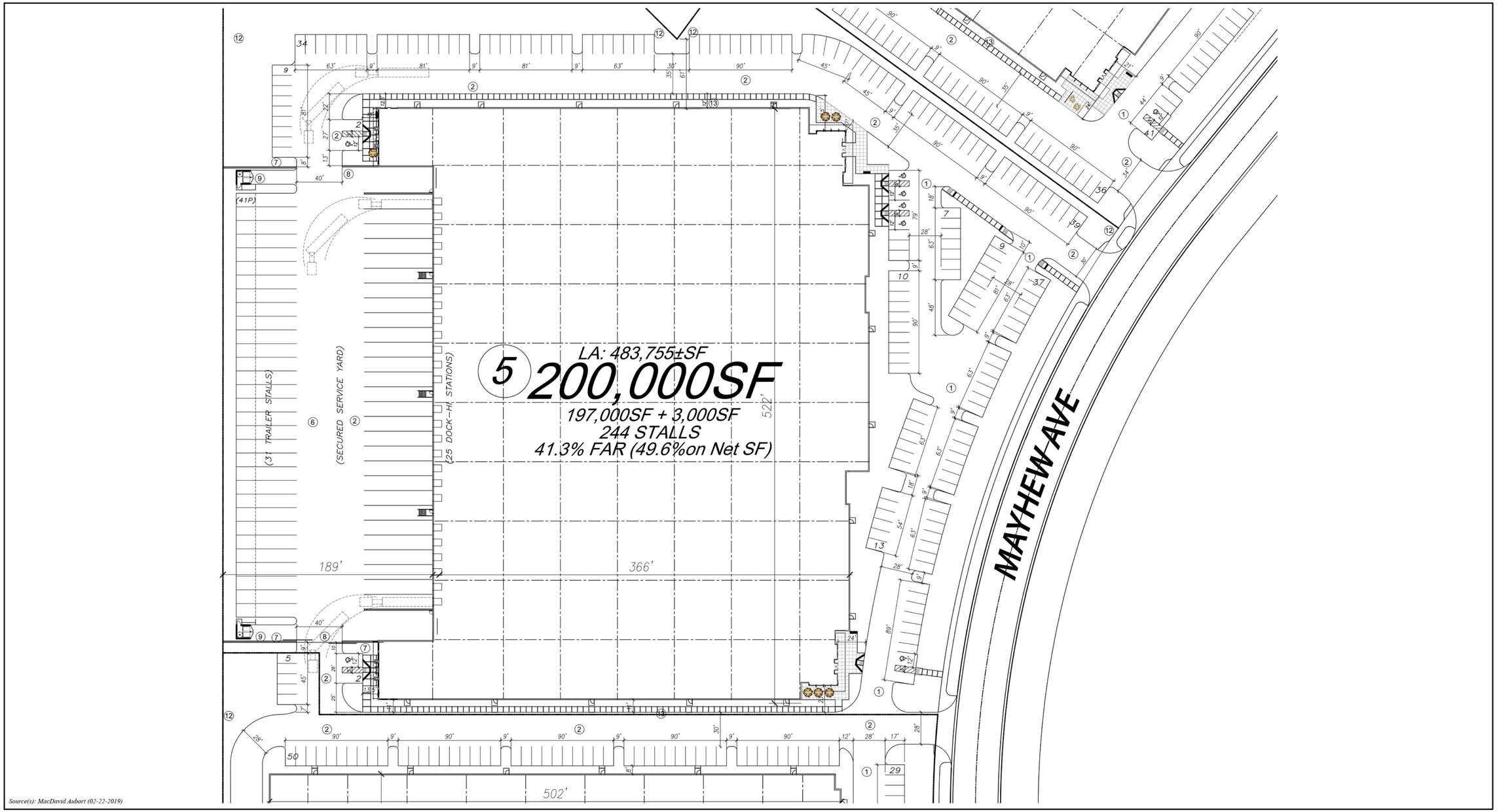


Source(s): MacDavid Aubort (02-22-2019)

Figure 3-10

NOT TO SCALE

SITE APPROVAL (PL17-0044) – BUILDING 4

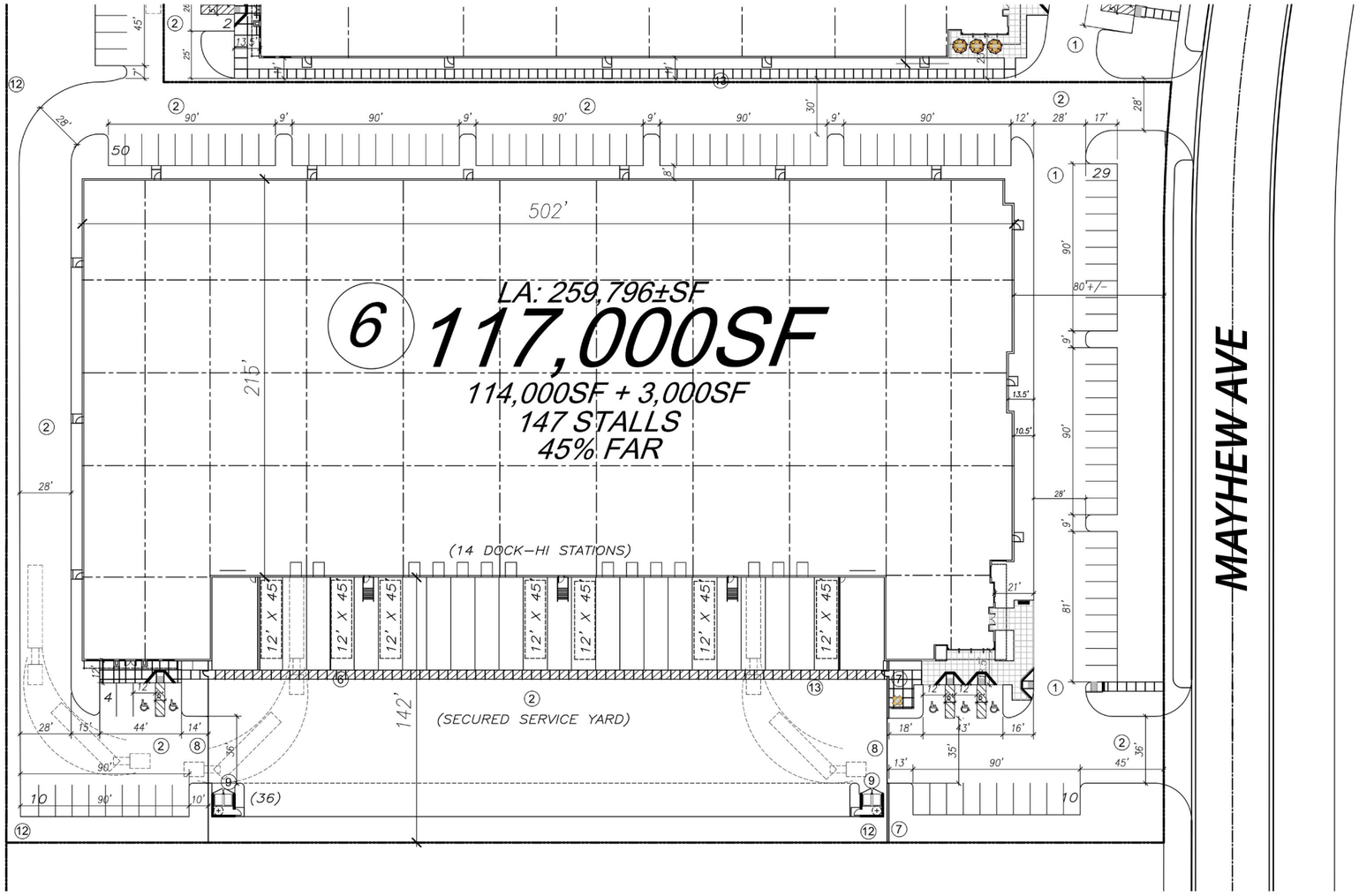


Source(s): MacDavid Aubort (02-22-2019)

Figure 3-11

NOT TO SCALE

SITE APPROVAL (PL17-0044) – BUILDING 5



Source(s): MacDavid Aubort (02-22-2019)

Figure 3-12

NOT TO SCALE

SITE APPROVAL (PL17-0044) – BUILDING 6

Building 3:
Building 3 would be located immediately west of Building 2 and east of Mayhew Avenue. The structure would contain 200,000 s.f. of building space with 32 loading docks (on the north side of the building), ±197 automobile parking stalls, and ±39 trailer parking stalls. Building 3 would contain up to three (3) building entries located in the northwestern, northeastern, and southwestern corners of the structure. Each entry would include enhanced paving, employee patio with accessible table seating, and/or nearby bicycle parking. Vehicular access to Building 3 would be provided from Mayhew Avenue and Street "B."

Building 4:
Building 4 is proposed to be located immediately west of Mayhew Avenue and south of Kimball Avenue. The structure would contain 171,500 s.f. of building space, 23 loading docks (on the west side of the building), ±223 automobile parking stalls, and ±12 trailer parking stalls. Building 4 would provide up to four (4) building entries: one at each corner of the building. Each entry would include enhanced paving, employee patio with accessible table seating, and/or nearby bicycle parking. Vehicular access to Building 4 would be provided from Mayhew Avenue.

Building 5:
Building 5 is proposed to be located immediately west of Mayhew Avenue, on the western portion of the Project site. The structure would contain 200,000 s.f. of building space, 25 loading docks (on the west side of the building), ±244 automobile parking stalls, and ±31 truck trailer parking stalls. Building 5 could include up to four (4) building entries, one at each corner of the building. Each entry would include enhanced paving, employee patio with accessible table seating, and/or nearby bicycle parking. Vehicular access to Building 5 would be provided from Mayhew Avenue.

Building 6:
Building 6 would be located immediately south of Building 5, west of Mayhew Avenue, and north of Bickmore Avenue. The structure would contain 117,000 s.f. of building space, 14 loading docks (on the south side of the building), ±147 parking stalls, and ±7 truck trailer parking stalls. Building 6 would include up to two building entries located in the southern corners of the structure, respectively. Each entry would include enhanced paving, employee patio with accessible table seating, and/or nearby bicycle parking. Vehicular access to Building 6 would be provided by two entryways, both from Mayhew Avenue.

D. Special Conditional Use Permit (PL17-0042)

The City of Chino requires the approval of a Special Conditional Use Permit (SCUP) to allow the construction of buildings over 50,000 s.f. Because all the buildings proposed by SA (PL17-0044) would exceed 50,000 s.f., SCUP (PL17-0042) is required to implement the Project.

3.4 PROJECT CONSTRUCTION AND OPERATIONAL CHARACTERISTICS

3.4.1 PROJECT IMPROVEMENTS

A. Public Access Improvements

Existing Kimball Avenue and Bickmore Avenue would be widened and improved along the Project site's frontage. The Project also would construct the full-width of the Mayhew Avenue segment that traverses the Project site, between Kimball Avenue and Bickmore Avenue, including a 13-foot-wide multi-use pedestrian trail and a 10-foot-wide bridle (equestrian) path along the east side of the road. Figure 3-13, *Roadway Cross-Sections*, depicts the Project's typical improvements to each of these roadways.

The Project Applicant also would construct off-site roadway improvements to Kimball Avenue and Bickmore Avenue. If these off-site road improvements are not constructed by others in advance of the Project's implementation, the ultimate extent of off-site improvements could include: 1) the Kimball Avenue segment between Euclid Avenue and the western Project site boundary; 2) the Kimball Avenue segment between the eastern Project site boundary and Rincon Meadows Avenue; and/or 3) the Bickmore Avenue segment between Euclid Avenue and the western Project site boundary. Figure 3-14, *Potential Off-Site Improvement Area*, shows the limits of the Project's potential off-site improvements to Kimball Avenue and Bickmore Avenue.

B. Water and Sewer Infrastructure Improvements

Water and sewer service would be provided to the Project by the City of Chino. The Project would construct on-site domestic and recycled water lines and sewer lines beneath Mayhew Avenue that would connect to existing facilities within Kimball Avenue and Bickmore Avenue.

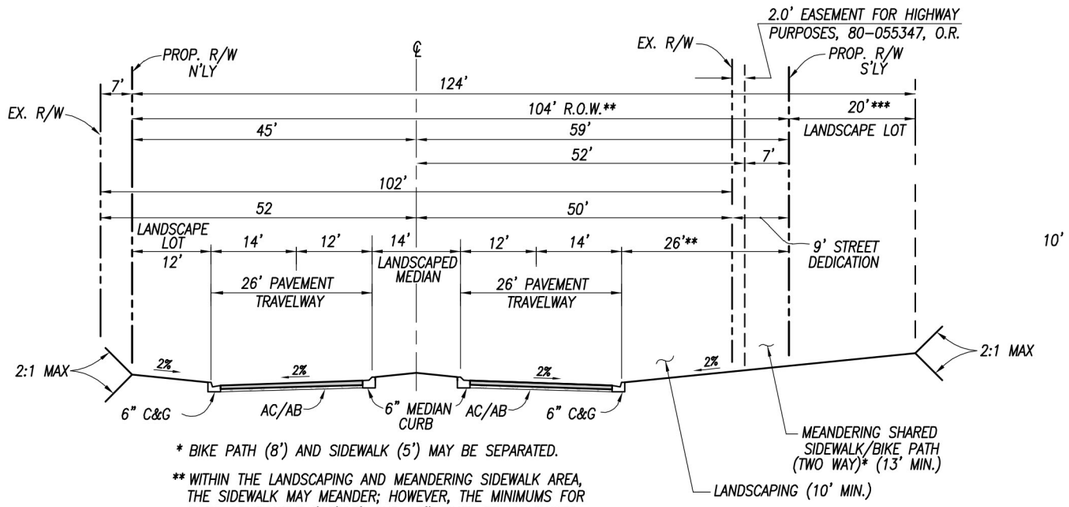
C. Stormwater Drainage Infrastructure Improvements

The Project proposes to install an on-site network of storm drain pipes, underground infiltration basins, and two (2) on-site water quality/detention basins, and one (1) off-site water quality/detention basin (at the northeast corner of the Mayhew Avenue/Bickmore Avenue intersection, as shown on Figure 3-14) to capture and convey stormwater runoff. The Project's stormwater drainage system would discharge to the existing Mayhew Avenue Channel located south of the Project site.

Upon full, future buildout of The Preserve Specific Plan and its master-planned stormwater drainage system, the on-site water quality/detention basins would be removed and stormwater runoff from the Project site would flow directly into an underground storm drain that will be located beneath Mayhew Avenue, south of Bickmore Avenue.

D. Earthwork and Grading

Grading would occur over the entirety of the Project site and, potentially, could extend into the entirety of the Project's off-site improvement areas shown on Figure 3-14. Proposed earthwork and grading activities would require approximately 102,000 cubic yards of fill soil to be imported from the approved TM 20008 development site, which is located north of Bickmore Avenue and abuts Project site. The Project would not create any manufactured slopes on-site, except around proposed detention basins where proposed slopes would have a maximum gradient of 2:1. Upon completion of grading activities, the Project site's elevations would range from approximately 605 feet above mean sea level (AMSL) in the northeast corner of the Project site to approximately 573 feet AMSL in the southwest portion of the Project site.



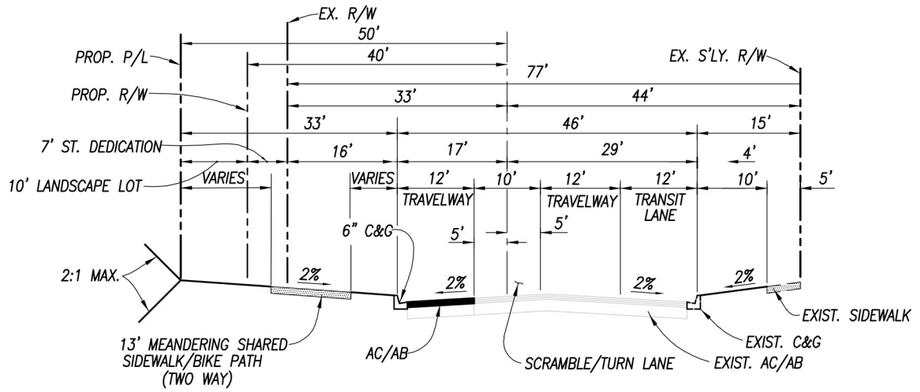
* BIKE PATH (8') AND SIDEWALK (5') MAY BE SEPARATED.

** WITHIN THE LANDSCAPING AND MEANDERING SIDEWALK AREA, THE SIDEWALK MAY MEANDER; HOWEVER, THE MINIMUMS FOR EACH COMPONENT (10',13', AND 10') MUST BE MAINTAINED.

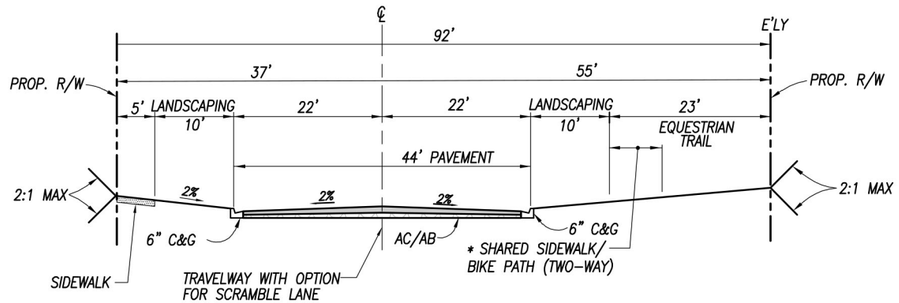
*** 20' LANDSCAPE LOT TO BE MAINTAINED AND OWNED BY THE PRESERVE MASTER MAINTENANCE CORPORATION OR H.O.A.

(TRUCK ROUTE)

KIMBALL AVENUE
131' R.O.W.



BICKMORE AVENUE
94' R.O.W.



MAYHEW AVENUE
92' R.O.W.

Source(s): Proactive Engineering Consultants (April 2019)

Figure 3-13

NOT TO SCALE

ROADWAY CROSS-SECTIONS

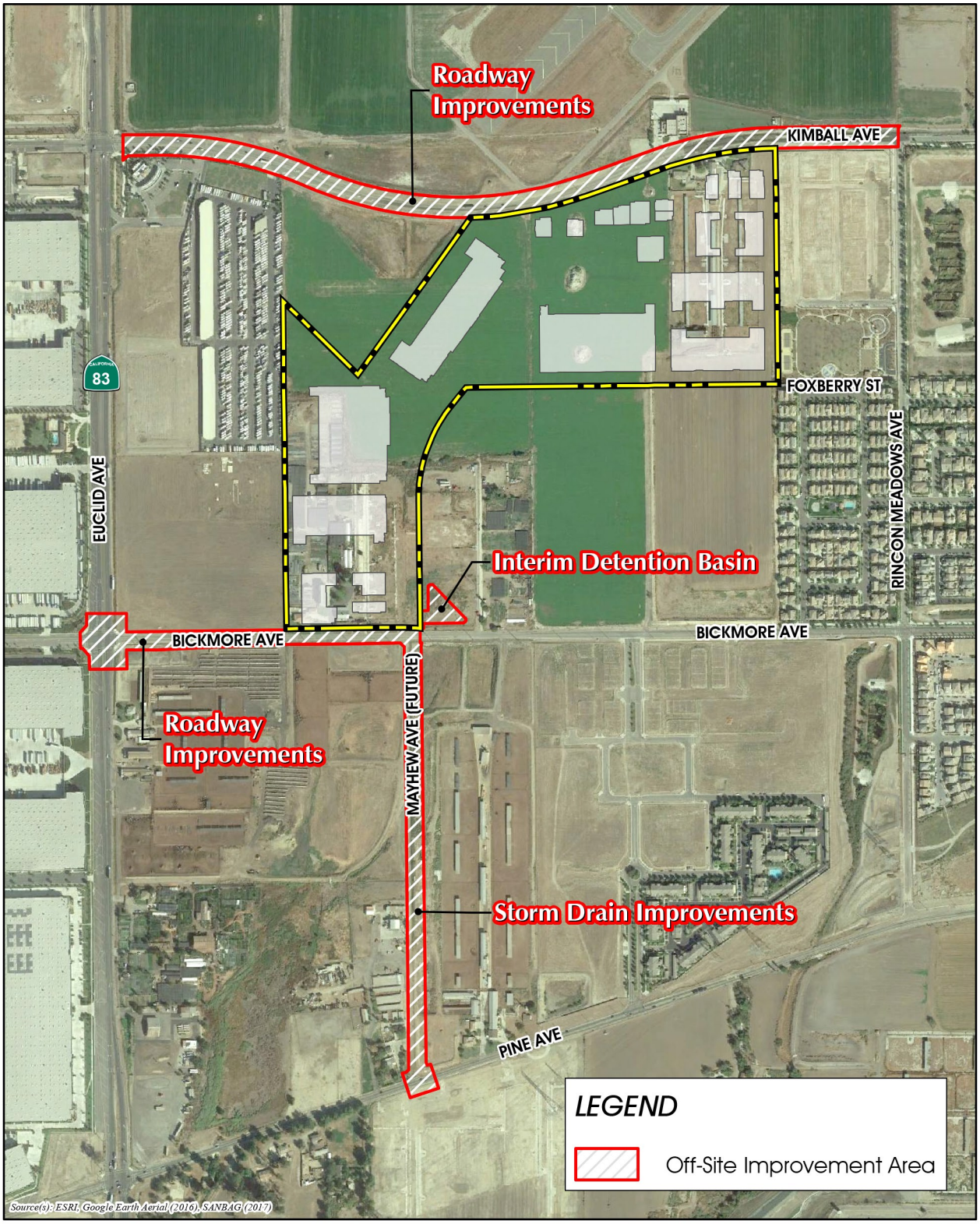


Figure 3-14

POTENTIAL OFF-SITE IMPROVEMENT AREA

3.4.2 CONSTRUCTION CHARACTERISTICS

The Project Applicant has indicated that the Project would be constructed in three phases over the course of approximately 27 months. During each phase of construction, construction equipment is expected to operate on the Project site up to eight (8) hours per day, six (6) days per week. Even though construction activities are permitted to occur between 7:00 a.m. to 8:00 p.m. on Mondays through Saturday pursuant to the Chino Municipal Code (§ 15.44.030(A)), construction equipment is not in continual use throughout a typical construction day and some pieces of equipment are used only periodically. Thus, eight (8) hours of daily use per piece of equipment (almost two-thirds of the daily period during which construction activities are allowed per City Code) is a reasonable assumption. Should construction activities need to occur at night (such as concrete pouring activities that require air temperatures to be lower than occur during the day), the Project Applicant would be required to obtain authorization for nighttime work from the City of Chino pursuant to Municipal Code §15.44.030(B).

The types and numbers of heavy equipment expected to be used during construction activities are listed in Table 3-2, *Construction Equipment Assumptions*.

3.4.3 OPERATIONAL CHARACTERISTICS

At the time this EIR was prepared, the future occupant(s) of the Project were unknown. The Project Applicant expects that the Project's buildings would be primarily occupied by warehouse, light industrial, and business park operators and one building would be occupied by a self-storage facility. For purposes of evaluation in this EIR, the Project is assumed to be operational 24 hours per day, seven days per week, with exterior loading and parking areas illuminated at night. Lighting would be subject to compliance with the design guidelines for The Preserve Specific Plan and Chino Municipal Code § 20.10.090, which state that exterior lighting shall be energy-efficient, shielded, or recessed, and directed downward and away from adjoining properties.

The Project is calculated to generate approximately 7,496 daily vehicle trips (actual vehicles) at buildout, including 6,179 passenger car trips and 1,317 truck trips, during long-term operation (refer to EIR Subsection 4.11, *Transportation/Traffic*).[1] The Project also is expected to use 98,463 gallons of water per day for indoor use and 99,924 gallons of water per day for outdoor use (i.e., landscape irrigation); generate 72,900 gallons of wastewater per day; use 6,371,523 kilowatt hours (kWh) of electricity per year; and use 8,538,029 thousand British thermal units per year (kBTU/yr) of natural gas per year (refer to EIR Subsections 4.12, *Utilities and Service Systems*, and 5.4, *Energy Consumption*).

[1] Project-related traffic was calculated using the 9th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual* and all analysis conducted in this EIR is based on the assumption that traffic generated by the Project would be in accordance with the trip rate recommendations in the 9th Edition *Trip Generation Manual*. Notwithstanding, it should be noted that while this EIR was under preparation, the ITE published the 10th Edition *Trip Manual*. Had the recommendations of the 10th Edition *Trip Generation Manual* been used for the Project analysis, the Project would have been calculated to generate approximately 5,573 daily vehicle trips (actual vehicles) at buildout, including 4,647 passenger car trips and 926 truck trips, which is fewer than the number of daily trips studied in this EIR.

Table 3-2 Construction Equipment Assumptions

Phase 1

Phase Name	Equipment Type	Number of Equipment	Hours per day
Demolition	Concrete/Industrial Saws	1	8
	Crushing/Proc. Equipment	1	8
	Excavators	2	8
	Rubber Tired Dozers	2	8
Grading	Excavators	2	8
	Graders	4	8
	Water Trucks	2	8
	Rubber Tired Dozers	4	8
	Scrapers	4	8
	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	2	8
	Forklifts	3	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	3	8
	Welders	2	8
Architectural Coating	Air Compressors	3	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8

Phases 2 & 3

Phase Name	Equipment Type	Number of Equipment	Hours per day
Grading	Excavators	2	8
	Graders	4	8
	Water Trucks	2	8
	Rubber Tired Dozers	4	8
	Scrapers	4	8
	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	2	8
	Forklifts	3	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	3	8
	Welders	2	8
Architectural Coating	Air Compressors	3	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8

Source: (Urban Crossroads, 2018a, Table 3-3)

3.5 City Review Process

The proposed Project and its technical aspects have been reviewed in detail by the City of Chino. Various City departments and divisions are responsible for reviewing land use applications for compliance with City codes and regulations. These departments and divisions also were responsible for reviewing this EIR for technical accuracy and compliance with CEQA. The City of Chino departments responsible for technical review include:

- Development Services Department, Planning Division
- Development Services Department, Building Division
- Development Services Department, Engineering Division
- Public Works Department
- Chino Valley Independent Fire District

The City of Chino has primary approval responsibility for the proposed Project. As such, the City serves as the Lead Agency for this EIR pursuant to CEQA Guidelines § 15050. The role of the Lead Agency was previously described in detail in Subsection 1.4 of this EIR. The City's Planning Commission is the decision-making authority for the Project and will consider the Project along with City staff's recommendations whether the Project's discretionary applications should be approved and this EIR should be certified.

3.6 Related Environmental Review and Consultation Requirements

In the event the Project described herein is approved, additional discretionary and/or administrative actions would be necessary to implement the Project. Table 3-3 lists the government agencies that are expected to use this EIR and provides a summary of the subsequent actions associated with the Project. This EIR covers all federal, state, local government and quasi-government approvals which may be needed to construct or implement the Project, whether or not they are explicitly listed in Table 3-3, or elsewhere in this EIR (CEQA Guidelines § 15124(d)).

Table 3-3 Matrix of Approvals/Permits

PUBLIC AGENCY	APPROVALS AND DECISIONS
City of Chino	
Proposed Project – City of Chino Discretionary Approvals	
City of Planning Commission	• Approve, conditionally approve, or deny Tentative Parcel Map (PL16-0456), Master Site Approval (PL16-0457), Site Approval (PL17-0044), and Special Conditional Use Permit (PL17-0042) • Reject or certify this EIR along with appropriate CEQA Findings
Subsequent City of Chino Discretionary and Ministerial Approvals	
City of Chino Implementing Approvals	• Approve Site Approval(s) • Approve Tentative Parcel Map(s) • Approve Conditional or Special Conditional Use Permits • Issue Grading Permits • Issue Building Permits • Approve Road Improvement Plans • Issue Encroachment Permits • Accept public right-of-way dedications • Approve street vacations
Other Agencies – Subsequent Approvals and Permits	
Santa Ana Regional Water Quality Control Board	• Issuance of a Construction Activity General Construction Permit. • Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit.
California Department of Fish and Wildlife (CDFW)	• Potential consultation with CDFW for pre-construction burrowing owl surveys.

4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

In accordance with CEQA Guidelines §§ 15126-15126.4, this EIR Section 4.0, *Environmental Analysis*, includes analysis of potential direct, indirect, and cumulatively considerable impacts that could occur from planning, constructing, and operating the proposed Project and related future development actions.

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for this EIR. The City of Chino received written comments regarding the EIR scope in response to the NOP issued for this EIR. Oral comments on the EIR scope were provided by members of the public at the EIR scoping meeting held on June 5, 2017, at the City of Chino Community Building. Taking all known information and public comments into consideration, 12 primary environmental subject areas are evaluated in detail in this Section 4.0, as listed below. Each subsection evaluates several specific subject matters related to the main environmental topic. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

4.1 Aesthetics
4.2 Agriculture and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Cultural Resources & Tribal Cultural Resources
4.6 Geology/Soils
4.7 Greenhouse Gas Emissions
4.8 Hazards/Hazardous Materials
4.9 Hydrology/Water Quality
4.10 Noise
4.11 Transportation and Traffic
4.12 Utilities/Service Systems

Public Resources Code (PRC) § 21100(b)(3) and CEQA Guidelines § 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Accordingly, in addition to the subject matters listed above, this EIR addresses the topic of energy conservation in Section 5.4, *Energy Consumption*.

As concluded by the Project's Initial Study (included in *Technical Appendix A* to this EIR) and after consideration of all comments received by the City on the scope of this EIR and documented in the City's administrative record, five (5) environmental subjects were determined by the City to have no potential to be significantly impacted by the Project and/or related future development actions: Land Use/Planning, Mineral Resources, Population/Housing, Public Services, and Recreation. These five subjects are discussed briefly in Section 5.0, *Other CEQA Considerations*. Additionally, the EIR addresses the topic of wildfire in Subsection 4.8, *Hazards and Hazardous Materials*, which would have no potential to be significantly impacted by the Project and/or related future development actions.

4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines § 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts" (CEQA Guidelines § 15130(a)(1)). As defined in CEQA Guidelines § 15355:

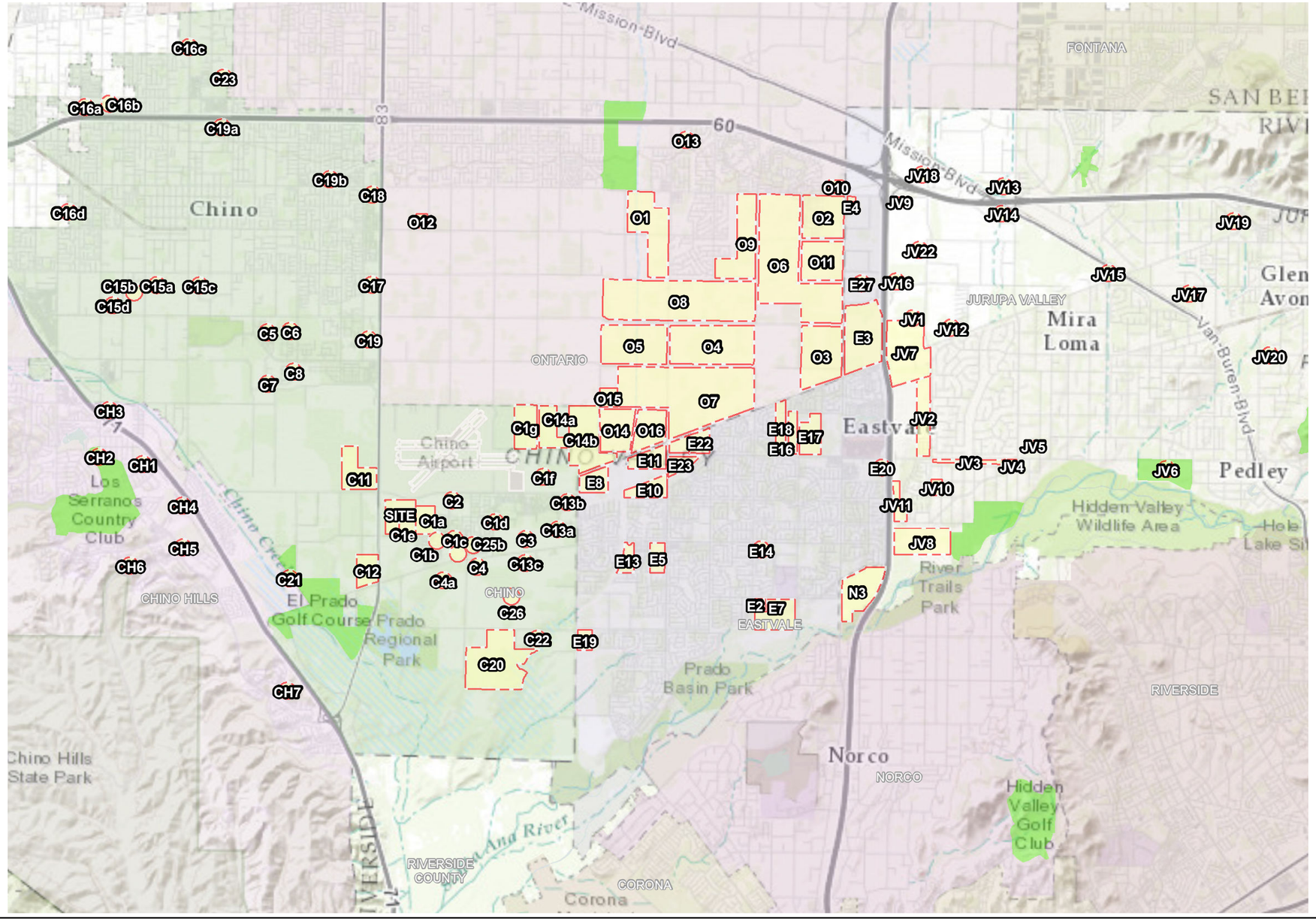
'Cumulative Impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

a) The individual effects may be changes resulting from a single project or a number of separate projects.
b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: "1) a list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency ['the list of projects approach'], or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact ['the summary of projections approach']."

The summary of projections approach is used in this EIR, except for the evaluation of cumulative traffic and vehicular-related air quality, greenhouse gas, and noise impacts. The analysis of cumulative traffic impacts combines the summary of projections approach with the manual addition of past, present, and reasonably foreseeable projects. This approach was determined to be appropriate by the City of Chino because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effect for all subject areas, with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which may require supplemental information not accounted for by the summary of projections. The cumulative impact analyses of vehicular-related air quality, greenhouse gas, and noise impacts, which rely on data from the Project's traffic study, inherently utilize the combined approach. With the combined approach, the cumulative impact analyses for the air quality, greenhouse gas, noise, and traffic issue areas overstate the Project's (and Project-related components') potential cumulative impacts relative to an analysis that would rely solely on the list of projects approach or solely on the summary of projections approach; therefore, the combined approach provides a conservative, "worst-case" analysis for the Project's cumulative air quality, greenhouse gas, noise, and traffic impacts.

The list of projects used to supplement the summary of projections approach for the cumulative traffic impact analysis (as well as vehicular-related air quality, greenhouse gas, and noise impact analyses) includes approved and pending development projects in proximity to the Project site that would contribute traffic to the same facilities as the Project, as well as several large, traffic-intensive projects farther from the Project site that have the potential to affect regional transportation facilities. This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or state highway system facilities as the proposed Project and have the potential to be fully operational in the foreseeable future. As such, the cumulative impact analysis of traffic and vehicular-related air quality, greenhouse gas, and noise impacts includes 85 other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections (Urban Crossroads, 2017, Table 4-4). The specific development projects included in the traffic and vehicular-related air quality, greenhouse gas, and noise cumulative impact analyses shown in Figure 4.0-1, *Cumulative Development Location Map*, and are listed in Table 4.0-1, *List of Cumulative Development Projects*.



Source(s): Urban Crossroads (09-16-2017)

Figure 4.0-1

NOT TO SCALE

CUMULATIVE DEVELOPMENT LOCATION MAP

Table 4.0-1 List of Cumulative Development Projects

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Chino				
C1a	Bickmore Street Residential	SFDR	196	DU
C1b	TM 17611	SFDR	21	DU
C1c	TM 17612	SFDR	42	DU
C1d	TM17635	SFDR	67	DU
C1e	Bouma Residential	SFDR	106	DU
		Condo/Townhouse	94	DU
C1f	Kimball Business Park	Light Industrial	140.500	TSF
		Warehousing	564.000	TSF
		High-Cube Warehouse	352.000	TSF
		Business Park	146.550	TSF
C1g	Chino Parcel Delivery	Parcel Delivery Facility	765.274	TSF
C2	TM17574	Condo/Townhouse	108	DU
C3	Falloncrest at the Preserve	SFDR	204	DU
		Condo/Townhouse	786	DU
		Apartments	412	DU
		Shopping Center	77.597	TSF
		General Office	77.597	TSF
C4a	West Preserve (Barthelemy Project)	SFDR	193	DU
		Condo/Townhouse	198	DU
		Apartments	288	DU
		Youth Soccer	1	Field
C4b	TM18778	SFDR	65	DU
C5	PL11-0047	Apartments	135	DU
	TM 18873	Condo/Townhouse	149	DU
	TM 16838-2 PA 7B	SFDR	67	DU
C6	TM17898	SFDR	77	DU
	TM 17899	SFDR	66	DU
	PL 13-0435	SFDR	41	DU
C7	TM18848	Condo/Townhouse	101	DU
C8	TM17891	SFDR	75	DU
	TM 17890	SFDR	94	DU
	TM 18891	SFDR	118	DU
	TM 17892	SFDR	63	DU
	TM 17893	SFDR	34	DU
	TM 17894	SFDR	39	DU
	TM 17895	SFDR	19	DU
	TM 17896	SFDR	67	DU
	TM 17897	SFDR	93	DU
C9	PL11-0299	General Light Industrial	50.000	TSF
	PL13-0601	SFDR	209	DU
C10	South of Pine	SFDR	1,351	DU
		Condo/Townhouse	732	DU
		Apartments	670	DU
C11	Majestic Airport Center	High-Cube Warehouse	2,890.400	TSF
		Warehousing	180.000	TSF
		Specialty Retail	25.000	TSF
		Pharmacy/Drugstore with Drive-Thru	13.000	TSF
		Fast-Food with Drive-Thru	8.600	TSF

Table 4.0-1 List of Cumulative Development Projects

#	Project/Location	Land Use[1]	Quantity	Units[2]
C12	PM18635	General Light Industrial	99.164	TSF
		High-Cube Warehouse	2,077.594	TSF
C13a	TM16420-1	Apartments	799	DU
C13b	TM 18890	Condo/Townhouse	94	DU
C13c	Lewis Residential	Apartments	400	DU
C14a	PM19368 (Chino East Industrial)	General Light Industrial	1,593.500	TSF
C14b	Watson Industrial Park	High-Cube Warehouse	3,889.900	TSF
C15a	PL 08-0334	Manufacturing	421.031	TSF
C15b	Hillwood @ Monte Vista Av./Schaefer Av.	Industrial	409.000	TSF
C15c	PL 10-0726	General Office	13.672	TSF
C15d	Yorba Avenue Commerce Center	High-Cube Warehouse	256.000	TSF
C16a	TM 18880	SFDR	33	DU
C16b	SEC Philadelphia/Ramona	Shopping Center	27.000	TSF
C16c	Chino Central Residential (PL13-0618)	SFDR	94	DU
	Central and Francis Residential	SFDR	113	DU
C16d	Pipeline and Norton Residential	SFDR	45	DU
C17	Brewart Residential	SFDR	127	DU
C18	Fern and Riverside Residential	SFDR	94	DU
C19a	Chino Riverside Residential	SFDR	59	DU
C19b	Borba Chino Residential	SFDR	84	DU
C20	Edgewater Communities	SFDR	415	DU
		Condo/Townhouse	659	DU
		Museum/Retail	6.500	TSF
		Church	15.200	TSF
		Park	15.0	AC
C21	Carson Industrial El Prado	High-Cube Warehouse	442.363	TSF
	Carson Mountain Industrial	High-Cube Warehouse	227.977	TSF
C22	Mill Creek	SFDR	1,074	DU
C23	DR Horton Brewer	SFDR	191	DU
C24a	Church	Church	47.979	TSF
		Daycare	190	STU
C24b	Flores Site	Shopping Center	4.000	TSF
		Gas Station w/ convenience store	16	VFP
		Express Car Wash	5.000	TSF
City of Chino Hills				
CH1	Country Club Villas	Condo/Townhouse	46	DU
CH2	Lago Los Serranos	Condo/Townhouse	95	DU
CH3	The Commons	Shopping Center	150.000	DU
CH4	The Golden Triangle	Shopping Center	106.700	TSF
CH5	Heritage Professional Center	Hospital	55.000	TSF
		Medical Office Building	86.952	TSF
		Hotel	120	RM
		Shopping Center	38.848	TSF
		Restaurant	7.200	TSF
CH6	Vista Bella Townhomes	Condo/Townhouse	65	DU

Table 4.0-1 List of Cumulative Development Projects

#	Project/Location	Land Use[1]	Quantity	Units[2]
CH7	Vila Borba Specific Plan	SFDR	176	DU
	City of Eastvale			
E1	14-1077 - Grainger Site (APN:156-050-025, 156-050-026, 156-020-027)	Industrial	546.000	TSF
E2	10-0117 (TM36373)	SFDR	51	DU
E3	10-0271 - Eastvale Commerce Center (Phase 1 and 2)	Shopping Center	249.000	TSF
		Hotel	130	RM
		High Cube Warehouse	3,100.000	TSF
		Business Park	610.000	TSF
E4	11-0354 - Arco Gas Station	Gas Station w/ convenience store and car wash	18.000	VFP
		Fast-Food w/o Drive-Thru	2.800	TSF
		Fast-Food with Drive-Thru	2.100	TSF
E5	The Marketplace at Enclave	Shopping Center	42.000	TSF
E6	Eastvale Shopping Center	Free-Standing Discount Superstore	192.000	TSF
		Specialty Retail	9.200	TSF
		Fast-Food Without Drive-Thru	7.200	TSF
		Coffee/Donut Shop w/ Drive Thru	2.000	TSF
		Fast-Food with Drive-Thru	3.500	TSF
		Gas Station w/ convenience store and car wash	16	VFP
E7	11-0363 TTM 36382 (Altfillisch Residential Project[5])	SFDR	146	DU
E8	SP00358 - The Ranch at Eastvale	Shopping Center	267.200	TSF
		General Light Industrial	801.500	TSF
		Business Park	1,121.100	TSF
E9	SC Limonite, LLC	SFDR	330	TSF
E10	13-0395 - 65th Street Residential (Copper Sky)	SFDR	250	DU
E11	PP23219 (PM35865)	General Light Industrial	738.430	TSF
E12	Dairy Property	SFDR	119	DU
E13	TR35751	Condo/Townhouse	243	DU
E14	13-0632 - Sumner Residential (Stratham Homes)	SFDR	129	DU
E15	14-0046 - Kasbergen/William Lyons Homes	Condo/Townhouse	220	DU
E16	TR32821	Condo/Townhouse	350	DU
E17	TR32909	SFDR	140	DU
E18	10-0124 - TR31252 (The Lodge)	SFDR	205	DU
E19	TR29997	SFDR	122	DU

Table 4.0-1 List of Cumulative Development Projects

#	Project/Location	Land Use[1]	Quantity	Units[2]
City of Jurupa Valley				
JV1	Silverlakes Equestrian[6]	Soccer Field	14	Fields
		Soccer Field	10	Fields
		Equestrian Facility	400	Stalls
JV2	TR33428	SFDR	338	DU
JV3	TR33258	SFDR	45	DU
JV4	CUP03555	Mini-Warehouse	141.460	TSF
JV5	CUP03488 (Self Storage)	Mini-Warehouse	89.642	TSF
JV6	TR35655	SFDR	9	DU
JV7	TR31644	SFDR	213	DU
	TR31768	SFDR	95	DU
	TR31778	SFDR	64	DU
	TR33461	SFDR	102	DU
	Thorobred Farms	High-Cube Warehouse	1,176.120	TSF
JV8	Ter Maaten (TTM No. 36391)	SFDR	468	DU
		Park	8.4	AC
JV9	Riverside Drive Development	General Light Industrial	167.020	TSF
JV10	6316 Wineville Av. (Daycare)	Daycare	40	STU
JV11	Vernola Marketplace Apartments	Apartments	597	DU
JV12	TR36692	SFDR	176	DU
	TR31768	SFDR	189	DU
	TR31778-1	SFDR	128	DU
	TR33461	SFDR	203	DU
	TR31644	SFDR	425	DU
JV13	PP23203	Industrial/Business Park	821.77	TSF
JV14	PP23390	Warehousing	78.31	TSF
JV15	PP23580	Fast-Food with Drive-Thru	1.832	TSF
JV16	PP24596	Warehousing	122.59	TSF
JV17	Galena Business Park (SDP31204)	General Light Industrial	173.39	TSF
JV18	Swift Transportation (ST00934)	General Office	8.000	TSF
City of Ontario				
O1	Countryside	SFDR	819	DU
O2	Edenglen	SFDR	310	DU
		Multi-Family Attached (Condo)	274	DU
		Shopping Center	217.520	TSF
		Business Park	550.000	TSF
O3	Esperanza	SFDR	914	DU
		Multi-Family Attached (Apartments)	496	DU
O4	Grand Park	SFDR	484	DU
		Multi-Family Attached (Apartments)	843	DU
O5	Parkside	SFDR	437	DU
		Multi-Family Attached (Apartments)	1,510	DU
		Shopping Center	115.000	TSF
O6	Rich Haven	SFDR	2,732	DU
		Multi-Family Attached (Condo)	1,524	DU
		Shopping Center	317.400	TSF

Table 4.0-1 List of Cumulative Development Projects

#	Project/Location	Land Use[1]	Quantity	Units[2]
O7	Subarea 29 & Amendment	SFDR	2,149	DU
		Shopping Center	87.000	TSF
O8	The Avenue	SFDR	2,020	DU
		Multi-Family Attached (Apartments)	586	DU
		Shopping Center	250.000	TSF
O9	West Haven	SFDR	753	DU
		Shopping Center	87.000	TSF
O10	Tuscana Village	SFDR	176	DU
		Shopping Center	26.000	TSF
O11	PDEV10-011	SFDR	11	DU
O12	PDEV10-008 - Dry Food Storage	Mini-Warehouse	17.000	TSF
O13	PDEV08-008	Shopping Center	3.920	TSF
O14	Colony Commerce West	High-Cube Warehouse	2,213.360	TSF
		Manufacturing	737.786	TSF
O15	West Ontario Commerce Center SP	High-Cube Warehouse	1,976.535	TSF
		Manufacturing	658.845	TSF
		Business Park	548.856	TSF
O16	Colony Commerce East	High-Cube Warehouse	998.680	TSF
		Manufacturing	226.279	TSF
		Warehousing	678.836	TSF
City of Corona				
COR1	Watermarke Properties	Apartments	450	DU
		Shopping Center	77.000	TSF

[1] SFDR = Single Family Detached Residential

[2] TSF = Ten Thousand Square Feet; DU = Dwelling Unit; VFP = Vehicle Fueling Position ; AC = Acres

[3] Source: Eastvale South Trip Generation Analysis, Albert A. Webb Associates, May 27, 2011

[4] Source: Trip Generation Comparison for Cloverdale Marketplace, Phase II, Eastvale CA, Albert A. Webb Associates, August 15, 2011.

[5] Source: Altfillisch Residential Project TIA Memorandum, LSA Associates, Inc., July 25, 2011.

[6] Source: From Silverlakes TIA (Revised), Kunzman Associates, September 25, 2008.

Source: (Urban Crossroads, 2017, Table 4-4)

For the cumulative impact analyses that rely on the summary projections approach (i.e., all issue areas with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise, as described in the preceding pages), the cumulative study area includes the City of Chino, City of Chino Hills, City of Eastvale, City of Jurupa Valley, and City of Ontario. These three cities encompass portions of southwestern San Bernardino County and northwestern Riverside County that have similar environmental characteristics as the Project area. The selected study area encompasses upper Chino Valley, which is largely bounded by the Chino Hills to the west, Interstate 15 to the east, the Prado Dam and the Santa Ana River to the south and southeast, and State Route 60 to the north. This area has historically been used for rural and/or agricultural uses, like the Project site; but, in recent decades has been developed for residential and industrial development. This study area exhibits similar characteristics in terms of climate, geology, and hydrology and, therefore, is also likely to have similar biological and archaeological characteristics as well. This study area also encompasses the service areas of the Project site's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that differ from those of the Project area, or are simply too far from the proposed Project site to produce environmental effects that could be cumulatively considerable. Exceptions include cumulative air quality analysis, which considers the entire South Coast Air Basin (SCAB) and greenhouse gas emissions and associated global climate change, which potentially affect all areas of planet Earth. Additionally, the

analysis of potential cumulative hydrology and water quality effects considers cumulative growth within the boundary of the Santa Ana River Basin watershed.

Environmental impacts associated with buildout of the cumulative study area surrounding the City of Chino were evaluated in CEQA compliance documents prepared for the respective General Plans of each of the above-named cities. The locations where each of these CEQA compliance documents is available for review is provided below. All of the CEQA compliance documents listed below are herein incorporated by reference pursuant to CEQA Guidelines § 15150.

- City of Chino General Plan EIR (SCH No. 2008091064), available for review at the City of Chino Community Development Department, Planning Division, 13220 Central Avenue, Chino, CA 91710;
- City of Chino Hills General Plan EIR (SCH No. 2013051082), available for review at City of Chino Hills Community Development Department, 14000 City Center Drive, Chino Hills, CA 91709;
- City of Eastvale General Plan EIR (SCH No. 2011111061), available for review at the City of Eastvale Planning Department, 12363 Limonite Avenue, Suite 910, Eastvale, CA 91752;
- City of Jurupa Valley General Plan EIR (SCH No. 2016021025), available for review at the City of Jurupa Valley Planning Department, 8930 Limonite Avenue, Jurupa Valley, CA 92509; and
- The Ontario Plan EIR (SCH No. 2008101140), available at the City of Ontario Planning Department, 303 East B Street, Ontario, California.

4.0.3 Analysis Format

Subsections 4.1 through 4.13 of this EIR evaluate the 13 environmental subjects warranting detailed analysis, as determined by this EIR's Initial Study and in consideration of public comment on this EIR's NOP. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's (and Project-related components') potential environmental impacts based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by the City of Chino to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this EIR). The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this EIR, the City of Chino is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. The standards of significance used in this EIR are based on the independent judgment of the City of Chino, taking into consideration CEQA Guidelines Appendix G, the City of Chino's Municipal Code and adopted City policies, the judgment of the technical experts that prepared this EIR's Technical Appendices, performance standards adopted, implemented, and monitored by regulatory agencies, significance standards recommended by regulatory agencies, and the standards in CEQA that trigger the preparation of an EIR.

As required by CEQA Guidelines § 15126.2(a), impacts are identified in this EIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project and/or Project-related components. A summarized "impact statement" is provided in each subsection following the analysis. Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies, regulations) that the Project and its implementing actions are required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. For any impact identified as significant and unavoidable, the City of Chino would be required to adopt a statement of overriding considerations pursuant to CEQA Guidelines § 15093 in order to approve the Project despite its significant impact(s) to the environment. The statement of overriding considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the Project's administrative record, that outweigh the unavoidable impacts.

4.1 AESTHETICS

This Subsection describes the aesthetic qualities and visual resources present on the Project site and in the site's vicinity, and evaluates the potential effects that the Project may have on these resources. Descriptions of existing visual characteristics, both on-site and in the vicinity of the Project site, and the analysis of potential impacts to aesthetic resources are based on field observations and photographs collected by T&B Planning, Inc. in June 2017 (T&B Planning, 2017); analysis of aerial photography (Google Earth, 2017); and the Project's application materials (as described in Section 3.0, *Project Description*, of this EIR). This Subsection also is based in part on information contained in the Community Character Element of the City of Chino General Plan (Chino, 2010a), the Aesthetics section of the certified Final Program EIR prepared for the City's General Plan (SCH No. 2008091064) (Chino, 2010b), and the City of Chino Municipal Code (Chino, 2018). All references used in this Subsection are listed in EIR Section 7.0, *References*.

4.1.1 EXISTING CONDITIONS

A. Project Site and Surrounding Area

The Project site encompasses approximately 72 acres in the southern portion of the City of Chino, in the southwestern portion of San Bernardino County. The site is located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 660 feet west of Rincon Meadows Avenue. Topographically, the site is relatively flat with elevations ranging from approximately 575 above mean sea level (amsl) in the site's southwestern boundary to approximately 600 feet amsl near the site's northeastern boundary. There are no unique topographic or aesthetic features present on the property, such as natural rock outcroppings; there are several piles of crushed concrete debris on the northern portion of the site that are not natural features.

Pursuant to CEQA Guidelines § 15125, the physical environmental condition for purposes of establishing the setting of an EIR is normally the environment as it existed at the time the EIR's NOP was released for public review. The NOP for this EIR was released on May 20, 2017. As of that approximate date, the northeastern portion of the site contained two residential structures, an abandoned dairy farm (and associated dairy structures); the central and northwestern portions of the site contained field crops; and the southern/southwestern portion of the site contained two residential structures, plant nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use. The existing conditions of the Project site were previously shown on Figure 2-6, *Aerial Photograph*.

Figure 4.1-1, *Site Photograph Key Map*, depicts the locations of six (6) vantage point photographs, each of which are described below. These photographs, shown on Figure 4.1-2 through Figure 4.1-4, provide a representative visual inventory of the site's visual characteristics as seen from surrounding public viewing areas. Note that some of the photographs may appear distorted, which is the result of capturing a panoramic view from the vantage point.

- Site Photograph 1 (Figure 4.1-2): Site Photograph 1 provides a 180-degree view from Euclid Avenue, approximately 0.2-mile west of the Project site, looking north to south. An existing two-story structure and some ornamental landscaping on the Project site are visible along the horizon; but, no feature on the Project site is prominently visible from Euclid Avenue under existing conditions.

Figure 4.1-1

0 175 350 700 Feet

SITE PHOTOGRAPH KEY MAP

NORTHEAST

SOUTH

Site Photo 1: From along Euclid Avenue (Highway 83), looking northeast to south.

EAST

SOUTH

Site Photo 2: From northwestern area of Project Site along Kimball Avenue, looking east to south.

Figure 4.1-2

NOT TO SCALE

SITE PHOTOGRAPHS 1 AND 2

- Site Photograph 2 (Figure 4.1-2): Site Photograph 2 provides a 180-degree view of the Project site from Kimball Avenue. The left-hand portion of the photograph provides a view looking toward Kimball Avenue to the east (the Chino Valley Fire Station No. 3 is visible on the north side of Kimball Avenue). Three (3) debris piles are visible in the mid-ground on the left-hand side of the photograph; structures associated with a former dairy farm are partially visible beyond the debris piles. The center and right-hand portions of the photograph provide a view across the site's fallow and agricultural fields. Existing off-site industrial buildings located west of Euclid Avenue are visible in the background on the right-hand side of the photograph. The Chino Hills are visible beyond the Project site – although partially obscured by haze – along the horizon in the center and right-hand side of the photograph.

- Site Photograph 3 (Figure 4.1-3): Site Photograph 3 provides a 90-degree view from the northeastern corner of the Project site. The left-hand portion of the photograph provides a view along the Project site's eastern boundary looking south. The center of the photograph provides a southwest view across the Project site to the southwest. The right-hand portion of the photograph provides a view looking west. Visible in the foreground and mid-ground of the photograph are on-site agricultural fields alongside former dairy farm and two residential structures. The Chino Hills, partially obscured by haze, are visible beyond the Project site along the horizon on the left-hand side of the photograph.

- Site Photograph 4 (Figure 4.1-3): Site Photograph 4 provides a 180-degree view of the Project site from Bickmore Avenue. The left-hand side of the photograph provides a view looking west, toward Euclid Avenue; the center of the photograph provides a view across the Project site looking north; the right-hand side of the photograph provides a view looking east, toward Rincon Meadows Avenue. Dilapidated structures associated with former dairy and agricultural uses on the subject property are located on left-hand side of the photograph. Vacant, undeveloped fields are visible in the center and right-hand portions of the photograph. Chain-link fencing and a deteriorating wooden split rail fence separate the site from Bickmore Avenue. The San Gabriel Mountains are visible along the horizon beyond the Project, although partially obscured by haze which is a frequent atmospheric occurrence in the region.

- Site Photograph 5 (Figure 4.1-4): Site Photograph 5 provides a 90-degree view from the southwestern corner of the Project site. The left-hand side of the photograph provides a view along the site's western boundary looking north; the center of the photograph provides a view across the site looking northeast; the right-hand side of the photograph provides a view looking east, toward Rincon Meadows Avenue. On the left-hand side of the photograph is off-site, vacant, undeveloped land surrounded by a chain-linked fence. Visible in the foreground and mid-ground of the photograph is an on-site residence, outbuildings, and ancillary agricultural structures. The residence includes ornamental landscaping, including palm trees and turf. The San Gabriel Mountains are partially visible beyond the Project site in the distance on the left-hand side of the photograph, but are partially obscured by on-site structures and haze.

B. Scenic Vistas and Scenic Resources

The City of Chino General Plan includes policies related to preserving views of Chino's geographic and environmental features that make Chino unique. The City of Chino General Plan identifies the San Gabriel Mountains and Chino Hills as important scenic resources to the City (Chino, 2010a, p. CC-21). The San Gabriel Mountains are located approximately 14.0 miles north of the Project site and are visible under clear weather conditions. The Chino Hills are located approximately 3.0 miles southwest of the Project site are visible under clear weather conditions.

EAST

WEST

Site Photo 3: From northern edge of Project Site along Kimball Avenue, looking east to west.

SOUTH

WEST

Site Photo 4: From northeastern corner of Project Site along Kimball Avenue, looking south to west.

Figure 4.1-3

NOT TO SCALE

SITE PHOTOGRAPHS 3 AND 4

WEST

EAST

Site Photo 5: From southern edge of Project Site along Bickmore Avenue, looking west to east.

NORTH

EAST

Site Photo 6: From southwestern corner of Project Site along Bickmore Avenue, looking north to east.

Figure 4.1-4

NOT TO SCALE

SITE PHOTOGRAPHS 5 AND 6

The City of Chino General Plan EIR does not identify any important scenic roadway or highway corridors in the City and according to the California Department of Transportation (Caltrans), there are no officially-designated scenic highway corridors within the City (Chino, 2010b, p. 4.1-5; Caltrans, 2011).

C. Light and Glare

The Project site contains minimal sources of artificial, exterior lighting under existing conditions. Artificial light sources occur in the immediate vicinity of the Project site, with the most notable sources of light emanating from industrial development located west of Euclid Avenue. Exterior, artificial lighting also is present at the Chino Valley Fire Station No. 3 (located on the north side of Kimball Avenue) and the Chino Airport (generally located north of Kimball Avenue and east of Euclid Avenue). Streetlights are present in the Project area along Euclid Avenue, Bickmore Avenue, and Kimball Avenue. Exterior, artificial light sources in the immediate vicinity of the Project include the Chino Airport to the north of the Project site on Kimball Avenue, the two residential structures in the northeast corner of the Project site, a residential community to the west of the Project site, and warehouse structures to the east of the Project site.

4.1.2 Applicable Regulatory Requirements

A. Local Regulations

1. City of Chino General Plan

The Community Character Element of the City of Chino General Plan guides the design of future development and on-going improvements throughout the City. This element identifies goals, objectives, policies, and actions that will preserve the City's small-town character while improving overall community design. The General Plan states that lighting in the City should be designed to enhance safety while minimizing light spillage onto adjacent properties and into the night sky. (Chino, 2010a)

2. The Preserve Specific Plan

The Preserve Specific Plan includes a set of Design Guidelines that establish the design framework that the City of Chino uses to evaluate proposed development within the Specific Plan area. The Preserve Specific Plan includes design standards that address outdoor lighting and glare that apply to all properties within the Specific Plan area. Lighting in the Specific Plan must minimize glare and must be positioned to enhance the safety of vehicular and pedestrian traffic. (Chino, 2011, p. 222)

3. City of Chino Municipal Code

The City of Chino Municipal Code Section 20.10.090 identifies general outdoor lighting standards for the City and Section 20.18.050 identifies lighting standards for parking lots. Lighting in the City of Chino is required to utilize energy efficient fixtures that do not flash or blink and are not of high intensity of brightness. In addition, lighting shall be designed to provide safe and adequate lighting while minimizing light spillage. (Chino, 2018)

4.1.3 Basis for Determining Significance

The proposed Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

a. Have a substantial adverse effect on a scenic vista;

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

c. Substantially degrade the existing visual character or quality of the site and its surroundings; or

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects that development projects could have on aesthetics/visual quality and scenic resources. The use of these thresholds for the evaluation of Project-related impacts is intended to ensure that the proposed Project's impacts to aesthetic resources are appropriately evaluated and that feasible mitigation measures are applied for any impacts that are determined to be significant. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold.

Regarding the determination of significance under Threshold "a," if the unique view of a scenic vista(s) would be blocked or otherwise substantially adversely affected as seen from a public viewing location(s), such as a public road, park, trail, and/or other publicly-owned property at which the general public is legally authorized to use or congregate, the impact will be regarded as significant. Effects to scenic vistas from private properties will not be considered significant in this EIR because the City of Chino General Plans calls for the protection of public views and the City does not have any ordinances or policies in place that protect views from privately-owned property.

Regarding the determination of significance under Threshold "c," if the Project would cause the visual character or quality of public views in a non-urbanized area to be substantially degraded, the impact will be regarded as significant. In this context, "substantially degrade" will mean the introduction of physical features that would have a demonstratively inconsistent character and/or would be constructed with inferior design characteristics than currently found in, based on the independent judgment of the City of Chino.

4.1.4 IMPACT ANALYSIS

Threshold a: Would the Project have a substantial adverse effect on a scenic vista?

Figure 4.1-2 through Figure 4.1-4 depict the Project site under existing conditions. As shown, the Project site consists of relatively flat land that contains residential and agricultural buildings (several of which are in states of disrepair), agricultural fields, and vacant, undeveloped land. The Project site does not contribute to a scenic vista under existing conditions and the City of Chino General Plan does not identify any scenic vistas or scenic corridors on the Project site or in the vicinity of the site (Chino, 2010a, p. CC-21).

Scenic resources within and surrounding Chino include the San Gabriel Mountains, located approximately 14.0 miles north of the Project site, and the Chino Hills, located approximately 3.0 miles south/southwest of the Project site. Under existing conditions, views of the San Gabriel Mountains and Chino Hills are available from the Project site and its vicinity on clear days.

The Project would develop the subject property as a business center with up to 25 buildings ranging in size from 5,000 s.f. to 200,000 s.f. The Project's proposed buildings would have a maximum height of approximately 42 feet from finished floor and would be set back from Kimball Avenue and Bickmore

Avenue by a minimum of 25 feet. (Kimball Avenue and Bickmore Avenue are the only existing public viewing areas that have the potential to be substantially affected by the Project.) From Kimball Avenue vantage points, the Project's buildings would not be so tall as to obstruct views of, or otherwise substantially detract from views of the Chino Hills, because due to their height reaching an elevation of 42 feet AMSL and approximate 3.0-mile distance from the Project site, the Chino Hills would still be visible along the horizon. From Bickmore Avenue vantage points, views of the San Gabriel Mountains are partially obstructed under existing conditions by the single- and two-story structures and landscaping (i.e., trees) on the Project site. As mentioned previously, the Project proposes buildings with a maximum height of approximately 42 feet, which is not substantially taller than the existing structures and landscaping adjacent to Bickmore Avenue; therefore, the Project's proposed business center structures would not substantially degrade views of the San Gabriel Mountains relative to existing conditions.

Accordingly, given the fact that the Project site is not a scenic vista or located near a designated scenic resource, and that prominent, scenic views from public vantage points would not be obstructed by the Project, the Project would not have a substantial adverse effect on a scenic vista and a less-than-significant impact would occur.

Threshold b: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project site is not located within or adjacent to a scenic highway corridor (Caltrans, 2016). Further, the Project site does not contain trees, rock outcroppings, or historic buildings of scenic value (Google Earth, 2017) (T&B Planning, 2017). The Project site is located approximately 2.25 miles southwest of a segment of SR-71 that is designated as a State-eligible scenic highway; however, due to distance and intervening topography and development, the Project would not be visible from SR-71. Accordingly, the Project site is not located within a State scenic highway corridor and implementation of the proposed Project would not have a substantial effect on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway corridor. No impact would occur.

Threshold c: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

❑ Construction-Related Activities

Heavy equipment would be used during development of the Project site. This equipment would be visible to the immediately surrounding areas during the temporary construction period. Construction activities are a common occurrence in the urbanizing Inland Empire region of southern California and, recently, within The Preserve Specific Plan area within the City of Chino. Construction activities do not inherently or substantially degrade an area's visual quality. Except for the short-term use of cranes during building construction and lifts during the architectural coating phase, the construction equipment used on the Project site is expected to be low in height and not particularly visible to the surrounding area. Furthermore, Project-related construction activities would be temporary in nature and all construction equipment would be removed from the Project site following completion of Project-related construction activities. Based on the foregoing, Project-related changes to local visual character and quality are determined to be less than significant during temporary, short-term construction activities.

❑ **Project Buildout**

At buildout of the proposed Project, views of the site from the surrounding area and publicly accessible areas would change from land that was used for residential and agricultural uses (dairy farm and field crops) to that of a business center – which will feature large buildings, loading docks and parking spaces, drive aisles, utility infrastructure, landscaping, exterior lighting, signage, and a water quality/detention basins.

Although the area surrounding the Project site has historically been non-urbanized and used for dairy and agricultural land uses, it is in the process of transitioning to urbanized, non-agricultural uses as planned by the Chino General Plan and The Preserve Specific Plan. Existing industrial land uses are located west of Euclid Avenue and approved (but not constructed) industrial land uses are located immediately west of the Project site (east of Euclid Avenue). The Project would be compatible with the size, scale, height, and architectural features (color, building materials, decorative elements) of these existing and approved industrial buildings in an urbanized setting. The Chino Airport is located to the north of the Project site. The Chino Airport contains numerous industrial-style buildings and hangars that would be visually compatible with the visual character of the Project. To the east of the Project site is former agricultural land that is in the process of being developed with residential land uses pursuant to The Preserve Specific Plan. The Project has been designed to be sensitive to and complement the character of the future, neighboring residential land uses by minimizing the bulk and scale of the buildings located along the site's eastern boundary (so that there is a gradual transition in intensity between the off-site residential land uses and on-site industrial land uses) and by incorporating walls and landscaping along the site's eastern boundary to provide a visual buffer between on- and off-site uses. Land to the south of the Project site is used for agriculture (dairy farms) under existing conditions but is planned for future large-scale commercial uses by The Preserve Specific Plan. As noted above, the local character is no longer solely defined by dairies and agriculture, as these uses now exist in relatively small pockets in The Preserve Specific Plan area rather than in large, contiguous blocks, and non-residential land uses (industrial and residential) are now common within the Specific Plan area. Therefore, the introduction of industrial land uses on the Project site would not substantially degrade the character of the immediate Project area, despite the presence of agricultural land uses to its immediate south.

The proposed Project incorporates a number of features to enhance the aesthetic quality of the Project. The Project's architecture incorporates a mild, earth-toned color palette that would not be visually offensive and also incorporates accent elements, such as colored glass and decorative building elements at entries for, visual interest. The Project's landscape plan incorporates plant species that can maintain vibrancy during drought conditions. In addition, the Project incorporates thematic landscape plantings and monument signs at Project gateways and key on-site intersections. The proposed visual features of the Project would ensure a high-quality aesthetic for the site that would be consistent with the design standards for industrial development called for by The Preserve Specific Plan. Therefore, based on the foregoing analysis, implementation of the proposed Project would not result in any significant adverse impacts to the visual quality of the Project site as would be seen from publicly accessible vantage points.

Based on the foregoing analysis, the Project would not substantially degrade the visual character or quality of the Project site or surrounding area. As such, the Project would result in a less-than-significant impact.

Threshold d: Would the Project create a new source of substantial light or glare which adversely affect day or nighttime views in the area?

The proposed Project would include exterior lighting; however, the installation of exterior lighting would be ancillary to the proposed business center complex.

The City of Chino Municipal Code includes design standards for outdoor lighting that apply to all development in the City (Chino, 2018). The Municipal Code lighting standards govern the placement and design of outdoor lighting fixtures to ensure adequate lighting for public safety while also minimizing light pollution and glare and precluding public nuisances (e.g., blinking/flashing lights, unusually high intensity, or bright lighting). In addition, The Preserve Specific Plan includes design standards that address outdoor lighting and glare that apply to all properties within the Specific Plan area.

The proposed Project is designed to adhere to the requirements of the City of Chino Municipal Code and The Preserve Specific Plan. Future implementing permits and approvals (i.e., building permits) would be required to demonstrate compliance with these standards. Compliance would ensure that the proposed Project does not produce substantial amounts of light or glare from artificial lighting sources that would adversely affect the day or nighttime views of the surrounding area.

4.1.5 Cumulative Impact Analysis

As noted under the discussion of Threshold "a," the Project site is flat and does not contribute to any prominent scenic vistas under existing conditions. Views of the San Gabriel Mountains and Chino Hills are available in the Project area; however, such views are available throughout the cumulative study area and are not unique to the Project site's vicinity. Furthermore, development in the cumulative study area would be required to comply with the applicable policies of governing General Plans and Municipal Codes, which include policies and regulations to preserve vistas to important, designated scenic resources. Accordingly, with buildout of the proposed Project and other developments within the Project's viewshed, impacts to scenic vistas would not be cumulatively significant and the Project's contributions would be less than cumulatively-considerable.

As noted under the analysis of Threshold "b," the Project site is not located within close proximity to any designated Scenic Routes and does not contain any scenic resources. Therefore, the proposed Project has no potential contribute to a cumulatively significant impact to scenic resources within a designated Scenic Route corridor.

Under existing conditions, the area surrounding the Project site is mostly characterized by urbanized land uses, including industrial, public facility (Chino Airport), and residential uses, with the exception of existing agricultural uses to the south. The Preserve Specific Plan area is rapidly developing; any future development within the vicinity of the site is expected to be infill development in accordance with The Preserve Specific Plan land plan and is not anticipated to fundamentally alter the existing visual quality or character of the area. As with the proposed Project, new development in the surrounding area would be subject to applicable development regulations and design standards, including, but not limited to the Chino Municipal Code and The Preserve Specific Plan. Mandatory compliance to the development regulations and design standards enforced by the documents would ensure that development would incorporate high quality building materials, site design, and landscaping to minimize the potential for adverse effects associated with visual quality. Although, the Project would contribute to the ongoing transition within The Preserve Specific Plan area from agricultural to non-agricultural uses, this trend was planned for and has been occurring for over 15 years. Accordingly, Project impacts are less than cumulatively considerable to the existing visual character or quality of the Project site or its surroundings.

With respect to potential cumulative light and glare impacts, the Project would be required to comply with City of Chino Municipal Code § 20.10.090 and applicable design guidelines from The Preserve Specific Plan, which sets standards for exterior lighting/fixtures. The restriction on unshielded light fixtures and

"spill over" lighting enforced by these lighting regulations has the effect of minimizing light and glare that would affect daytime views and/or create sky glow. Additionally, development projects with artificial light sources in surrounding jurisdictions would be required to comply with the light reduction requirements applicable in their respective jurisdiction. Although cumulative development in the Project's surrounding area is expected to introduce new sources of artificial lighting and potentially reflective materials, the required compliance with the applicable municipal code requirements would ensure that future cumulative development does not introduce substantial sources of artificial lighting or glare. As such, the Project would not contribute to cumulatively-considerable, adverse impacts to the existing daytime or nighttime views of the Project site or its surroundings.

4.1.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project site does not contain any designated scenic vistas or scenic corridors. Public views of the San Gabriel Mountains and Chino Hills would not be obstructed by the Project due to the distance between the Project site and mountain features and the height of the mountains and hills in relation to the maximum heights of the Project's proposed buildings (approximately 42 feet). Impacts would be less than significant.

Threshold b: No Impact. The Project site is not located within or adjacent to a scenic highway corridor, and does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings. There are no State-designated or eligible scenic highways within the vicinity of the Project site. Thus, no impact would occur.

Threshold c: Less-than-Significant Impact. The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during Project construction or operation. Although the Project would change the visual character of the site from dairy operations to a business center, the Project's surrounding area is transitioning from agricultural to non-agricultural (urban) land uses. Furthermore, the Project proposes a number of site design, architectural, and landscaping elements consistent with the requirements of The Preserve Specific Plan that would ensure the Project's character is consistent with the planned vision for the Specific Plan area. Impacts would be less than significant.

Threshold d: Less-than-Significant Impact. Project-related development would not create substantial light or glare. Compliance with Chino Municipal Code requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.

4.1.7 Mitigation

Impacts would be less than significant; therefore, mitigation would not be required.

4.2 AGRICULTURE AND FORESTRY RESOURCES

The following analysis is based on information obtained from the United States Department of Agriculture (USDA), the California Department of Conservation (CDC), the County of San Bernardino, the City of Chino General Plan, and The Preserve Specific Plan. Refer to Section 7.0, *References*, for a complete list of reference sources.

The Project's off-site impact area includes roadways, areas within the public road right-of-way (not used for agriculture under existing conditions), and disturbed/developed areas. No agriculture or forestry resources are located in the Project's off-site impact area. Accordingly, the analysis presented in this Subsection focuses on the potential for the Project to result in substantial adverse effects to agriculture and/or forestry resources that may be present on the Project site.

4.2.1 EXISTING CONDITIONS

A. Agriculture Resources

1. Regional Agricultural Setting

The City of Chino and the larger San Bernardino County area have been used historically for agricultural (row crops and orchards) and dairy land uses. According to the San Bernardino County Department of Agriculture (SBCDA) *2015 Crop Report*, the top three categories of agricultural resources in San Bernardino County (by value) are milk, eggs, and cattle and calves (meat). The total production value for the "west end south" county region, which includes the City of Chino Hills, and parts of Chino and Ontario, was estimated at approximately $335 million in 2015, which represents nearly three quarters (72.2%) of the County's total gross value of agricultural production for the year. The livestock and poultry commodity group, which includes milk, eggs, and chicken, accounted for 87.2% of the production value in the "west end south" County region, and over half (62.9%) of the production value for the County. In 2015, the total gross value of agricultural production in San Bernardino County totaled approximately $464 million, which represented a decrease of approximately $64 million from the previous year. (SBCDA, 2015) According to the City of Chino General Plan, the decline of agricultural production in San Bernardino County is expected to continue as the region becomes more urbanized (Chino, 2010a, p. OSC-8).

The CDC reports that agricultural lands face continuing pressure from urbanization, foreign competition, and rising production costs. According to the CDC's "California Farmland Conversion Report, 2015," the most recent years for which information has been reported by the CDC, San Bernardino County as a whole experienced a net loss of 840 acres of "Important Farmland" between 2010 and 2012, representing a decline of 3.7% over that two-year time period (CDC, 2015, Table A-28). "Important Farmlands" in this report include Prime Farmland, Statewide Important Farmland, Unique Farmland, and Farmland of Local Importance (refer to "Farmland Classification Designations" later in this section for a description of each farmland type).

2. Local Agricultural Setting

Under existing conditions, portions of the Project site are planted with alfalfa and used as nurseries for ornamental landscape plants (MJK, 2018, p. 9). There are no active dairy uses on the Project site. Historic aerial photographs show that the southern portion of the Project site was first developed with a dairy farm in 1953, which was later abandoned by 2006. An additional dairy farm appeared to the northeast portion of the Project site by 1975, and another, abutting, dairy farm appeared by 1987, both of which were inactive by 2014. Around 1994, a plant nursery appeared on the southwestern portion of the site. A second plant nursery began operating on the southern portion of the site around 2002.

The Project site's vicinity is transitioning to a mixed development pattern, as evidenced by various development approvals, including The Preserve Specific Plan that encompasses the Project site and properties to the southwest, as well as residential development to the east within the City of Chino.

3. Agriculture Productivity Potential

A property's agricultural productivity potential is primarily determined by the quality of the site's soils. High-quality, productive soils have a higher likelihood to correspond with an important agricultural resource than do low-quality soils. The Project site's soil types, and their respective agricultural productivity rankings, are discussed on the following pages.

❑ Soil Types

The distribution of soils on the Project site is shown on Figure 4.2-1, *Soils Map*. The mapping symbols shown on Figure 4.2-1 correspond to United States Department of Agriculture (USDA) soil series classifications. Provided below is a description of the soils found on the Project site (USDA, n.d.).

Cb – Chino Silt Loam. Approximately 70.3 acres (96 percent) of the on-site Project development area contains Chino silt loam. This soil is characterized as somewhat poorly drained with moderately slow permeability and is found on basin floors and floodplains with 0 to 2 percent slopes. This soil type has severe limitations because it is shallow, droughty and/or stony.

CkC – Chualar Clay Loam. Approximately 1.4 acres (2 percent) of the on-site Project development area contains Chualar clay loam. This soil type consists of well drained, mixed alluvium soil found on areas with slopes ranging from 2 to 9 percent. This soil type has moderate limitations that could limit the choice of plants (or require special practices) and contains a risk for erosion.

Gr – Grangeville Fine Sandy Loam. Approximately 1.2 acres (2 percent) of the on-site Project development area contains Grangeville fine sandy loam. This soil is characterized as somewhat poorly drained and water movement in the most restrictive layer is high and is found on alluvial fans with 0 to 2 percent slopes. Plants that can be planted in the soil type are limited (or require special practices) and this soil is limited by Chino's very dry climate.

❑ Storie Index

The Storie Index is a rating system first developed by R. Earl Storie in 1933 that determines the value of farmland by evaluating the soil type on a given property. The Storie Index rating system ranks each soil according to four general factors: 1) the characteristics of the soil profile and its depth; 2) the texture of the surface soil; 3) the slope of the land on which the soil is located; and 4) other factors, including drainage, salt content, erosion, and alkali. A score ranging from 0 to 100 percent is determined for each factor, and the scores are then multiplied together to derive an index rating. Soils are graded according to their index on a scale of 1 through 6. (University of California, 1978, p. 1)

Soils of Grade 1 (excellent) rate between 80 and 100 percent and have few or no limitations that restrict their use for crops. Soils of Grade 2 (good) rate between 60 and 79 percent and have few special management needs and are suitable for most crops, but they have minor limitations that narrow the choice of crops. Grade 3 (fair) soils rate between 40 and 59 percent and are suited to a few crops or to special crops and require special management. Grade 4 (poor) soils rate between 20 and 39 percent and are severely limited for crops, and if

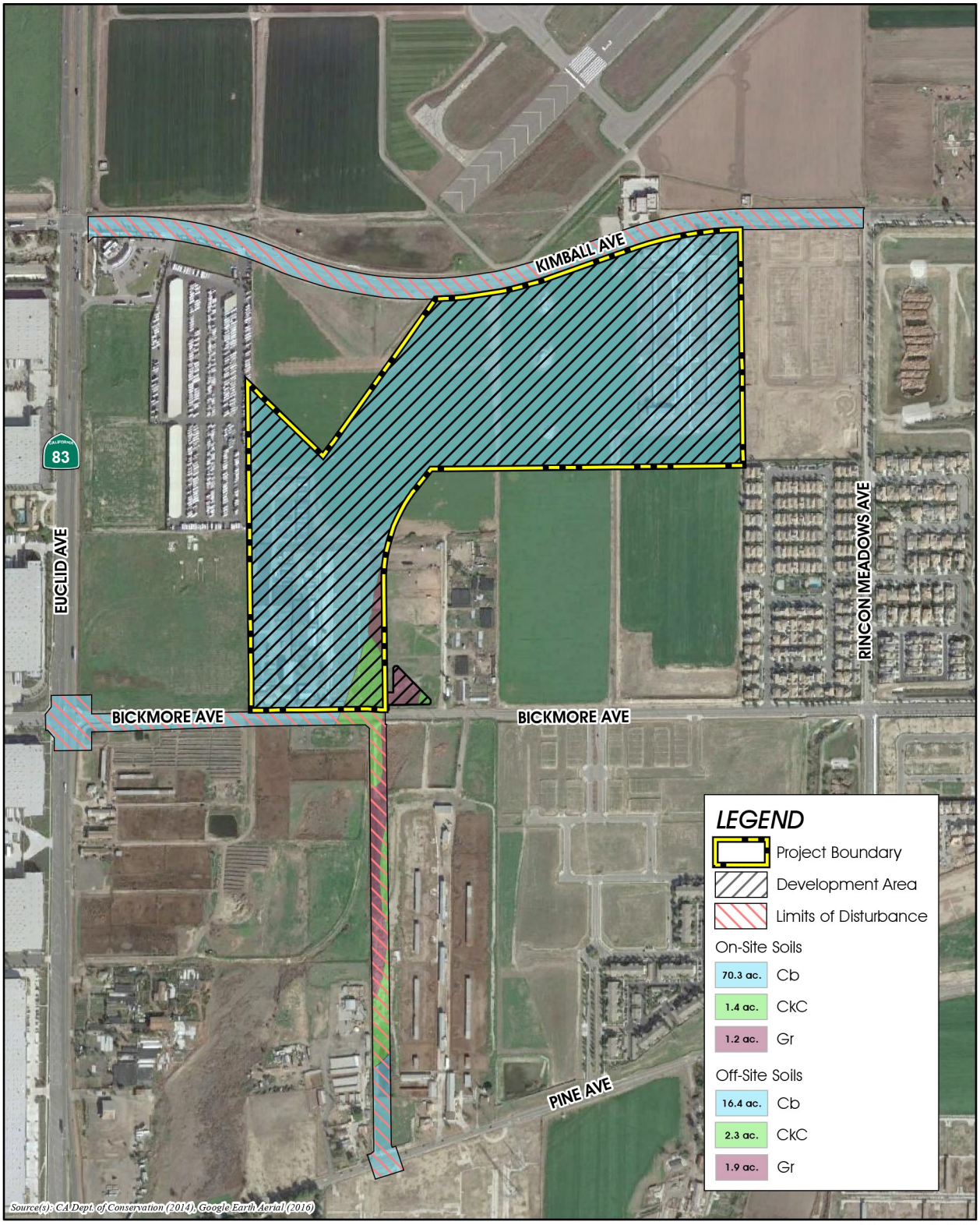


Figure 4.2-1

SOILS MAP

used, it requires careful management. Grade 5 (very poor) soils rate between 10 and 19 percent and generally are not suited to cultivated crops but can be used for pasture and range. Grade 6 (nonagricultural) consists of soils and land types that rate less than 10 percent and generally are not suited to farming. (University of California, 1978, p. 3)

The Storie Index rating for each of the soil types located within the Project site is presented in Table 4.2-1, *On-site Soils Summary*.

Table 4.2-1 On-site Soils Summary

Map Symbol	Mapping Unit Name	Acreage	% of Development Area	LCC[1]	Storie Index[2]
Cb	Chino Silt Loam	70.3	96.4	I[3]	69.7
CkC	Chualar Clay Loam	1.4	1.9	IIIe[4]	85.8
Gr	Grangeville Fine Sandy Loam	1.2	1.7	IIIe[4]	64.9

[1]Source: (USDA, n.d.)
[2]Source: (UC Davis, n.d.)
[3]Although not all Cb soils within the Project site are irrigated, the irrigated LCC is listed as a conservative measure.
[4]Within the Project site, areas with CkC and Gr soils are not irrigated; therefore, the non-irrigated LCC is listed.

❑ Land Capability Classification

Similar to the Storie Index, the Land Capability Classification (LCC) is used to determine the soil's suitability for crop production. The LCC includes eight (8) classes identified as "I" through "VIII," with soils designated as "I" being the most suitable for crop production. Additionally, the LCC includes four subclasses to identify the soil's limitation, including susceptibility to erosion ("e") and limitations due to water ("w"), shallow/stony soils ("s"), or climate ("c"). (USDA, n.d.)

The LCC rating for each of the soil types located within the Project site is presented in Table 4.2-1, *On-site Soils Summary*.

B. Forest Resources

Based on a biological survey conducted by M.J. Klinefelter (MJK), the Project site does not contain forest land or any vegetation communities associated with forest land (MJK, 2018, pp. 8-12).

4.2.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the State, and local environmental laws, related regulations governing the protection of agricultural and forest resources.

A. State Plans, Policies, and Regulations

1. California Land Conservation Act

The California Land Conservation Act (CLCA) of 1965, also known as the Williamson Act (CA Gov. Code § 51200, et seq.), enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Pursuant to Government Code § 51230, counties and cities may establish Agricultural Preserves, which define boundaries of those areas within which the city or county will be willing to enter into contracts pursuant to the CLCA. Contracts pursuant to the CLCA only are allowed for areas within established Agricultural Preserves. Agricultural Preserves generally must be at least 100 acres in size; however, a city or county may allow for lesser acreage if a finding is made that the characteristics of the agricultural enterprises in the area are unique and that the establishment of preserves of less than 100 acres is consistent with the general plan of the county or city. Once established, land uses within an Agricultural Preserve must be agricultural in nature, or other such uses that are not incompatible with agricultural uses. For lands within Agricultural Preserves, individual land owners may enter into a Contract with a county or city that would provide for the exclusion of uses other than agricultural, and other than those compatible with agricultural uses, for the duration of the Contract, even if the land is sold to a new owner. In return for entering into a Contract, the landowner is granted preferential property taxes that are based upon agricultural and related land uses rather than fair market value. Contracts may be exited at the option of the landowner or local government by initiating the process of term nonrenewal. Under the nonrenewal process, the remaining contract term (nine years in the case of an original term of ten years) is allowed to lapse, with the contract null and void at the end of the term. During the nonrenewal process, the annual property tax assessment continually increases each year until it is equivalent to current property tax rates at the end of the nonrenewal period. Under a set of specifically defined circumstances, a Contract may be cancelled without completing the process of term nonrenewal. Contract cancellation, however, involves a comprehensive review and approval process and the payment of a fee by the landowner equal to 12.5 percent of the full market value of the property in question. (CDC, 2017; California Legislative Information, 2000)

The City of Chino's Williamson Act Map (2017) does not identify any active Williamson Act contracts within the Project site (Chino, 2017a).

2. Farmland Mapping and Monitoring Program (FMMP)

The goal of the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) is to provide consistent, timely, and accurate data to decision makers for use in planning for the present and future of California's agricultural land resources. To meet this goal, FMMP's objective is to provide maps and statistical data to the public, academia, and local, state, and federal governments to assist them in making informed decisions for the best utilization of California's farmland. The FMMP was established in 1982 in response to what was by then a critical need for data on the nature, location, and extent of farmland, grazing land, and urban built-up areas in the State. Government Code § 65570 mandates FMMP to biennially report to the Legislature on the conversion of farmland and grazing land, and to provide maps and data to local government and the public. The FMMP also was directed to prepare and maintain an automated map and database system to record and report changes in the use of agricultural lands. It was the intent of the Legislature and a broad coalition of building, business, government, and conservation interests that FMMP be non-regulatory, and provide a consistent and impartial analysis of agricultural land use and change in California. With this in mind, FMMP provides basic data from which observations and analyses can be made in the land use planning process. (CDC, 2004, p. 3)

Pursuant to the FMMP, all lands within California are classified into one of seven map categories. The minimum mapping unit is generally 10 acres, except as otherwise noted (CDC, 2004, p. 6). Provided below is a description of the various map categories established by the FMMP:

- **Prime Farmland (P)**: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture

supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. (CDC, 2004, p. 6)

- **Farmland of Statewide Importance (S)**: Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. (CDC, 2004, p. 6)
- **Unique Farmland (U)**: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. (CDC, 2004, p. 6)
- **Farmland of Local Importance (L)**: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. (CDC, 2004, p. 6)
- **Grazing Land (G)**: Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres. (CDC, 2004, p. 6)
- **Urban and Built-Up Land (D)**: Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes. (CDC, 2004, p. 6)
- **Other Land (X)**: Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. (CDC, 2004, p. 6)

As shown on Figure 4.2-2, *FMMP Farmlands Map*, the Project site includes approximately 40.6 acres of Prime Farmland, 12.1 acres of Unique Farmland, and 20.2 acres of Other Land.

B. Local Plans, Policies, and Regulations

1. City of Chino "Right to Farm" Ordinance

Chapter 20.16 of the City of Chino's Municipal Code is the City's "Right-to-Farm" Ordinance, which states that no existing agricultural uses shall become a nuisance due to any changed condition in the surrounding area, and requires future owners of land near or adjacent to agricultural uses to be notified of all surrounding agricultural activities. This policy applies to "all legal agricultural operations within the agricultural overlay district, and other legally established agricultural operations existing at the time the property was annexed to the City of Chino." (Chino, 2018)

Figure 4.2-2

0 200 400 800 Feet

FMMP FARMLANDS MAP

4.2.3 Basis For Determining Significance

The proposed Project would result in a significant impact to agriculture and forestry resources if the Project or any Project-related component would:

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

b. *Conflict with existing zoning for agricultural use, or a Williamson Act contract;*

c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Government Code section 51104(g));*

d. *Result in the loss of forest land or conversion of forest land to non-forest use; or*

e. *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.*

The above-listed significance thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects that development projects could have on agricultural and/or forestry resources. The CEQA Guidelines revisions of December 2018 did not change the recommended wording of any of these thresholds.

Because the loss of farmland is not inherently a significant environmental impact, the determination regarding the significance of potential impacts to farmland under Thresholds "a" and "d" will be based on the CDC's Land Evaluation and Site Assessment (LESA) model. The LESA Model is a point-based approach that uses measurable factors to quantify the relative value of agricultural land resources to ultimately determine the significance of agricultural land conversions during the CEQA process. The LESA Model is made up of two sets of factors: "Land Evaluation" (LE), which evaluates soil quality/productivity, and "Site Assessment" (SA), which measures the social, economic, and geographic components that contribute to the overall value of agricultural land. The LE and SA are scored and weighted separately to yield a total LESA score. (CDC, 1997, p. 1) The total LESA score is evaluated against the scoring thresholds summarized in Table 4.2-2, *California LESA Model Scoring Thresholds*, to determine the significance of a project's impacts to farmland resources.

Table 4.2-2 California LESA Model Scoring Thresholds

Total LESA Score	Scoring Decision
0 to 39	Not Considered Significant
40 to 59	Considered Significant only if LE and SA subscores are greater than or equal to 20 points
60 to 79	Considered Significant unless either LE or SA subscore is less than 20 points
80 to 100	Considered Significant

Source: (CDC, 1997, Table 9)

The LESA model scoring methodology is described in detail in the CDC's *California Agricultural Land Evaluation and Site Assessment Model Instruction Manual*, which is available for review on the CDC's website and is herein incorporated by reference.

4.2.4 IMPACT ANALYSIS

Threshold a:	***Would the Project 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?***

Approximately 56 percent (40.6 acres) of the Project site is designated as Prime Farmland by the FMMP. Accordingly, the Project would convert Farmland to non-agricultural use.

The Project site was evaluated using the LESA Model to quantify its relative agricultural value. As summarized in Table 4.2-3, *LESA Score Summary*, the Project site receives a LESA Model score of 70.2, with a LE score of 42.1 and a SA score of 28.1.

Table 4.2-3 LESA Score Summary

	Factor Scores	Factor Weight[1]	Weighted Factor Scores
LE Factors			
LCC	98.9[2]	0.25	24.7
Storie Index	69.6[3]	0.25	17.4
	LE Subtotal	*0.50*	*42.1*
SA Factors			
Project Size	90.0[4]	0.15	13.5
Water Resources Availability	97.1[5]	0.15	14.6
Surrounding Agricultural Land	0[6]	0.15	0
Protected Resource Land	0[7]	0.05	0
	SA Subtotal	*0.50*	*28.1*
		Final LESA Score	***70.2***

[1]Defined by LESA Model.
[2]Approximately 70.3 acres of the site has a LCC classification of I, which corresponds to a LESA LCC rating of 100, and approximately 2.5 acres of the site has a LCC classification of IIIe, which corresponds to a LESA LCC rating of 70. The adjusted score for the site is 98.9 points.
[3]Approximately 70.3 acres of the site has a Storie Index of 69.7; approximately 1.4 acres of the site has a Storie Index of 85.8; and approximately 1.2 acres of the site has a Storie Index of 64.9. The adjusted score for the site is 69.6
[4]The site contains between 60-79 of LCC Class I soils, which corresponds to a LESA score of 90 points. The site contains less than 10 acres of LCC Class III soils, which corresponds to a LESA score of 0 points.
[5]Approximately 70.3 acres of the site are assumed to have access to water without restrictions during non-drought and drought years, which corresponds to a LESA score of 100 points. Approximately 2.6 acres of the site are assumed to have no access to irrigation and rely on rainfall, which corresponds to 20 points. The adjusted score for the site is 97.1 acres.
[6]Approximately 53 acres within the site's approximately 867-acre Zone of Influence (ZOI) is under agricultural production (or 6 percent of the ZOI), which corresponds to a LESA score of 0 points.
[7]Approximately 18 acres within the site's approximately 867-acre ZOI is protected agricultural land (or 2 percent), which corresponds to a LESA score of 0 points.

Pursuant to the LESA Model scoring system, a final LESA score between 60 and 79 points corresponds to an important agricultural resource when both the LE and SA factor scores are equal to or greater than 20. Because the Project site received a final LESA score of 70.2, with both the LE and SA factor scores exceeding 20, the site is considered to be an important agricultural resource. Therefore, the conversion of the Project site to non-agricultural use would be significant.

Threshold b:	***Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?***

The Project site is not subject to a Williamson Act Contract or zoned for an agricultural use (Chino, 2017a; Chino, 2018). Thus, the Project would not conflict with an existing Williamson Act Contract or with existing agricultural zoning designations. No impact would occur.

Threshold c:	***Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Government Code section 51104(g))?***
Threshold d:	***Would the Project result in the loss of forest land or conversion of forest land to non-forest use?***

The Project site does not contain forest land and is not zoned for forestland or timberland (Chino, 2018). As such, the Project has no potential to conflict with areas currently zoned as forest, timberland, or Timberland Production, and would not result in the rezoning of any such lands nor would result in the loss of forest land of the conversion of forest land to non-forest use. No impact would occur.

Threshold e:	***Would the Project 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?***

As disclosed above under the analysis for Thresholds "c" and "d," the Project would not involve other changes in the existing environment that would result in conversion of forest land to non-forest land.

As disclosed in the analysis for Threshold "a," the Project would convert Farmland on the Project site to non-agricultural use. The Farmland on the Project site is considered an important agricultural resource pursuant to the LESA Model; therefore, the Project's conversion of on-site Farmland to non-agricultural use is determined to be a significant impact.

As shown on Figure 4.2-2, additional Farmland (Prime Farmland) is located off-site, to the north and east of the Project site. The Farmland located to the east of the site is located on properties that are under construction for non-agricultural use; therefore, the conversions of these properties to non-agricultural use occurred prior to the Project and the Project is not responsible for the conversion. The Farmland located to the north of the Project site is located on the Chino Airport; the Project would not affect any property on the Chino Airport. Notwithstanding, pursuant to Chapter 20.16 of the City of Chino's Municipal Code ("Right-to-Farm"), should any Farmland in the Project vicinity be under active cultivation at the time the Project is implemented, the Project Applicant would be required to notify future occupants of the Project that agricultural operations are present in the immediate area and the potential effects of those agricultural operations, such as odors, noise, dust, pesticide application, and rodent management. Chapter 20.16 also requires the Project Applicant to inform future occupants of the Project that the City will allow the continued operation of any existing agricultural uses in the surrounding area and will not consider any existing agricultural operations to be a "nuisance" to industrial business activities on the Project site. Mandatory compliance with the provisions of Chapter 20.16 of the City of Chino's Municipal Code would preclude the Project's potential to indirectly result in the conversion of off-site Farmland a non-agricultural use.

4.2.5 Cumulative Impact Analysis

The Project would convert Farmland (Prime Farmland) with a substantial agricultural importance/value to a non-agricultural use. The Preserve Specific Plan EIR (SCH No. 2000121036) concluded that implementation of The Preserve Specific Plan would contribute to significant cumulative losses of prime farmlands and other important farmlands within the Chino Basin Dairy Area (CBDA). The CBDA was defined in The Preserve EIR as containing the Cities of Chino, Ontario, Eastvale, Corona, and portions of Riverside County, and the EIR concluded that when combined with other reasonably foreseeable development within the CBDA, there would be a significant cumulative loss of agricultural productivity within the CBDA region (Chino, 2003, p. 5.2-11). Since certification of The Preserve EIR, additional projects have been approved or are reasonably foreseeable that would contribute to the cumulative loss of Farmland within the CBDA. Thus, the Project's conversion of Farmland to non-agricultural use represents a cumulatively-considerable impact on agricultural resources within the CBDA.

The Project site does not have a Williamson Contract nor does the Project conflict with zoning of agricultural use. Accordingly, the Project would not have cumulative significant impact due to conflicting with a Williamson Contract or zoning of agricultural use. Additionally, there are no forest lands, timberlands, or Timberland Production zones on the Project site or in the Project site's vicinity, nor are any nearby lands under active production as forest land. Therefore, cumulatively significant impacts to forest land would not occur and the Project has no potential to result in a cumulatively-considerable impact to the loss of these lands.

4.2.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would convert Farmland with substantial agricultural production value to non-agricultural use. The loss of the Farmland on the Project site would be a significant direct impact and also would be cumulatively considerable in consideration of the past, ongoing, and projected future loss of farmland in the CBDA.

Threshold b: No Impact. The Project is not subject to a Williamson Act Contract and is not zoned for agricultural use; therefore, the Project would not conflict with a Williamson Act Contract or agricultural zoning.

Threshold c and d: No Impact. There are no forest lands, timberland, or Timberland Production zoned land on the Project site; therefore, implementation of the proposed Project would have no potential to conflict with forest land zoning or result in the loss or conversion of forest land to non-forest use. No impact would occur.

Threshold e: Significant Direct and Cumulatively-Considerable Impact. Implementation of the Project would not involve other changes to the existing environment, which, due to their location or nature, could result in conversion of off-site Farmland, to non-agricultural use or conversion of forest land to non-forest use. The Project would convert Farmland located on the Project site to non-agricultural use, which is a significant direct and cumulatively considerable impact.

4.2.7 Mitigation

There is no feasible mitigation for the Project's conversion of Farmland to non-agricultural uses.

This area of Chino is located in what was formerly known as the Chino Dairy Preserve which covered areas of the City and portions of Ontario. Dairy farming and related uses thrived during the 1960's and 1970's but has declined steadily in the following decades. This decline has resulted from fundamental economics: dairy

farming is simply no longer profitable or viable in Southern California. This is a result of rising land prices; increasingly stringent environmental and water quality control regulations and litigation. In fact, dairy farming is one of the primary pollutant contributors to Santa Ana River waters in the Prado Basin. For these reasons, the urbanization that has been occurring in the Chino Preserve and Ontario New Model Colony has been viewed by many environmental groups as an environmental improvement over past dairy farm uses. Therefore, imposing off-site conservation easements is not feasible mitigation because dairy farming is functionally obsolete in Southern California.

In view of the fact that compensatory mitigation for impacts to Farmland is not feasible in this circumstance, the only available mitigation that could substantially reduce or avoid Project impacts to Farmland would be to place all or a portion of the Project site into a permanent agricultural conservation easement. However, such mitigation would conflict with the City's long-term vision for the Project area for development with "Airport Related" land uses. The Project site is identified by the adopted General Plan and The Preserve Specific Plan for development with "Airport Related" land uses, and impacts associated with the site's conversion from a agriculture use to non-agricultural use were evaluated and disclosed as significant and unavoidable as part of the analysis contained in the 2003 EIR for The Preserve Specific Plan and the 2010 EIR for the City of Chino General Plan. The proposed Project would not result in an increase in impacts to Farmland beyond the significant and unavoidable impacts identified as part of the 2003 EIR for The Preserve Specific Plan and the 2010 EIR for the City of Chino General Plan, respectively, for which the City Council adopted Statements of Overriding Considerations in accordance with CEQA Guidelines § 15093.

Moreover, the City's designation of the site for future non-agricultural development as part of the General Plan and The Preserve Specific Plan represents an explicit policy decision by the City Council. To now require the Project applicant to place all or a portion of the site into a permanent agricultural easement would conflict with the City's policies that identify the Project site for long-term development. Lead agencies have a recognized authority to reject potential mitigation measures and alternatives based on policy considerations[1].

4.2.8 Significance of Impacts After Mitigation

Threshold a: Significant Unavoidable Impact. Feasible mitigation measures are not available for the Project's conversion of Farmland with substantial agricultural importance/value to non-agricultural use. Accordingly, the City of Chino finds that the Project's impacts to Farmland is a significant and unavoidable impact direct and cumulatively-considerable impact for which no feasible mitigation is available.

Threshold e: Significant Unavoidable Impact. Feasible mitigation measures are not available for the Project's conversion of Farmland with substantial agricultural importance/value to non-agricultural use. Accordingly, the City of Chino finds that the Project's impacts to Farmland is a significant and unavoidable impact direct and cumulatively-considerable impact for which no feasible mitigation is available.

[1] See *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal. App. 4th 957, 1001 (CEQA's language allowing the agency to determine infeasibility based on "social and other considerations" demonstrates that an agency can find an alternative or mitigation measure infeasible because it is undesirable as a matter of policy.) See also *Defend the Bay v. City of Irvine* (2004), 119 CA4th 1261 (upholding City's finding that it was infeasible to impose on-site and off-site mitigation measures for project's impact to 3,100 acres of Prime Farmland because it would "impede the City from achieving its General Plan goals and objectives for housing and improving the existing jobs/housing imbalance in the City"). See also *Cherry Valley Pass Acres and Neighbors v. City of Beaumont Sunny Cal Egg Poultry Company* (2010), 190 CA4th 316 (upholding findings of infeasibility for mitigating loss of agricultural resources due to economic and social infeasibility).

4.3 AIR QUALITY

This Subsection is based, primarily, on three technical studies that were prepared by Urban Crossroads, Inc. to evaluate the Project's potential effects to local and regional air quality. The air quality impact analysis prepared for the Project is titled "Altitude Business Centre Air Quality Impact Analysis," dated May 24, 2018, and is included as *Technical Appendix B1* to this EIR (Urban Crossroads, 2018a). The mobile source health risk assessment prepared for the Project is titled "Altitude Business Centre Mobile Source Diesel Health Risk Assessment," dated May 24, 2018, and is included as *Technical Appendix B2* to this EIR (Urban Crossroads, 2018b). The last report, titled "Altitude Business Centre Supplemental Air Quality Assessment," and dated March 22, 2019, is included as *Technical Appendix B3* to this EIR (Urban Crossroads, 2019a). Refer to Section 7.0, *References*, for a complete list of reference sources used in this Subsection.

4.3.1 EXISTING CONDITIONS

A. Atmospheric Setting

The Project site is located in the South Coast Air Basin (SCAB, or "Basin"), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB encompasses approximately 6,745 square miles and includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and the San Jacinto Mountains to the north and east, respectively; and the San Diego County line to the south. (Urban Crossroads, 2018a, p. 12)

B. Regional Climate and Meteorology

The regional climate – temperature, wind, humidity, precipitation, and the amount of sunshine – has a substantial influence on air quality. The SCAB's distinctive climate is determined by its terrain and geographical location, which comprises a coastal plain connected to broad valleys and low hills bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The SCAB is semi-arid, with average annual temperatures varying from the low-to-middle 60s, measured in degrees Fahrenheit (F); however, 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 the SCAB's climate. Humidity restricts visibility in the SCAB and the relative high humidity heightens the conversion of sulfur dioxide to sulfates. The marine layer provides an environment for that conversion process, especially during the spring and summer months. Inland areas of the SCAB, including where the Project site is located, show more variability in annual minimum/maximum temperatures and lower average humidity than coastal areas within the SCAB due to decreased marine influence. (Urban Crossroads, 2018a, p. 12)

More than 90 percent of the SCAB's rainfall occurs between November and April. The annual average rainfall within the SCAB varies between approximately nine (9) inches in Riverside to 14 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. 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 abundant amount of sunshine (and its associated ultraviolet radiation) is a key factor to the photochemical reactions of air pollutants in the SCAB. (Urban Crossroads, 2018a, p. 13)

Dominant airflow direction and speed are the driving mechanisms for transport and dispersion of air pollution. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with storms moving through the region from the northwest. This period also brings five to 10 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. During the nighttime, heavy, cool air descends mountain slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. (Urban Crossroads, 2018a, p. 13)

In the SCAB, there are two distinct temperature inversion structures that control the 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 of 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 nitrogen oxides and carbon monoxide, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline. (Urban Crossroads, 2018a, p. 13)

C. Air Quality Pollutants and Associated Human Health Effects

The federal government and State of California have established maximum permissible concentrations for common air pollutants that may pose a risk to human health or would otherwise degrade air quality and adversely affect the environment. These regulated air pollutants are referred to as "criteria pollutants." An overview of the common criteria air pollutants in the SCAB, their sources, and associated effects to human health are summarized on the following pages (refer also to Section 2.6 of *Technical Appendix B1*).

- Carbon Monoxide (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 in the winter during the morning, when there is little to no wind and surface-based inversions trap the pollutant at ground levels. CO is emitted directly from internal combustion engines; therefore, motor vehicles operating at slow speeds are the primary source of CO and the highest ambient CO concentrations in the SCAB are generally found near congested transportation corridors and intersections. Inhaled CO does not directly affect the lungs, but affects tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Therefore, health conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. The most common symptoms associated with CO exposure include headache, nausea, vomiting, dizziness, fatigue, and muscle weakness. Individuals most at risk to the effects of CO include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic oxygen deficiency. (Urban Crossroads, 2018a, pp. 18-21)

- Sulfur Dioxide (SO_2) is a colorless gas or liquid. SO_2 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 sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X). SO_2 is a respiratory irritant to people afflicted with asthma. After a few minutes' exposure to low levels of SO_2, asthma sufferers can experience breathing difficulties, including airway constriction and reduction in breathing capacity. Although healthy individuals do not exhibit similar acute breathing difficulties in response to SO_2 exposure at low levels, animal studies suggest that very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. (Urban Crossroads, 2018a, pp. 19, 21-22)

- Nitrogen Oxides (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 oxygen (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. Nitrogen oxides are 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 nitrogen oxide 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 stations. 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. Short-term exposure to NO_2 can result in resistance to air flow and airway contraction in healthy subjects. Exposure to NO_2 can result decreases in lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individuals are more susceptible to the effects of NO_X than healthy individuals. (Urban Crossroads, 2018a, pp. 19, 21)

- Ozone (O_3) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, warm temperatures, and light wind conditions are favorable to the formation of this pollutant. Short-term exposure (lasting for a few hours) to ozone 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. Individuals exercising outdoors, children, and people with pre-existing lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Children who participate in multiple outdoor sports and live in communities with high ozone levels have been found to have an increased risk for asthma. (Urban Crossroads, 2018a, pp. 19-20)

- Particulate Matter less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$) are air pollutants consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are 10 microns or smaller or 2.5 microns or smaller, respectively. These particles are formed in the atmosphere from primary gaseous emissions that include sulfates 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 is highly dependent on location, time of year, and weather conditions. The small size of PM_{10} and $PM_{2.5}$ allows them to enter the lungs where they may be deposited, resulting in adverse health effects. Elevated ambient concentrations of fine particulate matter (PM_{10} and $PM_{2.5}$) have been linked to an increase in

respiratory infections, number, and severity of asthma attacks, and increased hospital admissions. Some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, 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 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 the most susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$. (Urban Crossroads, 2018a, pp. 19, 21)

- Volatile Organic Compounds (VOCs) and Reactive Organic Gasses (ROGs) are a family of hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. Both VOCs and ROGs are precursors to ozone and contribute to the formation of smog through atmospheric photochemical reactions. Individual VOCs and ROGs have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, including such common VOCs as gasoline, alcohol, and the solvents used in paints. Odors generated by VOCs can irritate the eye, nose, and throat, which can reduce respiratory volume. In addition, 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. (Urban Crossroads, 2018a, pp. 19-20, 22)

- Lead (Pb) is a heavy metal that is highly persistent in the environment. Historically, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, ambient levels of lead have not exceeded applicable air quality standards at any of the SCAQMD's regular air quality monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. Exposure to low levels of lead 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 lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death. Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. (Urban Crossroads, 2018a, pp. 20, 22)

D. Existing Air Quality

Air quality is evaluated in the context of ambient air quality standards published by the federal and State governments. 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. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are detailed in Table 4.3-1, *Ambient Air Quality Standards*. In California, a region's air quality is determined to be healthful or unhealthful by comparing pollutant levels in ambient air samples to the applicable NAAQS and CAAQS presented in Table 4.3-1.

Table 4.3-1 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: (Urban Crossroads, 2018a, Table 2-1)

1. Regional Air Quality

❑ Criteria Pollutants

The SCAQMD monitors levels of various criteria pollutants at 38 monitoring stations throughout its jurisdiction. In 2015, which is the most recent year for which detailed data was available at the time the NOP for this EIR was issued, the federal and State ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$

were exceeded on at least one day at most monitoring locations within the SCAB. Measured levels of NO_2, SO_2, CO, sulfates, and lead within the SCAB did not exceed federal or State standards in 2015. (Urban Crossroads, 2018a, p. 17) The attainment status for criteria pollutants within the SCAB is summarized in Table 4.3-2, *SCAB Criteria Pollutant Attainment Status*.

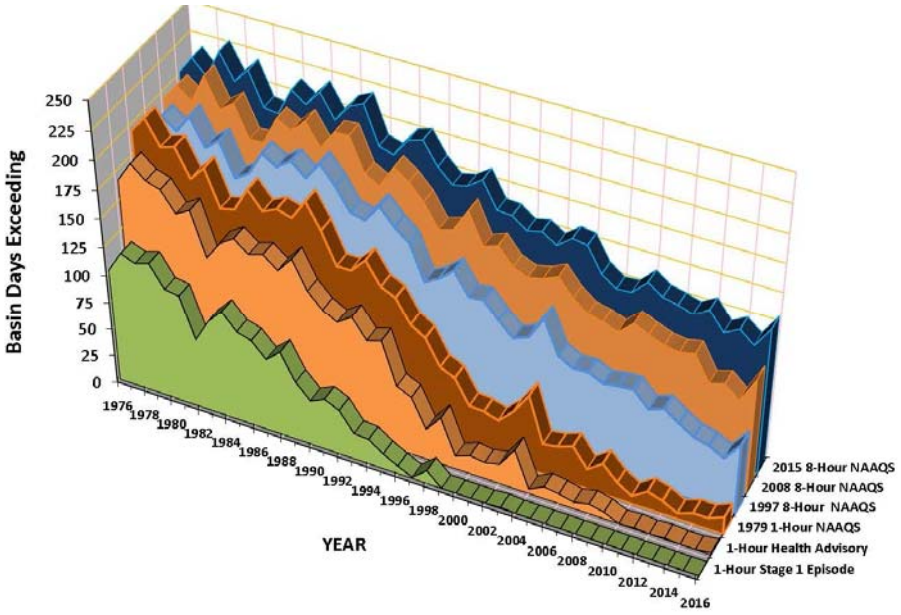
Table 4.3-2 SCAB Criteria Pollutant Attainment Status

Criteria Pollutant	State Designation	Federal Designation
Ozone – 1 hour standard	Nonattainment	Nonattainment ("extreme")
Ozone – 8 hour standard	Nonattainment	Nonattainment ("extreme")
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment ("serious")
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Attainment	Unclassifiable/Attainment
Lead[1]	Attainment	Nonattainment (Partial)

State/Federal designations were taken from http://www.arb.ca.gov/desig/adm/adm.htm
Source: (Urban Crossroads, 2018a, Table 2-2)

The SCAB has been one of the most unhealthful air basins in the United States and has experienced unhealthful air quality since World War II. However, as a result of the region's air pollution control efforts over the last 60+ years, criteria pollutant concentrations in the SCAB have reduced dramatically and are expected to continue to improve in the future as State regulations become more stringent (Urban Crossroads, 2018a, pp. 24-29). Criteria pollutant trends within the SCAB are illustrated on the graphs presented on the following pages and described in detail in Section 2.8 of *Technical Appendix B1*.

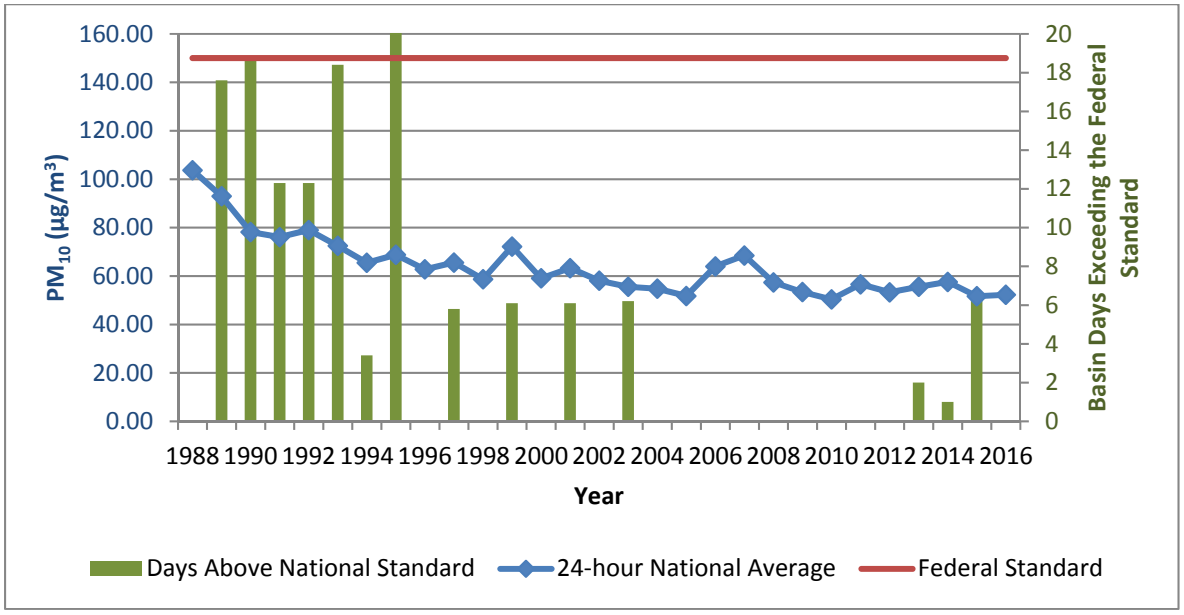
South Coast Air Basin Ozone Trend



Source: (Urban Crossroads, 2018a, Table 2-4)

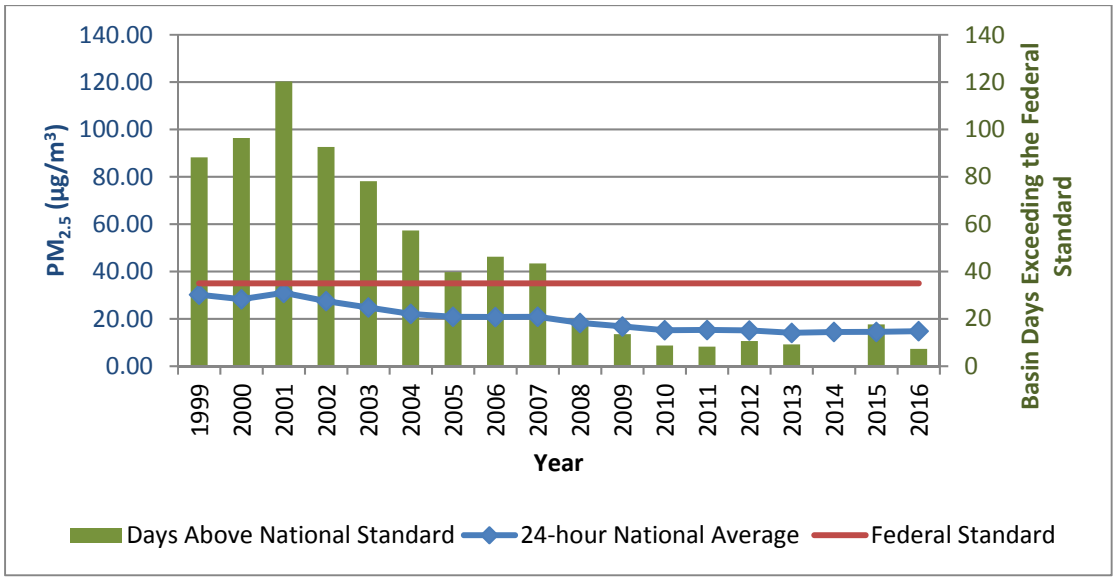
[1]In 2015, the Los Angeles County portion of the SCAB exceeded applicable federal lead standards; however, all other portions of the SCAB – including the portion of the SCAB where the Project site is located – did not exceed federal lead standards.

South Coast Air Basin PM_{10} Trend



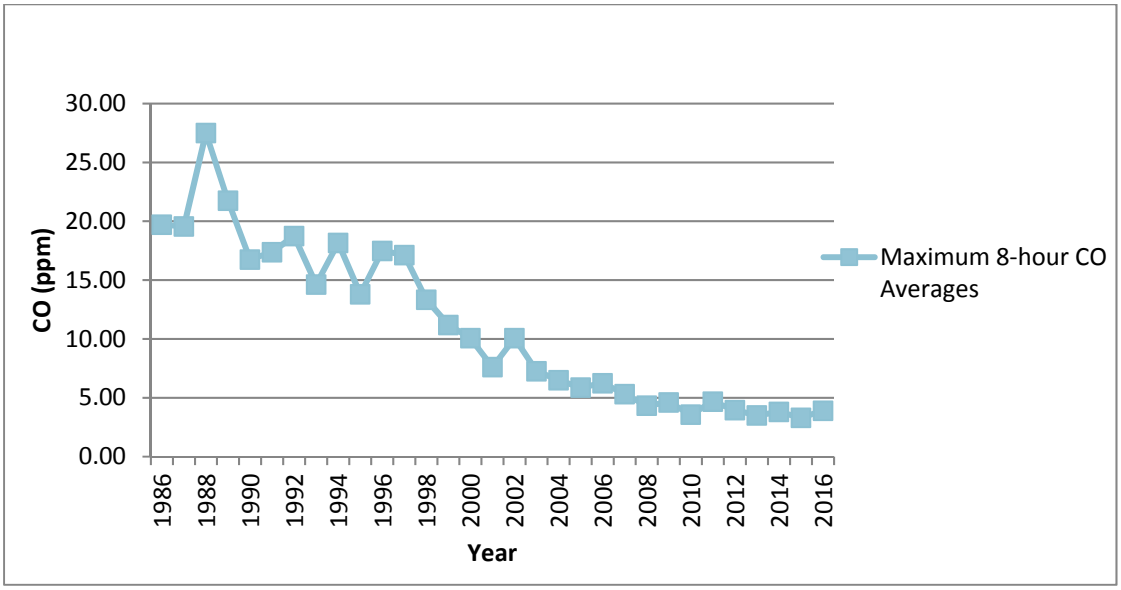
Source: (Urban Crossroads, 2018a, Table 2-5)

South Coast Air Basin $PM_{2.5}$ Trend



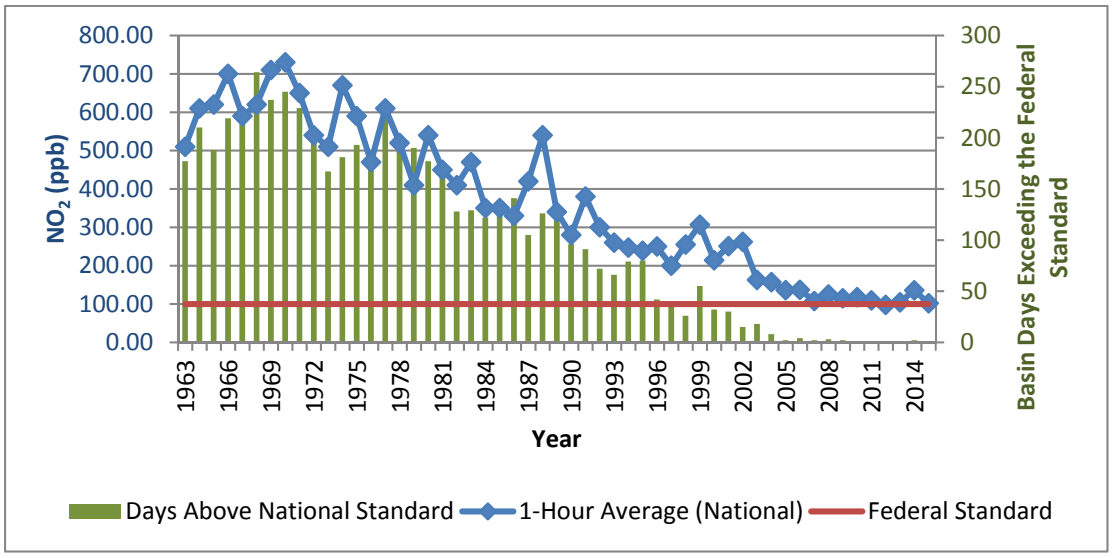
Source: (Urban Crossroads, 2018a, Table 2-6)

South Coast Air Basin CO Trend



Source: (Urban Crossroads, 2018a, Table 2-7)

South Coast Air Basin NO_2 Trend



Source: (Urban Crossroads, 2018a, Table 2-8)

❑ Toxic Air Contaminants

Toxic air contaminants (TACs) are a classification of air pollutants that have been attributed to carcinogenic and non-carcinogenic health risks. Beginning in the mid-1980s, the California Air Resources Board (CARB) adopted a series of regulations to reduce the amount of air toxic contaminant emissions resulting from mobile and stationary sources, such as cars, trucks, stationary sources, and consumer products. As a result of CARB's regulatory efforts, ambient concentrations of TACs have declined substantially across the state. (Urban Crossroads, 2018a, p. 29)

To reduce TAC emissions from mobile sources, CARB has required that all light- and medium-duty vehicles sold in California since 1996 be equipped with an on-board diagnostic system to alert drivers of potential engine problems (as approximately half of all tailpipe emissions result from malfunctioning emissions control devices). Also, since 1996, CARB has required the use of cleaner burning, reformulated gasoline in all light- and medium-duty vehicles. These two regulations resulted in an over 80 percent reduction in TAC emissions from light- and medium-duty vehicles in the State between 1990 and 2012 despite an approximately 30 percent increase in the State's population over that same time period. The CARB also implemented programs to retrofit diesel-fueled engines and facilitate the use of diesel fuels with ultra-low sulfur content to minimize the amount of diesel emissions and their associated TACs. As a result of CARB's programs, diesel emissions and their associated TACs fell by approximately 68 percent since 2000 despite an approximately 81 percent increase in miles traveled by diesel vehicles during that same time period. CARB's efforts at reducing stationary source TACs have been focused mainly on the dry cleaning and paint/architectural coating industries, which have resulted in a greater than 85 percent reduction of stationary source TACs across the State between 1990 and 2012. (Urban Crossroads, 2018a, pp. 30-31)

In 2000, the SCAQMD prepared a comprehensive urban toxic air pollution study to evaluate the TAC concentration levels in the SCAB and their associated health risks, called *MATES-II* (Multiple Air Toxics Exposure Study in the South Coast Air Basin). *MATES-II* showed the average excess cancer risk within the SCAB ranging from 1,100 in one million persons to 1,750 in one million persons, with an average regional excess cancer risk of about 1,400 in one million. As part of the *MATES-II* study, the SCAQMD concluded that diesel particulate matter (DPM) accounted for more than 70 percent of the identified excess cancer risk in the SCAB. The SCAQMD has updated their urban toxic air pollution survey twice since 2000, with the 2008 (*MATES-III*) and 2014 updates (*MATES-IV*) showing reductions in the average excess cancer risk within the SCAB as compared to *MATES-II*. The current version of the urban toxic air pollution survey, *MATES-IV*, is the most comprehensive dataset of ambient air toxic levels and health risks within the SCAB. The *MATES-IV* report estimates the average Basin-wide excess cancer risk level within the SCAB to be 418 million, an approximately 70 percent improvement from the findings of *MATES-II* report just 14 years earlier. According to SCAQMD, DPM accounts for approximately 68 percent of the total risk shown in *MATES-IV*. (Urban Crossroads, 2018a, p. 32)

2. Local Air Quality

❑ Criteria Pollutants

Local air quality data was collected from the SCAQMD air quality monitoring stations located nearest to the Project site. Data was collected for the three most recent years for which data was available. Data for PM_{10} and $PM_{2.5}$ was obtained from the Southwest Sam Bernardino Valley monitoring station; data for O_3, CO, and NO_2 was obtained from the Northwest San Bernardino Valley monitoring station. (Urban Crossroads, 2018a, p. 17) Ambient air pollutant concentrations in the Project area are summarized in Table 4.3-3, *Project Area Air Quality Monitoring Summary*.

❑ Toxic Air Contaminants

As part of preparation of the *MATES-IV* study, the SCAQMD collected toxic air contaminant data at ten fixed sites within the SCAB. None of the fixed monitoring sites are located within the vicinity of the Project site; however, *MATES-IV* extrapolates the excess cancer risk levels throughout the SCAB using mathematical modeling for specific geographic grids. *MATES-IV* estimates an excess carcinogenic risk of 780.30 in one million for the Project area. (Urban Crossroads, 2018a, p. 32)

Table 4.3-3 Project Area Air Quality Monitoring Summary

Pollutant	Standard	Year		
		2014	2015	2016
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.117	0.124	0.131
Maximum 8-Hour Concentration (ppm)		0.094	0.102	0.098
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	16	25	23
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	63	50	56
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	0	1
Number of Days Exceeding Federal 8-Hour Standard	> 0.07 ppm	59	49	55
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		2.0	2.5	1.9
Maximum 8-Hour Concentration (ppm)		2.4	1.7	1.4
Nitrogen Dioxide (NO_2)*				
Maximum 1-Hour Concentration (ppm)		0.058	0.068	0.065
Annual Arithmetic Mean Concentration (ppm)		0.014	0.013	0.014
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum 24-Hour Concentration (µg/m^3)		87	74	76
Annual Arithmetic Mean (µg/m^3)		35.1	30.3	32.2
Number of Samples		60	57	57
Number of Samples Exceeding State Standard	> 50 µg/m^3	6	3	5
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)*				
Maximum 24-Hour Concentration (µg/m^3)		73.6	56.6	45.6
Annual Arithmetic Mean (µg/m^3)		14.5	13.3	14.0
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	9	17	6

-- = data not available from SCAQMD or ARB
Source: (Urban Crossroads, 2018a, Table 2-3)

4.3.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the federal, State, and local environmental laws and related regulations governing air quality emissions.

A. Federal Plans, Policies, and Regulations

1. Federal Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. § 7401 *et seq.*) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O_3, CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and lead. (EPA, 2017a)

One of the goals of the CAA was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to

appropriate industrial sources in the state, in order to achieve these standards. The CAA was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. (EPA, 2017a)

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM_{10}). Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet federal air quality standards designed to protect public health. (EPA, 2017b) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO_x on a phased-in basis that began in model year 1994. Automobile manufacturers also are required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. (EPA, 2017c)

Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source. (EPA, 2017a)

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk. (EPA, 2017a)

2. SmartWay Program (Voluntary)

The EPA's SmartWay Program is a voluntary public-private program developed in 2004, that: 1) provides a comprehensive and well-recognized system for tracking, documenting and sharing information about fuel use and freight emissions across supply chains; 2) helps companies identify and select more efficient freight carriers, transport modes, equipment, and operational strategies to improve supply chain sustainability and lower costs from goods movement; 3) supports global energy security and offsets environmental risk for companies and countries; and 4) reduces freight transportation-related emissions by accelerating the use of advanced fuel-saving technologies. This program is supported by major transportation industry associations, environmental groups, State and local governments, international agencies, and the corporate community. (EPA, n.d.)

B. State Plans, Policies, and Regulations

1. California Clean Air Act (CCAA)

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain state ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the

maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the California Ambient Air Quality Standards (CAAQS), by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, 2017a)

2. Air Quality Management Planning

The California Air Resources Board (CARB) and local air districts throughout the State are responsible for developing clean air plans to demonstrate how and when California will attain air quality standards established under both the CAA and CCAA. For the areas within California that have not attained air quality standards, CARB works with local air districts to develop and implement State and local attainment plans. In general, attainment plans contain a discussion of ambient air quality data and trends; a baseline emissions inventory; future year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; an attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment. Air quality planning activities undertaken by CARB also include the development of policies, guidance, and regulations related to State and federal ambient air quality standards; coordination with local agencies on transportation plans and strategies; and providing assistance to local districts and transportation agencies. (CARB, 2012)

3. Truck & Bus Regulation

Under the Truck and Bus Regulation, adopted by CARB in 2008, all diesel truck fleets operating in California are required to adhere to an aggressive schedule for upgrading and replacing heavy-duty truck engines. Older, more polluting trucks are required to be replaced first, while trucks that already have relatively clean engines are not required to be replaced until later. Pursuant to the Truck and Bus Regulation, all pre-1994 heavy trucks (trucks with a gross vehicle weight rating greater than 26,000 pounds) were to be removed from service on California roads by 2015. Between 2015 and 2020, pre-2000 heavy trucks will be equipped with PM filters and will be upgraded or replaced with an engine that meets 2010 emissions standards. The upgrades/replacements will occur on a rolling basis based on model year. By 2023, all heavy trucks operating on California roads must have engines that meet 2010 emissions standards. Lighter trucks (those with a gross vehicle weight rating of 14,001 to 26,000 pounds) must adhere to a similar schedule, and will all be replaced by 2020.

C. Local Plans, Policies, and Regulations

1. SCAQMD Air Quality Management Plan

Under existing conditions, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, and in conformance with California Health & Safety Code § 40702 *et seq.* and the California CAA, the SCAQMD adopted an Air Quality Management Plan (AQMP) to plan for the improvement of regional air quality. AQMPs are updated regularly in order to more effectively reduce emissions and accommodate growth. Each version of the plan is an update of the previous plan and has a 20-year horizon with a revised baseline. The SCAQMD's most recent iteration of the AQMP was adopted in March 2017. The Final *2016 Air Quality Management Plan (AQMP)* incorporates the latest scientific and technological information and local and regional land development plans, including the Southern California Association of Governments

(SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The Final *2016 AQMP* is based on current emissions modeling data, recent motor vehicle emissions information, and demographic data/projections provided by SCAG. The air quality pollutant levels projected in the Final *2016 AQMP* are based on the assumption that buildout of the region will occur in accordance with local general plans and specific plans, and in accordance with growth projections identified by SCAG in its *2016 RTP/SCS*.

2. Applicable SCAQMD Rules

The SCAQMD Rules that are currently applicable during construction activity for this Project include, but are not limited to: Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186/1186.1 (Street Sweepers) (Urban Crossroads, 2018a, p. 6).

4.3.3 Methodology for Estimating Project-Related Air Quality Impacts

The California Emissions Estimator Model (CalEEMod), version 2016.3.2, was used to calculate all Project-related air pollutant emissions (with the exception of the Project operational-related localized emissions and diesel particulate matter emissions, refer to Subsection 4.3.3B.2, below). The CalEEMod is a statewide land use emission computer model developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts, including the SCAQMD, that provides a uniform platform to quantify potential criteria pollutant emissions associated with construction and operation of land development projects. (Urban Crossroads, 2018a, p. 35)

A. Methodology for Calculating Project Construction Emissions

1. Regional Pollutant Emissions

For analysis purposes, the Project's construction activities are assumed to begin in March 2018 and would occur over six (6) phases before ending in June 2020. The six (6) phases of construction are: 1) demolition; 2) grading; 3) building construction; 4) architectural coating; 5) paving; and 6) construction workers commuting. Table 3-2 of *Technical Appendix B1* lists the expected duration of each phase of Project construction and represents a "worst-case" analysis scenario. Should Project construction actually occur at any date later than the respective dates assumed in this analysis, construction equipment emission factors would be lower than those assumed herein due to emission regulations becoming more stringent and the retirement of older (higher-polluting equipment) (Urban Crossroads, 2018a, p. 36). EIR Table 3-1, *Construction Equipment Assumptions*, previously listed the pieces of heavy equipment expected to be used during each phase of Project construction (refer to Section 3.0, *Project Description*). The analysis assumptions referenced above are based on information provided by the Project Applicant and the experience and technical expertise of the Project air quality consultant (Urban Crossroads). (Urban Crossroads, 2018a, pp. 35-37)

Refer to Section 3.4 of *Technical Appendix B1* for more detail on the methodology utilized to calculate the Project's estimated construction-related regional pollutant emissions.

2. Localized Pollutant Emissions

Project-related localized pollutant emissions were calculated in accordance with the SCAQMD's Final Localized Significance Threshold Methodology. The localized pollutant emissions analysis relies on the same assumptions used to calculate construction-related regional pollutant emissions, as described above. Pursuant to the SCAQMD's Final Localized Significance Threshold Methodology, the analysis of Project

construction-related localized pollutant emissions included the following process (Urban Crossroads, 2018a, p. 47):

- The CalEEMod was utilized to determine the maximum daily on-site emissions that would occur during construction activity.

- The SCAQMD's Fact Sheet for Applying CalEEMod to LSTs was used to determine the maximum Project site acreage that would be actively disturbed based on the construction equipment fleet and equipment hours as estimated in the CalEEMod. (Based on the SCAQMD's methodology, the Project is estimated to disturb 8.0 acres per day during peak construction activities.)

- Because the Project is expected to disturb greater than five acres per day during peak construction activities, the SCAQMD's screening look-up tables were utilized to determine localized pollutant concentration levels at sensitive receptor locations – defined as a place where an individual who might have respiratory difficulties could remain for 24 hours – near the Project site.

The SCAQMD's Final Localized Significance Threshold Methodology indicates that off-site mobile emissions from development projects should be excluded from localized emissions analyses. Therefore, for purposes of calculating the Project's construction-related localized pollutant emissions, only emissions included in the CalEEMod on-site emissions outputs were considered. (Urban Crossroads, 2018a, p. 47)

Refer to Section 3.6 of *Technical Appendix B1* for more detail on the methodology utilized to calculate Project construction-related localized pollutant emissions.

B. Methodology for Calculating Project Operational Emissions

1. Regional Pollutant Emissions

The Project's operational regional pollutant emissions analysis quantifies air pollutant emissions from mobile sources, on-site equipment sources, area sources (e.g., architectural coatings, consumer products, landscape maintenance equipment), and energy sources.

Mobile source emissions are the product of the number of vehicle trips generated by the Project, the composition of the Project's vehicle fleet (mix of passenger cars, light-heavy-duty trucks, medium-heavy-duty trucks, and heavy-heavy duty trucks), and the number of miles driven by Project vehicles (Urban Crossroads, 2018a, p. 41). The Project's average number of vehicle trips and vehicle fleet mix were calculated using the SCAQMD's recommended methodology, as described in detail in EIR Subsection 4.11, *Transportation and Traffic*. For the mobile source operational emissions analysis, a one-way trip length of 16.6 miles was used for passenger vehicles and a one-way trip length of 50.2 miles was used for trucks (Urban Crossroads, 2018a, pp. 43-44).

The Project proposes to use indoor and outdoor cargo-handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) that are electric powered. Accordingly, the operational analysis does not include any tailpipe emissions from on-site equipment use. (Urban Crossroads, 2018a, p. 44)

The estimated area source emissions and energy source emissions analyses for the Project rely on default inputs within the CalEEMod (Urban Crossroads, 2018a, p. 44).

Refer to Section 3.5 of *Technical Appendix B1* for detailed information on the methodology utilized to calculate the Project's operational regional pollutant emissions.

2. Localized Pollutant Emissions

The LST analysis includes on-site sources only. However, the CalEEMod model outputs do not separate on-site and off-site mobile source emissions. Accordingly, on-site mobile source emissions are assumed to be the equivalent of a 0.25-mile trip for passenger vehicles and trucks. (Urban Crossroads, 2018a, p. 52)

Refer to Section 3.7 of *Technical Appendix B1* for detailed information on the methodology utilized to calculate the Project's operational localized pollutant emissions.

3. Diesel Particulate Matter Emissions

Project-related vehicle diesel particulate matter (DPM) emissions were calculated using EMFAC 2014 emission factors for PM_{10}. Refer to Section 2.2 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the estimation of the Project-related DPM emissions. (Urban Crossroads, 2018b, pp. 9-11)

The potential health risks of Project-related DPM emissions were quantified in accordance with the guidelines in the SCAQMD's "Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis." Pursuant to SCAQMD's recommendations, emissions were modeled using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) software program. Refer to Section 2.3 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the calculation of average particulate concentrations associated with operations at the Project site. (Urban Crossroads, 2018b, pp. 16-18)

Health risks associated with exposure to DPM emissions at a given concentration are defined in terms of the probability of developing cancer or adverse, chronic non-cancer health effects. The cancer and non-cancer risk probabilities are determined through a series of equations to calculate unit risk factor, cancer potency factor, and chronic daily intake. The equations and input factors utilized in the Project analysis were obtained from Office of Environmental Health Hazard Assessment (OEHHA). Refer to Section 2.4 of *Technical Appendix B2* for a detailed description of the variable inputs and equations used in the calculations of receptor population health risks associated with Project operations. (Urban Crossroads, 2018b, pp. 18-19)

In the analysis of potential DPM effects, potential cancer and non-cancer risks for the maximally exposed individual resident (MEIR), maximally exposed individual worker (MEIW), and maximally exposed individual school child (MEISC), receptors located within a 1,320-foot radius of the Project site and the Project's primary truck route. CARB and SCAQMD emissions models indicate that 80 percent of DPM particles settle out of the air within 1,000 feet from the emissions source. Accordingly, the 1,320-foot distance used in the Project's analysis provides a conservative study area that captures the geographic area subject to the maximum potential effect from Project-related DPM emissions. (Urban Crossroads, 2018b, p. 27) For purposes of analysis, the MEIR was determined to be located approximately 110 feet east of the Project site, the MEIW located approximately 175 feet north of the Project site at the Chino Valley Fire Station #63, and the MEISC located approximately 0.8-mile east of the Project site (at the Cal Aero Preserve Academy). (Urban Crossroads, 2018b, p. 20)

4.3.4 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to air quality if the Project or any Project-related component would:

a. *Conflict with or obstruct implementation of the applicable air quality plan;*
b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
c. *Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
d. *Expose sensitive receptors to substantial pollutant concentrations; or*
e. *Create objectionable odors affecting a substantial number of people.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects that development projects could have on regional and local air quality. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold. The specific criteria described below are utilized to evaluate the significance of potential air quality impacts are based on applicable local regulations and relevant federal and State performance standards.

The Project would result in a significant impact under Threshold "a" if the Project were determined to conflict with the SCAQMD *2016 AQMP*. As defined in the SCAQMD *CEQA Air Quality Handbook* (Chapter 12), a Project would conflict with the *AQMP* if either of the following conditions were to occur (Urban Crossroads, 2018a, p. 54):

- The Project would increase the frequency or severity of existing NAAQS and/or CAAQS violations, cause or contribute to new air quality violations, or delay the attainment of interim air quality standards; or
- The Project would exceed the *2016 AQMP*'s future year buildout assumptions.

For evaluation under Thresholds "b" and "c," the Project would result in a significant direct and cumulatively considerable impact if the Project's construction and/or operational activities exceed one or more of the SCAQMD's "Regional Thresholds" for criteria pollutant emissions. The "Regional Thresholds" established by SCAQMD for criteria pollutants are summarized in Table 4.3-4, *SCAQMD Maximum Daily Emissions Thresholds*. (Urban Crossroads, 2018a, p. 34) The CEQA Guidelines revisions of December 2018 recommended the elimination of Threshold "b;" therefore, its evaluation herein in conjunction with the evaluation of Threshold "c" is appropriate.

Table 4.3-4 SCAQMD Maximum Daily Emissions Thresholds

Pollutant	Construction	Operations
Regional Thresholds		
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
Sox	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Localized Thresholds		
CO	118 lbs/day (demolition)	270 lbs/day
	270 lbs/day (grading)	
NOx	868 lbs/day (demolition)	2,193 lbs/day
	2,193 lbs/day (grading)	
PM_{10}	5 lbs/day (demolition)	4 lbs/day
	16 lbs/day (grading)	
$PM_{2.5}$	4 lbs/day (demolition)	2 lbs/day
	9 lbs/day (grading)	

Source: (Urban Crossroads, 2018a, Table 3-1)

For evaluation under Threshold "d," the Project would result in a significant impact if any of the following were to occur (Urban Crossroads, 2018b, p. 5):

- The Project's localized criteria pollutant emissions would exceed one or more of the "Localized Thresholds" listed in Table 4.3-4;
- The Project would cause or contribute to a CO "Hot Spot;" and/or
- The Project's toxic air contaminant emissions, like DPM, would expose sensitive receptor populations to an incremental cancer risk of greater than 10 in one million; and/or result in a non-carcinogenic health risk rating ("Acute Hazard Index") greater than 1.0.

[Note: The SCAQMD's cancer risk threshold – 10 in one million – corresponds to the potential that up to 10 persons, out of one million equally exposed people, would develop cancer if exposed continuously to a development project's toxic air contaminant emissions over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning – 1,000 in one million – is 100 times more likely than the SCAQMD's carcinogenic risk threshold. (Urban Crossroads, 2018b, p. 18)

For Threshold "e," a significant impact would occur if the Project's construction and/or operational activities result in air emissions leading to an odor nuisance pursuant to SCAQMD Rule 402 (SCAQMD, 2015b).

4.3.5 IMPACT ANALYSIS

Threshold a: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD *2016 AQMP*, which is the applicable air quality plan for the Project area, estimates long-term air quality conditions for the SCAB. These criteria for determining consistency with the *2016 AQMP* are analyzed 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.*

Consistency Criterion No. 1 refers to violations of the NAAQS and CAAQS. Violations of the NAAQS and/or CAAQS would occur if the Project were to exceed the SCAQMD's localized emissions thresholds. As disclosed under the analysis for Threshold "d," below, the Project would exceed the SCAQMD localized emissions thresholds for particulate matter (PM_{10} and $PM_{2.5}$) during construction, and by extension, would result in violations of the NAAQS or CAAQS. Accordingly, localized criteria pollutant emissions from Project construction would increase the frequency or severity of existing air quality violations, cause or contribute to new violations, and/or delay the timely attainment of air quality standards or the interim emissions reductions specified in the *AQMP*. (Urban Crossroads, 2018a, p. 51)

The Project's operational emissions would not exceed SCAQMD localized emissions thresholds; thus, during operation, the Project would not increase the frequency or severity of existing air quality violations, cause or contribute to new violations, and/or delay the timely attainment of air quality standards or the interim emissions reductions specified in the *AQMP* (Urban Crossroads, 2018a, p. 53).

- *Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP based on the years of project buildout phase.*

The air quality conditions presented in the *2016 AQMP* are based on the growth forecasts identified by SCAG in its *2016-2040 RTP/SCS*. The *2016-2040 RTP/SCS* anticipates that development in the various incorporated and unincorporated areas within the SCAB will occur in accordance with the adopted general plans for these areas. As such, development projects that propose to increase the intensity and/or introduce unplanned uses on an individual property may increase stationary area source emissions and/or vehicle source emissions relative to the *2016 AQMP* assumptions. If a development project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the AQMP. (Urban Crossroads, 2018a, pp. 55-56)

The Project is consistent with the land use designation applied to the Project site by the City of Chino General Plan, and the Project's proposed land uses and development concept are consistent with the development regulations contained within The Preserve Specific Plan. Because the Project would be consistent with growth planned by Chino's General Plan and The Preserve Specific Plan, the Project would not exceed the growth projections and the Project is considered to be consistent with the growth assumptions used in the *2016 AQMP*.

In summary, because the proposed Project does not satisfy *AQMP* Consistency Criteria No. 1, the Project is determined to be inconsistent with the *2016 AQMP*. As such, the Project would conflict with the *AQMP* and a significant impact would occur.

Threshold b:	***Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?***
Threshold c:	***Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?***

A. Construction Emissions Impact Analysis

The Project's peak construction emissions are summarized in Table 4.3-5, *Peak Construction Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

Table 4.3-5 Peak Construction Emissions Summary

Year	Emissions (pounds per day)					
	VOC	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 (2018)	13.83	159.16	81.85	0.16	37.87	20.42
Phase 2 (2018)	13.85	159.30	81.94	0.16	37.87	20.43
Phase 2 (2019)	28.44	147.79	78.01	0.15	37.35	19.94
Phase 3 (2019)	13.06	147.93	78.08	0.16	37.35	19.95
Phase 3 (2020)	28.99	45.38	40.92	0.09	4.57	2.74
Maximum Daily Emissions	**28.99**	**159.30**	**81.94**	**0.16**	**37.87**	**20.43**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-4)
Note: Although construction will occur later in time than analyzed herein, the air pollutants emitted by construction equipment and presented herein are worst-case estimates and likely overstate emission levels, because as time passes, mandatory emission regulations become more stringent and construction contractors regularly replace older, higher-polluting equipment with newer, less-polluting equipment as part of their business operations (Urban Crossroads, 2018a, p. 36).

As shown in Table 4.3-5, the Project's peak construction emissions of VOC, CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during construction and would not contribute to an existing or projected air quality violation for these criteria pollutants, on a direct or cumulatively-considerable basis. Impacts associated with the Project's construction emissions of VOC, CO, SO_X, PM_{10} and $PM_{2.5}$ would be less than significant.

Notwithstanding the conclusions above, the Project's construction emissions of NO_X would exceed the applicable SCAQMD regional threshold. NO_X is a precursor for ozone, a pollutant for which the SCAB does not attain federal (NAAQS) or State (CAAQS) standards (Urban Crossroads, 2018a, p. 35). Accordingly, the Project's daily NO_X emissions during construction would violate the applicable SCAQMD regional threshold and would result in a considerable net increase of a criteria pollutant for which the Project region is in nonattainment. This impact is significant and mitigation is required.

B. Operational Emissions Impact Analysis

The Project's operational emissions are presented in Table 4.3-6, *Peak Operational Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

Table 4.3-6 Peak Operational Emissions Summary

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	29.34	1.25E-03	0.13	1.00E-05	4.80E-04	4.80E-04
Energy Source	0.32	2.89	2.43	0.02	0.22	0.22
Mobile (Trucks)	15.52	457.95	122.85	1.78	62.36	19.74
Mobile (Passenger Cars)	9.62	13.84	199.43	0.68	78.32	21.04
Total Maximum Daily Emissions	**54.80**	**474.68**	**324.84**	**2.48**	**140.90**	**41.00**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**

Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	29.34	1.25E-03	0.13	1.00E-05	4.80E-04	4.80E-04
Energy Source	0.32	2.89	2.43	0.02	0.22	0.22
Mobile (Trucks)	15.71	471.96	125.79	1.76	62.37	19.75
Mobile (Passenger Cars)	7.86	14.44	160.50	0.61	78.32	21.04
Total Maximum Daily Emissions	**53.23**	**489.29**	**288.85**	**2.39**	**140.91**	**41.01**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-6)

As shown in Table 4.3-6, the Project's peak operational emissions of CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during long-term operational activities and would not contribute to an existing or projected air quality violation, on a direct or cumulatively-considerable basis. Impacts associated with the Project's operational emissions of CO, SO_X, PM_{10} and $PM_{2.5}$ would be less than significant.

Notwithstanding, the Project's operational VOC and NO_X emissions would exceed the applicable SCAQMD regional threshold. VOCs and NO_X are precursors for ozone, a pollutant for which the SCAB does not attain federal (NAAQS) or State (CAAQS) standards (Urban Crossroads, 2018a, p. 41). Accordingly, the Project's daily VOC and NO_X emissions during long-term operation would violate the applicable SCAQMD regional thresholds for these pollutants and would result in a considerable net increase of a pollutant (i.e., ozone) for which the Project region is in nonattainment. This impact would be significant.

Threshold d: Would the Project expose sensitive receptors to substantial pollutant concentrations?

A. Localized Criteria Pollutant Analysis

1. Construction Analysis

Table 4.3-7, *Peak Construction Localized Emissions Summary*, summarizes the Project's localized criteria pollutant emissions during peak construction activities.

As shown in Table 4.3-7, the Project's localized NO_X and CO emissions would not exceed applicable SCAQMD thresholds during construction (Urban Crossroads, 2018a, p. 51). Accordingly, Project construction would not expose any sensitive receptors to substantial NO_X and CO criteria pollutant concentrations. Impacts would be less than significant related to NO_X and CO emissions during construction.

Notwithstanding, the Project's localized particulate matter (PM_{10} and $PM_{2.5}$) emissions would exceed the applicable SCAQMD regional threshold (Urban Crossroads, 2018a, p. 51). Accordingly, the Project's daily particulate matter (PM_{10} and $PM_{2.5}$) emissions during construction would violate the applicable SCAQMD localized thresholds and would result in a considerable net increase of a criteria pollutant (i.e., PM_{10} and $PM_{2.5}$) for which the Project region is in nonattainment, which is determined to be a significant impact.

Table 4.3-7 Peak Construction Localized Emissions Summary

On-Site Demolition Emissions	**Emissions (pounds per day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 (2018)	39.76	23.43	6.40	2.65
Maximum Daily Emissions	**39.76**	**23.43**	**6.40**	**2.65**
SCAQMD Localized Threshold	118	868	5	4
Threshold Exceeded?	**NO**	**NO**	**YES**	**NO**
On-Site Grading Emissions	**Emissions (pounds per day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 (2018)	159.08	79.85	37.37	20.29
Phase 2 (2018)	159.08	79.85	37.37	20.29
Phase 2 (2019)	147.61	76.16	36.84	19.81
Phase 3 (2019)	147.74	76.23	36.84	19.81
Maximum Daily Emissions	**159.08**	**79.85**	**37.37**	**20.29**
SCAQMD Localized Threshold	270	2,193	16	9
Threshold Exceeded?	**NO**	**NO**	**YES**	**YES**

Source: (Urban Crossroads, 2018a, Table 3-9)
Note: Although construction will occur later in time than analyzed herein, the air pollutants emitted by construction equipment and presented herein are worst-case estimates and likely overstate emission levels, because as time passes, mandatory emission regulations become more stringent and construction contractors regularly replace older, higher-polluting equipment with newer, less-polluting equipment as part of their business operations (Urban Crossroads, 2018a, p. 36).

2. Operational Analysis

Table 4.3-8, *Peak Operational Localized Emissions Summary*, summarizes the Project's localized criteria emissions during peak operational activities.

Table 4.3-8 Peak Operational Localized Emissions Summary

Peak Operational Emissions	Emissions (pounds per day)			
	NOx	CO	PM10	PM2.5
Maximum Daily Emissions	**7.07**	**9.57**	**3.09**	**1.02**
SCAQMD Localized Threshold	270	2,193	4	2
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-11)

As shown in Table 4.3-8, the Project would not exceed the applicable SCAQMD thresholds for localized NO_X, CO, and particulate matter (PM_{10} and $PM_{2.5}$) emissions during operation. Accordingly, the Project would not expose any sensitive receptors to substantial criteria pollutant concentrations during operation. Impacts would be less than significant.

B. CO Hot Spot Analysis

A CO "hot spot" is an isolated geographic area where localized concentrations of CO exceeds the CAAQS one-hour (20 parts per million) or eight-hour (9 parts per million) standards. A Project-specific CO "hot spot" analysis was not performed because CO attainment in the SCAB was thoroughly analyzed as part of SCAQMD's *2003 AQMP* and the *1992 Federal Attainment for Carbon Monoxide Plan (1992 CO Plan).* As identified in the SCAQMD's *2003 AQMP* and the *1992 CO Plan*, peak CO concentrations in the SCAB were the byproduct of unusual meteorological and topographical conditions and were not the result of traffic congestion. For context, the CO "hot spot" analysis performed for the *2003 AQMP* recorded a CO concentration of 9.3 parts per million (8-hour) at the Long Beach Boulevard/Imperial Highway intersection in Los Angeles County; however, only a small portion of the recorded CO concentrations (0.7 parts per million) were attributable to traffic congestion at the intersection. The vast majority of the recorded CO concentrations at the Long Beach Boulevard/Imperial Highway intersection (8.6 parts per million) were attributable to ambient air concentrations. In comparison, the busiest intersections in the Project site vicinity would not experience peak congestion levels comparable to the congestion levels observed at the Long Beach Boulevard/Imperial Highway intersection. Furthermore, ambient CO concentrations in the Project site vicinity were most recently recorded at 1.4 parts per million. Based on the relatively low traffic congestion levels, low existing ambient CO concentrations, and the lack of any unusual meteorological and/or topographical conditions in the Project site vicinity, the Project is not expected to cause or contribute to a CO "hot spot." (Urban Crossroads, 2018a, pp. 53-55) Impacts would be less than significant.

C. Toxic Air Contaminant Emissions Impact Analysis

Based on the typical operations of light industrial and warehouse buildings, the Project would not include stationary sources of toxic air contaminant emissions. However, the Project's operational activities would generate/attract diesel-fueled trucks. Diesel-fueled trucks produce DPM, which is a toxic air contaminant and is known to be associated with acute and chronic health hazards – including cancer. Project-related DPM health risks, which are summarized below, were calculated for two different scenarios: a scenario where Limonite Avenue is extended between Hellman Avenue and Archibald Avenue ("with Limonite extension") and a scenario where Limonite Avenue exists as it does today ("without Limonite extension").

Detailed air dispersion model outputs and risk calculations are presented in Appendix 2.1 of *Technical Appendix B2*.

At the MEIR, the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 6.57 in one million without the Limonite extension or 6.50 in one million with the Limonite extension. In both scenarios, the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. Also, at the MEIR, the non-cancer health risk index attributable to the Project would be 0.003 (both with and without the Limonite extension), which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, pp. 1-2) Accordingly, the Project's operations would not directly cause or contribute in a cumulatively-considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact to residential receptors.

At the MEIW, the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.52 in one million without the Limonite extension or 0.49 in one million with the Limonite extension. Neither value would exceed the SCAQMD cancer risk threshold of 10 in one million. At the MEIW, the non-cancer health risk index attributable to the Project would be 0.002 (both with and without Limonite extension), which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, pp. 1-2) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively-considerable manner to the exposure of nearby workers to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact to worker receptors.

At the MEISC, the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 0.11 in one million without the Limonite extension or 0.12 in one million with the Limonite extension. In both cases, the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. At MEISC, the non-cancer health risk index attributable to the proposed Project would be 0.0002 (both with and without Limonite extension), which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, pp. 1-2) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively-considerable manner to the exposure of nearby school children to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact to school child receptors.

Threshold e: Would the Project create objectionable odors affecting a substantial number of people?

The Project could produce air emissions leading to odors during proposed construction activities resulting from construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of the respective phase of construction. In addition, construction activities on the Project site would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. (Urban Crossroads, 2018a, pp. 1-2) Accordingly, the Project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

During long-term operation, the proposed Project would include business park, light industrial, warehouse, and mini-warehouse land uses, which are not typically associated with the emission of objectionable odors. The temporary storage of refuse associated with the Project's long-term operational use could be a potential source of odor; however, Project-generated refuse is required to be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations, thereby precluding any significant

odor impact. Furthermore, the Project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance, during long-term operation. (Urban Crossroads, 2018a, pp. 1-2) As such, long-term operation of the proposed Project would not create objectionable odors affecting a substantial number of people.

4.3.6 Cumulative Impact Analysis

As described under the analysis for Threshold "a," the Project site would conflict with the SCAQMD's *2016 AQMP* because the Project would contribute to existing local air quality violations. New, large-scale development in the SCAB would have a similar potential as the Project to exceed the NAAQS and/or the CAAQS and, consequently, conflict with the *AQMP*. The Project's conflict with the *AQMP* is determined to be a significant cumulatively considerable impact.

Related to Thresholds "b," "c," and "d" above, and based on SCAQMD guidance, any exceedance of a regional or localized threshold for criteria pollutants also is considered to be a cumulatively considerable effect, while air pollutant emissions that fall below applicable regional and/or localized thresholds are not considered cumulatively considerable. As discussed in the preceding analysis, the Project would exceed the SCAQMD regional threshold for NO_X emissions during construction and VOC and NO_X emissions during long-term operation. Therefore, the Project's regional emissions of NO_X (during construction) and VOC and NO_X (during operation) would be cumulatively-considerable. The Project also would exceed the SCAQMD localized threshold for particulate matter (PM_{10} and $PM_{2.5}$) emissions during construction. Therefore, the Project's localized emissions of PM_{10} and $PM_{2.5}$ (during construction) would be cumulatively-considerable.

As indicated in the analysis of Threshold "e," above, there are no Project components that would expose a substantial number of sensitive receptors to air emissions resulting in objectionable odors. The areas surrounding the Project site are developed with agricultural and residential land uses and the Chino Airport. The agricultural uses, which include dairies, are sources of offensive odors. The sources of objectionable odors in the areas immediately surrounding the Project site are expected to be discontinued in the future as these areas transition to non-agricultural uses as planned by The Preserve Specific Plan. Because the Project would not produce air emissions resulting in objectionable odors and objectionable odors are not expected to occur in the areas immediately surrounding the Project site upon planned development of the area, there is no long-term potential for odors from the Project site to combine with odors from nearby development projects and expose nearby sensitive receptors to substantial, offensive odors. Accordingly, the Project would have a less-than-significant cumulative impact.

4.3.7 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would contribute to an existing air quality violation in the SCAB and, therefore, would conflict with the *2016 AQMP*.

Thresholds b and c: Significant Direct and Cumulatively-Considerable Impact. The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during construction and VOC and NO_X emissions during long-term operation. As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of ozone standards in the SCAB, which is a significant direct and cumulatively-considerable impact.

Threshold d: Significant Direct and Cumulatively-Considerable Impact. The Project would exceed the applicable SCAQMD localized thresholds for particulate matter (PM_{10} and $PM_{2.5}$) emissions during construction.

Threshold e: Less-than-Significant Impact. The Project would not produce unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.

4.3.8 MITIGATION

The following mitigation measures would reduce the Project's construction-related particulate matter (PM_{10} and $PM_{2.5}$) emissions.

MM 4.3-1 The Project shall comply with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust." Rule 403 requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earth moving, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the City of Chino shall verify that the following notes are specified on the grading plan and within the construction management plan required in accordance with City of Chino Municipal Code Section 20.23.210. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Chino staff or its designee to confirm compliance.

a. During grading and ground-disturbing construction activities, the construction contractor shall ensure that all unpaved roads, active soil stockpiles, and areas undergoing active ground disturbance are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas by water truck, sprinkler system, or other comparable means, shall achieve a minimum soil moisture of 12 percent. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite.

b. Temporary signs shall be installed on the construction site along all unpaved roads indicating a maximum speed limit of 15 miles per hour (mph). The signs shall be installed before construction activities commence and remain in place for the duration of construction activities that include vehicle activities on unpaved roads.

c. Gravel pads must be installed at all access points to prevent tracking of mud onto public roads.

d. Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect.

e. If materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

f. All street frontages adjacent to the construction site shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets.

g. Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and initiate corrective action within 24 hours.

h. Any vegetative cover to be utilized onsite shall be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil.

i. Any on-site stock piles of debris, dirt, or other dusty material shall be covered or watered as necessary to minimize fugitive dust pursuant to SCAQMD Rule 403.

j. A high wind response plan shall be formulated and implemented for enhanced dust control if winds are forecast to exceed 25 mph in any upcoming 24-hour period.

MM 4.3-2 The Project shall comply with the provisions of South Coast Air Quality Management District Rule 1186 "PM_{10} Emissions from Paved and Unpaved Roads and Livestock Operations" and Rule 1186.1, "Less-Polluting Street Sweepers" by complying with the following requirements. To ensure and enforce compliance with these requirements, prior to grading and building permit issuance, the City of Chino shall verify that the following notes are included on the grading and building plans and within the construction management plan required in accordance with City of Chino Municipal Code Section 20.23.210. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Chino staff or its designee to confirm compliance.

a. If visible dirt or accumulated dust is carried onto paved roads during construction, the contractor shall remove such dirt and dust at the end of each work day by street cleaning.

b. Street sweepers shall be certified by the South Coast Air Quality Management District as meeting the Rule 1186 sweeper certification procedures and requirements for PM_{10}-efficient sweepers. All street sweepers having a gross vehicle weight of 14,000 pounds or more shall be powered with alternative (non-diesel) fuel or otherwise comply with South Coast Air Quality Management District Rule 1186.1.

The following mitigation measure would reduce the Project's construction-related NO_X emissions.

MM 4.3-3 Prior to grading permit issuance, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the following note. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of Chino staff to confirm compliance.

a. During grading activity, all construction equipment with more than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified or better.

MM 4.3-3a Project construction contractors shall assure that all construction equipment complies with all applicable California Air Resources Board (CARB) air quality regulations. Also, Project construction contractors shall tune and maintain all construction equipment in accordance with the equipment manufacturer's recommended maintenance schedule and specifications. Maintenance records for all pieces of equipment shall be kept on-site for the duration of construction activities and shall be made available for periodic inspection by City of Chino staff or their designee.

MM 4.3-3b The Project Applicant shall encourage construction contractors to apply for South Coast Air Quality Management District "SOON" funds. The "SOON" program provides funds to qualifying off-road diesel construction fleets for the purchase of commercially-available, low-emission heavy-duty engines.

Although the Project's construction-related VOC emissions would be less than significant, the following mitigation would minimize the Project's emissions of VOCs during construction.

MM 4.3-4 Prior to grading permit issuance, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the following note. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of Chino staff to confirm compliance.

a) Only "low-volatile organic compound" paint products (no more than 50 gram/liter of VOC) and/or High-Pressure Low Volume (HPLV) applications shall be used on-site. All other architectural coatings shall comply with the VOC limits prescribed by SCAQMD Rule 1113.

The following mitigation measures would reduce the Project's operational VOC and NO_X emissions.

MM 4.3-5 Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than three (3) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to the issuance of an occupancy permit, the City of Chino shall conduct a site inspection to ensure that the signs are in place.

MM 4.3-6 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Chino demonstrating that the Project is designed to exceed the California Energy Code (Title 24, Part 6) standards in effect at the time of building permit application

submittal by three (3) percent and includes the energy efficiency design features listed below at a minimum.

a) Preferential parking locations for carpool, vanpool, EVs and CNG vehicles;

b) All outdoor cargo handling equipment (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts) shall be electric-powered; and

c) All fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent.

MM 4.3-7 Prior to the issuance of permits that would allow the installation of landscaping, the City of Chino shall review and approve landscaping plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; and 2) use of water-efficient irrigation technique. The City of Chino shall inspect for adherence to these requirements after landscaping installation.

MM 4.3-8 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Chino demonstrating that occupants/tenants of the Project site will be provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.

MM 4.3-9 Legible, durable, weather-proof signs shall be placed at driveways where delivery trucks exit onto public streets that direct truck drivers to designated truck routes. The City of Chino shall confirm the required signs are installed prior to issuance of an occupancy permit.

MM 4.3-10 A maximum of 154,500 square feet of refrigerated warehouse space shall be permitted within the Project. The refrigerated warehouse space shall only be permitted west of Mayhew Avenue, at the approximate locations of proposed Buildings 4, 5, and/or 6. For purposes of this mitigation measure, refrigerated warehouse space shall include all areas kept at a sustained temperature of 55 degrees Fahrenheit or lower.

MM 4.3-11 Prior to the issuance of a building permit and/or tenant improvement permit for any warehouse building that contains refrigerating storage, an electrical hookup for refrigeration units on delivery trucks shall be provided at all loading dock spaces servicing the refrigerated storage spaces. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.

4.3.9 Significance of Impacts After Mitigation

Threshold a: Less-than-Significant Impact. Mitigation Measures (MM) 4.3-1 and 4.3-2 would require the Project to employ specific precautions during construction activities to minimize particulate matter emissions. With implementation of MM 4.3-1 and MM 4.3-2, the Project's localized particulate matter concentrations would fall below the applicable SCAQMD thresholds during construction (see discussion for the significance of impacts under Threshold "d," below), thereby eliminating the Project's conflict with the *2016 AQMP*. After mitigation, the Project's impact would be less than significant.

Thresholds b and c: Less-than-Significant Impact (Construction), Significant and Unavoidable Direct and Cumulative Impact (Operation). MM 4.3-3 would require the Project's construction contractors to utilize construction equipment that meets minimum emissions standards. With implementation of this mitigation,

the Project's construction NO_X emissions would fall below the SCAQMD's applicable regional significance threshold, refer to Table 4.3-9. After mitigation, the Project's construction air quality impact would be less than significant.

Table 4.3-9 Peak Construction Emissions Summary (With Mitigation)

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 (2018)	6.13	86.07	87.67	0.16	12.16	7.38
Phase 2 (2018)	4.36	73.85	88.52	0.16	11.50	6.81
Phase 2 (2019)	28.44	73.24	88.21	0.15	11.41	6.75
Phase 3 (2019)	4.96	73.24	88.21	0.15	11.41	6.75
Phase 3 (2020)	28.99	45.38	40.92	0.09	4.57	2.74
Maximum Daily Emissions	**28.99**	**86.07**	**88.52**	**0.16**	**12.16**	**7.38**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-5)

MM 4.3-5 through MM 4.3-8 would require design features to be incorporated into the Project that will reduce the Project's overall demand for energy resources and would reduce the Project's operational NO_X and VOC emissions (NO_X and VOCs are released during the combustion of certain types of energy resources). The mitigation provided by MM 4.3-5 through MM 4.3-8 would be sufficient to reduce the Project's operational VOC emissions below the SCAQMD's applicable regional threshold (see Table 4.3-10).

Table 4.3-10 Project-Operational Regional Emissions Summary (With Mitigation)

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	26.01	1.25E-03	0.13	1.00E-05	4.80E-04	4.80E-04
Energy Source	0.29	2.60	2.19	0.02	0.20	0.20
Mobile (Trucks)	15.43	455.21	122.06	1.77	61.92	19.60
Mobile (Passenger Cars)	9.62	13.84	199.43	0.68	78.31	21.04
Total Maximum Daily Emissions	**51.35**	**471.65**	**323.81**	**2.47**	**140.43**	**40.84**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (pounds per day)**					
	VOC	**NO_x**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	26.01	1.25E-03	0.13	1.00E-04	4.80E-04	4.80E-04
Energy Source	0.29	2.60	2.19	0.02	0.20	0.20
Mobile (Trucks)	15.61	469.10	125.00	1.75	61.92	19.61
Mobile (Passenger Cars)	7.86	14.44	160.49	0.61	78.31	21.04

Total Maximum Daily Emissions	**49.77**	**486.14**	**287.81**	**2.38**	**140.43**	**40.85**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-7 and 3-8)

Mobile source emissions account for approximately 94 percent, by weight, of the Project's total operational NOx emissions. Mobile source emissions are regulated by standards imposed by federal and state agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of Chino. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of Chino to enforce that have a proportional nexus to the Project's level of impact. As such, it is concluded that the Project's operational emissions of NOx would exceed SCAQMD air quality standards on a daily basis. In addition, the Project's operational emissions of NOx would cumulatively contribute to an existing air quality violation in the SCAB (i.e., ozone concentrations), as well as cumulatively contribute to the net increase of a criteria pollutant for which the SCAB is non-attainment (i.e., federal and State ozone concentrations). Accordingly, the Project's long-term emissions of NOx are concluded to result in a significant and unavoidable impact on both a direct and cumulatively-considerable basis.

A recent Supreme Court of California decision, *Sierra Club v. County of Fresno (Friant Ranch)*, states that EIRs should relate a project's expected significant adverse air quality impacts to likely human health consequences or explain why it is not feasible at the time of preparing the EIR to provide such an analysis. Given that the proposed Project's implementation would result in a significant direct and cumulatively considerable impact associated with NOx emissions under long-term operating conditions, the potential health consequences associated with this air pollutant, as well as other air pollutants associated with the Project, were considered. Although as explained below it may be misleading and unreliable to attempt to specifically quantify the health risks associated with the NOx and other air pollutant emissions that would result from the Project, the Project's air quality impact analysis (*Technical Appendix B1*) and mobile source health risk assessment (*Technical Appendix B2*) provide extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation. Refer to these EIR appendices for additional information.

Specific to NOx, population-based studies suggest that long-term exposure to NOx can cause an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants). Short-term exposure can result in resistance to air flow and airway contraction in healthy subjects. Exposure also can decrease lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individuals are more susceptible to the effects of NOX than healthy individuals. These and other health effects associated with air pollutants that would be generated by the Project were previously described in this Subsection (refer to Subsection 4.3.1C, *Air Quality Pollutants and Associated Human Health Effects*). As noted in the Brief of Amicus Curiae by the SCAQMD in the *Friant Ranch* case (hereafter, "Brief"), 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 – indicated that quantifying specific health risks that may result from NOx and other air pollutants from proposals like the Project would be unreliable and misleading due to the relatively small-scale of the Project (from a regional perspective), unknown variables related to pollutant generation/release and receptor exposure, and regional model limitations (Urban Crossroads, 2019a, pp. 12-15). Accordingly, current scientific, technological, and modeling limitations prevent accurate and quantifiable relation of the Project's NOx emissions (and other air pollutant emissions) to likely health consequences for local and regional receptors.

Threshold d: Less-than-Significant Impact. MMs 4.3-1 and 4.3-2 would require specific precautions to be employed during Project construction activities to minimize particulate matter emissions. With implementation of MM 4.3-1 and MM 4.3-2, the Project's localized particulate matter concentrations would fall below the applicable SCAQMD thresholds during construction (see Table 4.3-11). After mitigation, the Project's construction activities would not violate or contribute substantially to an existing or projected air quality violation, and construction-related impacts associated with PM_{10} and $PM_{2.5}$ emissions would be reduced to less than significant.

Table 4.3-11 Peak Construction Localized Emissions Summary (With Mitigation)

On-Site Demolition Emissions	**Emissions (pounds per day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 (2018)	27.88	24.27	2.60	1.61
Maximum Daily Emissions	**27.88**	**24.27**	**2.60**	**161**
SCAQMD Localized Threshold	118	868	5	4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Grading Emissions	**Emissions (pounds per day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 (2018)	85.86	85.58	11.65	7.24
Phase 2 (2018)	73.64	86.44	10.96	6.67
Phase 2 (2019)	73.05	86.37	10.94	6.61
Phase 3 (2019)	73.05	86.37	10.94	6.61
Maximum Daily Emissions	**85.86**	**86.44**	**11.65**	**7.24**
SCAQMD Localized Threshold	270	2,193	16	9
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2018a, Table 3-11)

4.4 BIOLOGICAL RESOURCES

This Subsection assesses the potential for the Project to impact sensitive biological resources. The analysis in this Subsection is based, primarily, on information contained in a technical report prepared by M.J. Klinefelter (hereafter, "MJK") titled, "Biological Resources Assessment and Burrowing Owl Report, Altitude Business Centre," and dated August 31, 2018. The technical report is included as *Technical Appendix C* to this EIR (MJK, 2018). The biological resources evaluation included the review of relevant literature, field surveys, and a geographic information system (GIS)-based analysis of vegetation communities. The field study performed by MJK included: 1) vegetation mapping; 2) general and focused biological surveys; 3) habitat assessments for special-status plants and wildlife species; and 4) focused surveys for the burrowing owl. Refer to *Technical Appendix C* for detailed descriptions of the survey dates, scopes of study, and research and survey methodologies used in the biological resources evaluation.

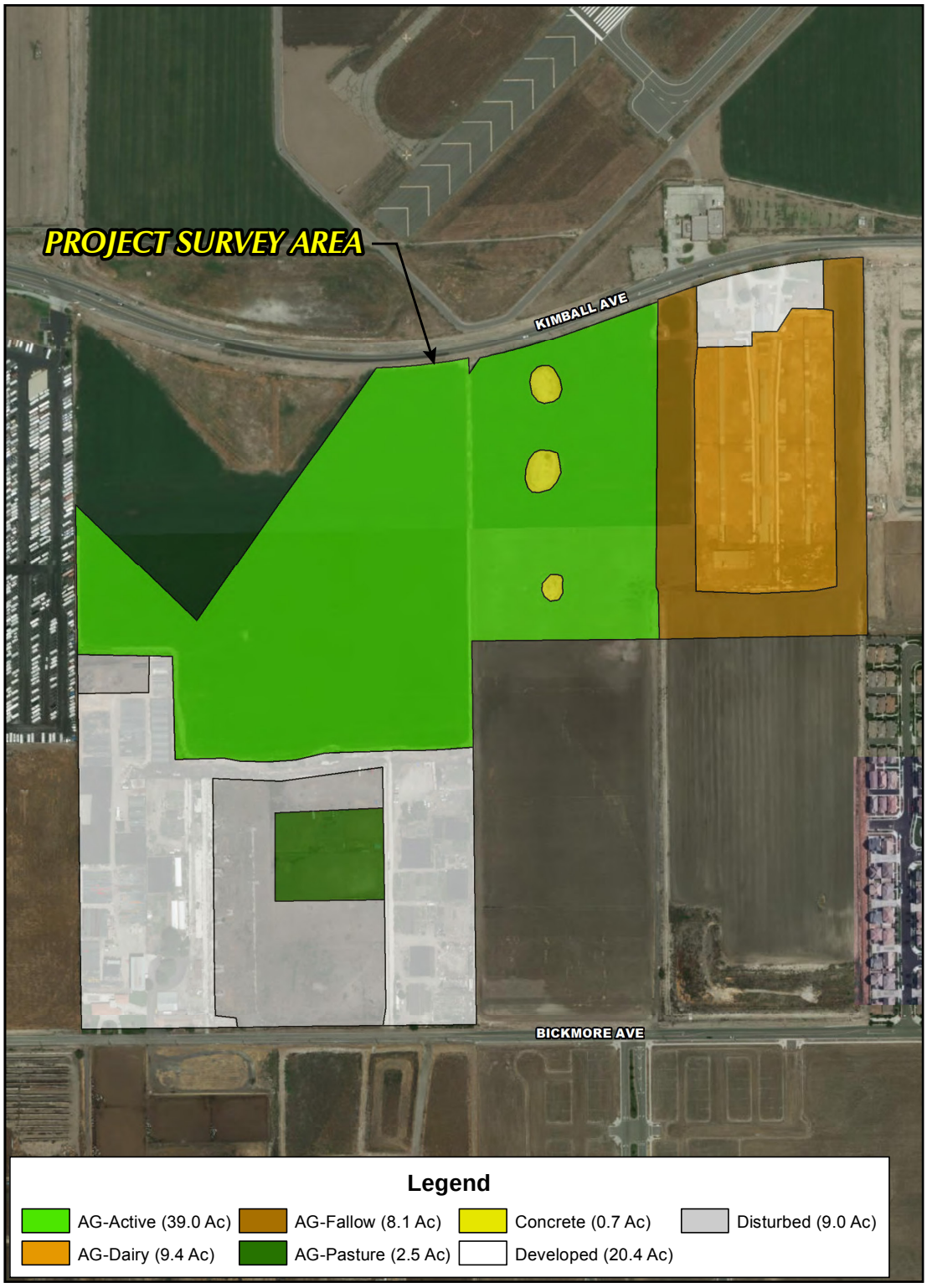
4.4.1 EXISTING CONDITIONS

The southern portion of the Project site, abutting Bickmore Avenue, is occupied by two residential structures, ornamental landscape nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use. The northeastern portion of the Project site, which abuts Kimball Avenue, is occupied by two residential structures, a non-operational dairy farm, and ancillary structures/facilities associated with the shuttered dairy farm. The north-central portion of the Project site is comprised of agricultural fields and vacant land that has been subject to weed abatement activities (i.e., discing; tilling of the land). The Project site is relatively flat and is disturbed/developed with a mix of primarily non-native plant species and a low number of native species. Wildlife detected on the Project site are limited primarily due to lack of native vegetation and severe disturbances associated with past and present agricultural operations on-site. (MJK, 2018, p. 10)

The Project's potential off-site physical disturbance areas include the alignments of Kimball Avenue (between Euclid Avenue and Rincon Meadows Avenue), Bickmore Avenue (between Euclid Avenue and the western Project boundary), Mayhew Avenue (between Bickmore Avenue and Pine Avenue), and a small area located at the northeast corner of the future Bickmore Avenue / Mayhew Avenue intersection (to be used as an interim detention basin). Under existing conditions, the segments of Kimball Avenue and Bickmore Avenue within the Project's potential off-site development area are paved roads with in-ground and above-ground infrastructure and maintained shoulders and are devoid of vegetation. The Project's potential off-site development area within the future alignment of Mayhew Avenue was disturbed/graded in late-2017 to accommodate utility infrastructure improvements and is devoid of vegetation. The Project's off-site development area located at the northeast corner of the future Mayhew Avenue/Bickmore Avenue intersection includes disturbed, former dairy farm property, which was surveyed by MJK in conjunction with the Project site. (MJK, 2018, p. 10)

A. Vegetation Communities

Based on vegetation mapping conducted by MJK, the Project site, including the off-site development area at the northeast corner of the future Mayhew Avenue/Bickmore Avenue intersection (hereafter "Project survey area"), contains six (6) distinct vegetation communities: agriculture-active, agriculture-dairy, agriculture-fallow, agriculture-pasture, developed, and disturbed. The vegetation communities observed are illustrated on Figure 4.4-1, *Existing Vegetation Communities*, and described on the following pages. None of the observed vegetation communities within the Project survey area are classified as a sensitive natural vegetation community or special-status vegetation community. (MJK, 2018, p. 10)



Source(s): M.J. Klinefelter (08-31-2018)

Figure 4.4-1

NOT TO SCALE

EXISTING VEGETATION COMMUNITIES

- **Agricultural Land-Active Fields (Croplands).** Within the Project survey area, agricultural land consists of approximately 39.0 acres of alfalfa fields. On-going activities in this area include clearing, discing, tilling, and installation of crops of irrigation and harvesting. (MJK, 2018, pp. 10-11)

- **Agricultural Land-Fallow Fields.** The northeast portion of the Project survey area includes approximately 8.1 acres of fallow agricultural land that were planted within wheat and sorghum in 2016 and 2017 (MJK, 2018, p. 11).

- **Agricultural Land-Dairy.** The northeast portion of the Project survey area (approximately 9.4 acres) contains the remnants of dairy operations that were active until 2013. The former dairy site contains structures and infrastructure associated with the dairy; a majority of the area consists of bare ground and some non-native weeds. Native species were mostly absent from the former dairy site. (MJK, 2018, p. 12)

- **Agricultural Land-Pasture.** The Project survey area contains approximately 2.5 acres of pasture land, consisting mainly of a corral for goats, sheep, and Shetland ponies. This area contains bare ground with no vegetation present. (MJK, 2018, p. 12)

- **Developed.** The Project survey area contains approximately 20.4 acres of developed land, comprised of residential structures, landscape nursery operations (greenhouses, shade structures, ancillary buildings, container plans, storage areas, parking areas), and internal roads/driveways. The developed areas on the Project site contained a variety of non-native ornamental plant species, as well as areas of bare ground and asphalt/concrete. (MJK, 2018, p. 12)

- **Disturbed.** The Project survey area includes approximately 9.0 acres of disturbed land. Disturbed land is classified as areas that are not developed but have been disturbed repeatedly over many years and, consequently, vegetation in these areas consists predominantly of non-native species and/or bare ground. (MJK, 2018, p. 12)

As described above, with the exception of the off-site development area at the northeast corner of the future Mayhew Avenue/Bickmore Avenue intersection (which was addressed above as part of the Project survey area), the Project's potential off-site development areas are devoid of vegetation under existing conditions (MJK, 2018, p. 10).

B. Special-Status Plants

No special-status plant species were observed within the Project survey area or within the Project's potential off-site development areas (MJK, 2018, p. 10). Based on the location of the Project and the geographic distribution of the species, the following seven (7) plant species have the potential to occur in the Project site's vicinity: (MJK, 2018, Appendix C)

- **Chaparral sand verbena.** This species is not federal or State listed but is rare in California (CNPS Rare Plant Ranking – CRPR – 1B.1). This species occurs in sandy coastal scrub, chaparral, and desert dunes and is not expected to occur on the Project site or in the Project's off-site development area to due lack of suitable habitat. (MJK, 2018, Appendix C)

- **Lucky morning glory.** This species is not federal or State listed but is rare in California (CRPR 3.1). Every known living occurrence of this species occurred within the limits of a ciénega wetland system, which does not occur on the Project site or in the Project's off-site development area. (MJK, 2018, Appendix C)

- **Smooth tarplant.** This species is not federal or State listed but is rare in California (CRPR 1B.1). This species occurs in open alkaline areas, playas, poorly drained flats, meadows and seeps, depressions, waterway banks and beds, grassland, chenopod scrub, riparian woodland, valley and foothill grassland. The smooth tarplant is not expected to occur on the Project site or in the Project's off-site development area to due lack of suitable habitat. (MJK, 2018, Appendix C)

- **Paniculate tarplant.** This species is not federal or State listed but has a limited distribution in California (CRPR 4.2). The paniculate tarplant species is typically found in grasslands (sometimes vernally mesic), open shrublands, roadsides, and fallow fields, and is associated with clay, alkaline, or sandy soils. The paniculate tarplant is not expected to occur on the Project site or in the Project's off-site development area to due lack of suitable habitat. (MJK, 2018, Appendix C)

- **Southern California black walnut.** This species is not federal or State listed but has a limited distribution in California (CRPR 4.2). The southern California black walnut is found in chaparral, cismontane foothill woodland, coastal scrub, and wetland-riparian habitats. This species is not expected to occur on the Project site or in the Project's off-site development area to due lack of suitable habitat. (MJK, 2018, Appendix C)

- **Robinson's pepper-grass.** This species is not federal or State listed but has a limited distribution in California (CRPR 4.2). Robinson's pepper grass is found in dry soils in coastal sage scrub, chaparral, grasslands, and disturbed areas. This species has a moderate potential to occur in the fallow fields on the Project site. (MJK, 2018, Appendix C)

- **Salt spring checkerbloom.** This species is not federal of State listed but is rare in California (CRPR 2B.2). The salt spring checkerbloom occurs in mesic habitat including alkaline springs and marshes in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. This species is not expected to occur on the Project site or in the Project's off-site development area to due lack of suitable habitat. (MJK, 2018, Appendix C)

The Project survey area and the Project's potential off-site development areas contain extremely limited and low-quality habitat and are unable to support stands of native vegetation due to historic and ongoing disturbances and alterations.

C. Special-Status Animals

The following two (2) special-status animal species were detected on the Project site:

- **Northern Harrier.** The northern harrier is a California Species of Special Concern. A single northern harrier individual was observed foraging over the agricultural fields within the Project site. Suitable nesting and foraging habitat for the species is located on the Project site. (MJK, 2018, Appendix C)

- **Burrowing Owl.** The western burrowing owl is a California Species of Special Concern. A pair of deceased burrowing owls were observed in 2016 in the former dairy located in the southern portion of the Project site; no other burrowing owl individuals or signs (e.g., whitewash, pellets, small mammal bones, feathers) were observed during focused surveys conducted in 2016 and 2017. Nine (9) California ground squirrel burrows, which can be used by the burrowing owl, were observed on the Project site. The Project site also contains habitat that could be used by the burrowing owl for foraging. (MJK, 2018, Appendix C)

Additionally, based on the habitat present, the following nine (9) special-status animal species have the potential to occur on the Project site and/or within the Project's off-site development areas:

- **Tricolored Blackbird.** The tricolored blackbird is a California Species of Special Concern. This species was not detected during the field investigation and suitable nesting habitat is not present on the Project site. This species has a low potential to forage on the Project site if nesting in the vicinity. (MJK, 2018, Appendix C)

- **Ferruginous Hawk.** The ferruginous hawk is a California Species of Special Concern. Based on site conditions and the s ferruginous hawk's habitat preferences, this species is not expected to nest on the Project site and was not observed during field surveys. There is low potential for this species to forage the Project site during migration. (MJK, 2018, Appendix C)

- **Lawrence's Goldfinch.** The Lawrence's goldfinch is a Federal Species of Concern. This species was not observed during field surveys. The Project site contains suitable nesting habitat for the species and there is moderate potential for the species to forage on-site if nesting in the vicinity. (MJK, 2018, Appendix C)

- **Lark Sparrow.** The lark sparrow is a Federal Species of Concern. This species was not observed during field surveys; but, there is suitable nesting and foraging habitat for the species on the Project site. There is moderate potential for the lark sparrow to occur on the Project site. (MJK, 2018, Appendix C)

- **White-tailed Kite.** The white-tailed kite is a Federal Species of Concern and a State Fully Protected Species. This species was observed on the Project site in 2015 but was not observed during field surveys conducted in 2016 and 2017. There is suitable nesting and foraging habitat for this species on the Project site. (MJK, 2018, Appendix C)

- **Loggerhead Shrike.** The loggerhead shrike is a Federal Species of Concern and a California Species of Special Concern. This species was not observed during field surveys. Based on conditions on the Project site, there is a low potential for this species to nest on-site and a moderate potential for this species to hunt on-site. (MJK, 2018, Appendix C)

- **Pallid Bat.** The pallid bat is a California Species of Special Concern. This species was not detected during field surveys; but, the Project site provides limited potential roosting locations for this species and there is a moderate potential for this species to forage at the site. (MJK, 2018, Appendix C)

- **Western Mastiff Bat.** The western mastiff bat is a California Species of Special Concern. This species was not detected during field surveys. There is no potential for this species to roost on the

Project site due to the relatively high levels of disturbance (i.e., night-time lighting, noise, on-going agricultural operations, and human and animal activity). There is low potential for this species to forage on the Project site if roosting within the vicinity. (MJK, 2018, Appendix C)

- ❑ **Western Yellow Bat.** The western yellow bat is a California Species of Special Concern. This species was not detected during field surveys. The Project site offers few opportunities to roost; but, there is moderate potential for this species to forage at the Project site if roosting in the vicinity. (MJK, 2018, Appendix C)

D. Nesting Birds

Although no active bird nests were observed during biological field surveys, the Project survey area contains trees, shrubs, and ground cover that provide suitable nesting sites for avian bird species (MJK, 2018, pp. 13-14)

E. Jurisdictional Waters and Wetlands

The Project survey area does not support any drainages, water courses, vernal pools, or wetland habitats that would be under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB) (MJK, 2018, p. 16).

4.4.2 Applicable Environmental Plans, Policies, and Regulations

The Project is subject to State of California (hereafter, "State") and federal regulations that were developed to protect natural resources, including: State and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities. Provided below is an overview of the federal, State, and regional laws, regulations, and requirements that are applicable to the Project.

A. Federal Plans, Policies, and Regulations

1. Endangered Species Act (ESA)

The purpose of the federal Endangered Species Act (ESA) is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. Under the ESA, species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. (USFWS, 2013)

The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Through regulations, the term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."

Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on Federal land. Protection from commercial trade and the effects of federal actions do apply for plants. (USFWS, 2013)

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the USFWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. During consultation, the "action" agency receives a "biological opinion" or concurrence letter addressing the proposed action. In the relatively few cases in which the USFWS or NMFS makes a jeopardy determination, the agency offers "reasonable and prudent alternatives" about how the proposed action could be modified to avoid jeopardy. It is extremely rare that a project ends up being withdrawn or terminated because of jeopardy to a listed species. (USFWS, 2013)

Section 10 of the ESA may be used by landowners including private citizens, corporations, tribes, States, and counties who want to develop property inhabited by listed species. Landowners may receive a permit to take such species incidental to otherwise legal activities, provided they have developed an approved habitat conservation plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that the permit holder will take to avoid, minimize, and mitigate the impacts, and the funding available to carry out the steps. HCPs may benefit not only landowners but also species by securing and managing important habitat and by addressing economic development with a focus on species conservation. (USFWS, 2013)

2. Migratory Bird Treaty Act (16 USC Section 703-712)

The Migratory Bird Treaty Act (MBTA) makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The migratory bird species protected by the MBTA are listed in 50 CFR 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA (16 U.S.C. 703-712). The MBTA implements Conventions between the United States and four countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds. (USFWS, 2017)

3. Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." (USFWS, 2016)

B. State Plans, Policies, and Regulations

1. California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Wildlife (CDFW) works with interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. CDFW may authorize the take of any such species if certain conditions are met. (CDFW, 2017a)

Section 2081 subdivision (b) of the California Fish and Game Code (CFGC) allows CDFW to authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met. These authorizations are commonly referred to as incidental take permits (ITPs). (CDFW, 2017a)

If a species is listed by both the federal ESA and CESA, CFGC Section 2080.1 allows an applicant who has obtained a federal incidental take statement (federal Section 7 consultation) or a federal incidental take permit (federal Section 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with CESA. If the federal documents are found to be consistent with CESA, a consistency determination (CD) is issued and no further authorization or approval is necessary under CESA. (CDFW, 2017a)

A Safe Harbor Agreement (SHA) authorizes incidental take of a species listed as endangered, threatened, candidate, or a rare plant, if implementation of the agreement is reasonably expected to provide a net conservation benefit to the species, among other provisions. SHAs are intended to encourage landowners to voluntarily manage their lands to benefit CESA-listed species. California SHAs are analogous to the federal safe harbor agreement program and CDFW has the authority to issue a consistency determination based on a federal safe harbor agreement. (CDFW, 2017a)

2. Natural Community Conservation Planning Act (NCCP)

CDFW's Natural Community Conservation Planning (NCCP) program takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly. (CDFW, 2017b)

An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Working with landowners, environmental organizations, and other interested parties, a local agency oversees the numerous activities that compose the development of an NCCP. CDFW and the U.S. Fish and Wildlife Service provide the necessary support, direction, and guidance to NCCP participants. (CDFW, 2017b)

There are currently 13 approved NCCPs (includes 6 subarea plans) and 22 NCCPs in the active planning phase (includes 10 subarea plans), which together cover more than 7 million acres and will provide

conservation for nearly 400 special status species and a wide diversity of natural community types throughout California. (CDFW, 2017b)

3. Native Plant Protection Act (NPPA) of 1977

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. (CDFW, 2017d)

4. Unlawful Take or Destruction of Nests or Eggs (CFGC Sections 3503.5-3513)

Section 3503.5 of the CFGC specifically protects birds of prey, stating:

> *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

Section 3513 of the CFGC duplicates the federal protection of migratory birds, stating:

> *It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.*

C. Local Plans, Policies, and Regulations

1. City of Chino Municipal Code

The City's Municipal Code (§ 20.19.040) requires that an arborist certified by the International Society of Arboriculture be retained prior to the removal of any tree(s) 10 inches or larger in diameter to make a recommendation as to the feasibility of maintaining or removing the tree(s). In addition, the removal of any existing trees requires the replacement of trees with a species designated by the Community Development Director or his designee. These replacement trees may be required on the property from which the tree(s) was removed, or at an off-site location. (Chino, 2016a)

2. City of Chino Subarea 2 Resources Management Plan

The City of Chino adopted the Subarea 2 Resources Management Plan (hereafter, "RMP") in conjunction with adoption of The Preserve Specific Plan. The RMP provides a detailed methodology for implementing the biological resources mitigation measures contained in The Preserve Specific Plan EIR (SCH #2000121036), establishes a framework for development within the Specific Plan area to ensure compliance with the EIR's biological mitigation measures, and requires new development within The Preserve Specific Plan area to pay a biological resources development impact fee (DIF). The RMP is herein incorporated by reference and available for review at the City of Chino Community Development Department, Planning Division, 13220 Central Avenue, Chino, CA 91710.

4.4.3 BASIS FOR DETERMINING SIGNIFICANCE

Environmental impacts to biological resources are assessed using impact threshold criteria, which reflect the policy statement contained in CEQA § 21001(c) of the Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

In the development of thresholds of significance for impacts to biological resources, CEQA provides guidance primarily in § 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. CEQA Guidelines § 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species ..."*

Therefore, for the purpose of analysis in this EIR, the proposed Project would result in a significant impact to biological resources if the Project or any Project-related component would:

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service;*
b. *Have a substantially adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Wildlife Service;*
c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
d. *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*
f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan.*

4.4.4 IMPACT ANALYSIS

For purposes of the analysis on the following pages, the Project site and the Project's potential off-site development areas are collectively referred to as the "Project development area."

Threshold a:	***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 Wildlife or U. S. Fish and Wildlife Service?***

A. Impacts to Special-Status Plants

No special-status plants were documented in the Project development area. Furthermore, the Project development area contains extremely limited and low-quality habitat and is unable to support stands of native vegetation due to historic and ongoing disturbances and alterations. Accordingly, the Project development area is considered to have little, if any, habitat value for any of the special-status plant species known to occur in the Project area. (MJK, 2018, pp. 10, 23) The Project's impacts to special-status plant species would be less

B. Impacts to Special-Status Animals

As discussed in Subsection 4.4.1C, two (2) special-status raptors (i.e., the northern harrier and burrowing owl) were observed on the Project site and nine (9) other special-status raptors, song birds, and bats have the potential to occur on the Project site. Potential impacts to these special-status species are discussed below.

1. Special-Status Raptors

Implementation of the Project would remove potential foraging habitat for the northern harrier, ferruginous hawk, and white-tailed kite. The viability of lands to support raptor foraging is directly connected to its ability to support raptor prey – small mammals. However, the extensive, long-standing alteration of the site from natural conditions and small mammal abatement activities (related to active agricultural activities) have resulted in a lack of small mammals at the Project site. Because the Project site does not contain productive foraging grounds for the northern harrier, ferruginous hawk, and white-tailed kite, the Project would result in a less-than-significant impact to the foraging ability of these species. Notwithstanding, the Project site does contain suitable nesting habitat for the northern harrier and white-tailed kite and would result in a significant, direct impact to these species if any individuals were taken during construction. (MJK, 2018, pp. 14, 24)

Although no burrowing owl individuals or signs of burrowing owl use were observed on the Project site during focused surveys conducted in 2017, the Project site does contain suitable habitat for the species and the species was known to utilize the Project site in 2016 (when two burrowing owl carcasses were observed on the Project site during focused surveys). Because the burrowing owl is a nomadic species, the species likely utilized the Project site in some capacity (foraging and/or nesting) during and prior to 2016 and it is possible the species could utilize the site again in the future. (MJK, 2018, p. 24) If burrowing owls are present on the Project site at the time grading activities commence, impacts to the species would be significant and mitigation would be required.

2. Special-Status Songbirds

Implementation of the Project would result in the removal of habitat from the Project site that has the potential to used for nesting and/or as foraging/hunting grounds by the tricolored blackbird, Lawrence's goldfinch, lark sparrow, and loggerhead shrike. However, Project implementation is not expected to result in a substantial adverse effect to the regional populations of special-status songbirds because these species are known to utilize a variety of landscapes for nesting and, due to past and on-going disturbances and human activity and the Project site, the property includes relatively low-quality foraging habitat for special-status songbirds. The Project's impacts to special-status songbirds would be less than significant.

3. Special-Status Bats

No pallid bat, western mastiff bat, or western yellow bat individuals were detected in the Project's physical disturbance area; but Project implementation would remove habitat that has the potential to be used for roosting and foraging by the pallid bat and western yellow bat and for foraging by the western mastiff bat. The quality of bat foraging and roosting habitat on the Project site is low and the pallid, western mastiff, and western yellow bat populations are healthy in southern California; therefore, the loss of potential foraging and roosting habitat on the Project site would not result in a substantial adverse effect to regional bat populations. (MJK, 2018, p. 24) The Project's potential impacts to the pallid bat, western mastiff bat, and western yellow bat would be less than significant.

C. Indirect Impacts to Special-Status Biological Resources

Development projects located adjacent to natural open spaces have the potential to result in indirect effects to biological resources such as light pollution, noise pollution, non-native/ornamental plant invasion, etc. The Project site and the areas immediately surrounding the property are heavily disturbed (or already developed), dominated by non-native species, and do not have a high potential to support sensitive or special-status biological resources. Due to the lack of natural, undisturbed habitat surrounding the Project site, the Project would not result in indirect impacts to special-status biological resources. In addition, off-site vegetation impacts associated with proposed improvements to Kimball Avenue, Bickmore Avenue, and Mayhew Avenue would be minimal. Accordingly, the Project would result in less-than-significant indirect impacts to special-status biological resources.

Threshold b:	***Would the Project have a substantially adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?***

None of the habitat types within the Project development area are classified as riparian habitats, nor are these habitats identified as sensitive natural communities in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (MJK, 2018, pp. 2, 23). Accordingly, the Project has no potential to result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. No impact would occur and mitigation is not required.

Threshold c:	***Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

The Project's physical disturbance area does not contain any protected wetland or aquatic resources that fall under federal or State jurisdiction, including, but not limited to, natural drainages or water courses, wetland habitat, marsh, vernal pools, or coastal resources (MJK, 2018, p. 20). Therefore, the Project would not result in a substantial adverse effect on State or federally-protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. No impact would occur and mitigation is not required.

Threshold d:	***Would the Project 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?***

The Project's physical disturbance area does not contain natural, surface drainage or ponding features. Additionally, there are no water bodies on or adjacent to the Project site that could support fish. Therefore, there is no potential for the Project to interfere with the movement of native resident migratory fish. The Project development area also does not serve as a corridor nor is it connected to an established corridor, and there are no native wildlife nurseries on or adjacent to the site. Therefore, there is no potential for the Project to impede the use of a native wildlife nursery site. (MJK, 2018, p. 25) Based on the foregoing information, the Project would result in no impact to any native resident or migratory fish, established wildlife corridor, or native wildlife nursery sites.

The Project would result in the removal vegetation (i.e., ornamental trees, shrubs, and groundcover) that has the potential to provide roosting and nesting habitat for birds, including migratory and common raptor species. If active nests are present within the Project development area during construction, the Project could result in substantial, adverse effects to biological resources (i.e., bird nests) that are protected by the MBTA and California Fish and Game Code. The Project's potential to impact nesting birds is a significant impact for which mitigation is required.

Threshold e:	***Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

Implementation of the Project would result in the removal of mature, ornamental trees from the Project impact area. The removal of trees is regulated by Chino Municipal Code Section 20.19.040.D.3, which requires development projects to conduct a tree inventory prior to construction and, if any mature significant trees are to be removed, to replace each removed tree at defined ratios (as specified in Municipal Code Section 20.19.040.D.3). The Municipal Code defines "mature significant trees" as oak trees with trunks more than eight inches in diameter at breast height; other trees with trunks more than 10 inches in diameter at breast height; and multi-trunk trees with a total circumference of 38 inches or more at breast height. Prior to removal of any mature significant trees from the Project impact area, the Project Applicant would be required to comply with the provisions of Section 20.19.040.D.3 of the Chino Municipal Code. Mandatory compliance with the requirements of the Municipal Code would ensure the Project would not conflict with the City of Chino's ordinances regarding tree removal. As such, a less-than-significant impact would occur. (Chino, 2016b)

The City of Chino does not have any additional policies or ordinances in place to protect biological resources.

Threshold f:	***Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan?***

The Project impact area is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan (MJK, 2018, p. 3). Therefore, no impact would occur.

4.4.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis for biological resources considers development of the proposed Project in conjunction with other development projects in the vicinity of the Project site (including nearby development projects located within the cities of Eastvale and Ontario) as well as full General Plan buildout in the cities of Chino, Eastvale, and Ontario.

The Project's physical disturbance area does not contain any special-status plant species. Therefore, the Project would not impact any special-status plant species and there is no potential for the Project to contribute to a cumulative impact to special-status plant species.

The Project's physical disturbance area does not contain high-quality foraging habitat for special-status raptor, songbird, and bat species with the potential to occur in the Project area (with the exception of the burrowing owl). The Project site does, however, contain suitable nesting habitat for a variety or special-status raptors and songbirds. A wide range of habitat and vegetation types have the potential to support nesting birds; therefore, it is likely that other development projects within the cumulative study area also may impact nesting birds. In the absence of mitigation, the Project has the potential to contribute to the taking of nesting special-status raptors and songbirds, which would be a cumulatively considerable effect that would require mitigation.

The Project site does contain potentially suitable habitat for the burrowing owl. Although the burrowing owl species was not observed on the Project site during field surveys conducted in 2017, the species has used the Project site in the past and there is the potential for this species to occupy the property again in the future, prior to commencement of Project construction. The burrowing owl is commonly found within the Project vicinity; as such, it is reasonable to conclude that impacts to the burrowing owl habitat would occur in conjunction with development of other properties in Chino, Ontario, and Eastvale. Thus, the Project has the potential to contribute to a cumulatively-considerable impact to the burrowing owl.

The Project would not impact any riparian or sensitive natural communities; therefore, there is no potential for the Project to contribute to a cumulatively-considerable impact to this resource.

The Project would not impact any State- or federally-protected wetlands. Accordingly, the Project has no potential to contribute to a cumulatively-considerable impact to State- or federally-protected wetlands.

The Project would result in the removal of vegetation that has the potential to support nesting birds protected by federal and State regulations. A wide range of habitat and vegetation types have the potential to support nesting birds; therefore, it is likely that other development projects within the cumulative study area also may impact nesting birds. However, the Project – like all other development activities in the cumulative study area – would be required to comply with State and federal law to preclude impacts to nesting birds. The Project's potential impact to nesting birds would be cumulatively-considerable absent compliance to State and federal regulations.

The Project would not conflict with any local policies or ordinances protecting biological resources. Other development projects in the cumulative study area would be required to comply with applicable local policies and/or ordinances related to the protection of biological resources as a standard condition of review/approval. Because the Project and cumulative development would be prohibited from violating applicable, local policies or ordinances related to the protection of biological resources, a cumulatively-considerable impact would not occur.

The Project impact area is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Because there is no conservation plan applicable to the Project impact area, there is no potential for the Project to contribute to the violation of a conservation plan. No cumulative impact would occur.

4.4.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. There Project site contains suitable nesting habitat for the northern harrier and white-tailed kite and there is the potential that the Project could take individuals from these species during construction. The Project site also contains suitable foraging and nesting habitat for the burrowing owl. In the event the burrowing owl migrates onto the Project site before Project construction commences, the Project has the potential to take burrowing owl individuals.

Threshold b: No Impact. The Project development area does not contain riparian and/or other sensitive natural habitats; therefore, the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.

Threshold c: No Impact. No State- or federally-protected wetlands are located within the Project development area; therefore, no impact to wetlands would occur.

Threshold d: Significant Direct and Cumulatively-Considerable Impact. There is no potential for the Project to interfere with the movement of fish or impede the use of a native wildlife nursery site. However, the Project would directly impact nesting migratory birds protected by the MBTA and California Fish and Game Code.

Threshold e: Less-than-Significant Impact. The Project would not conflict with any local policies or ordinances protecting biological resources.

Threshold f: No Impact. The Project impact area is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, no impact would occur.

4.4.7 Mitigation

The following Mitigation Measure (MM) would address the Project's direct and cumulatively considerable impact to the burrowing owl:

MM 4.4-1 No sooner than 30 days prior to and no later than 14 days prior to grading activities, a qualified biologist shall conduct a survey of the Project's impact footprint and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Chino prior to the issuance of a grading permit and subject to the following provisions:

a) In the event that the pre-construction survey detects no burrowing owls in the impact area, a grading permit may be issued without restriction.

b) In the event that the pre-construction survey detects the burrowing owl within the Project's impact footprint, then prior to the issuance of a grading permit and prior to the

commencement of ground-disturbing activities on the property, the Project Applicant shall make reasonable efforts to consult with the California Department of Fish and Wildlife (CDFW) regarding conservation strategies for the burrowing owl, although it is acknowledged that the Project Applicant cannot compel the CDFW to participate in the consultation process. Regardless of whether or not the CDFW engages in consultation the Project Applicant shall ensure at minimum that Project-related activities occur in conformance with the burrowing owl mitigation standards established by the City of Chino Subarea 2 Resources Management Plan.

1. Prior to disturbance of occupied burrows, natural or artificial replacement burrows shall be provided at a ratio of 2:1 within a City-designated relocation area. A qualified biologist shall confirm the replacement burrows are unoccupied and suitable for burrowing owl use prior to disturbance of occupied burrows.

2. No disturbance shall occur within 50 meters of occupied burrows during the non-breeding season (September 1 through January 31) or within 75 meters of occupied burrows during the breeding season (February 1 through August 31), until the Project Applicant provides evidence to the City of Chino that suitable replacement burrows have been provided.

3. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

4. If burrowing owls are present at the time occupied burrows are to be disturbed, the owls shall be excluded from the site in accordance with CDFW relocation protocol and the protocol established in Table 4-6 of the City of Chino Subarea 2 Resources Management Plan.

5. Subject to the provisions of the Subdivision Map Act vesting map requirements, if the City of Chino has established a mitigation fee program for the long-term management of burrowing owl habitat as recommended by the City of Chino Subarea 2 Resources Management Plan, prior to issuance of a grading permit, the Project Applicant shall pay the appropriate mitigation fee to the City of Chino.

The following MM would address the Project's direct and cumulatively considerable impact to the northern harrier, white-tailed kite, and nesting birds during construction:

MM 4.4-2 Vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (January 31 through September 1), unless a migratory bird nesting survey is completed in accordance with the following requirements:

a) A migratory bird nesting survey of the Project site and the Project's off-site development area, including suitable habitat within a 250-foot radius, shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground

disturbance. A copy of the migratory nesting bird survey results report shall be provided to the City of Chino.

b) If the survey does not identify the presence of any nests, then construction activities can proceed without restriction.

c) If the survey identifies the presence of active nests, then the qualified biologist shall provide the City with a copy of maps showing the location of all nests and a species-appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City and shall be no less than a 100-foot radius around the nest for non-raptors and no more than a 500-foot radius around the nest for raptors.

1. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing. No construction vehicles shall be permitted within restricted areas (i.e., bird protection zones), unless directly related to the management or protection of the legally protected species, until all nestlings have fledged and left the nest (or the nest has failed).

2. In the event that a nest is abandoned despite efforts to minimize disturbance and, if the nestlings are still alive, the Project Applicant/Developer shall contact the California Department of Fish and Wildlife (CDFW) and, subject to CDFW approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).

4.4.8 Significance of Impacts After Mitigation

Thresholds a and d: Less-than-Significant Impact with Mitigation Incorporated. Implementation of MM 4.4-1 and MM 4.4-2 would ensure that pre-construction surveys are conducted for the burrowing owl and nesting birds to determine the presence or absence of the species within the Project development area. If present, the mitigation measures establish mitigation activities that would be required to occur in conformance with accepted protocols and regulatory requirements. With implementation of the required mitigation, potential direct and cumulatively-considerable impacts to the burrowing owl, northern harrier, white-tailed kite, and nesting birds would be reduced to less than significant.

4.5 CULTURAL RESOURCES & TRIBAL CULTURAL RESOURCES

The analysis in this Subsection is based, in part, on two (2) site-specific cultural resources assessment reports. The reports titled "Phase I Cultural Resources Survey for the Kimball Business Park Project," dated October 25, 2016, and "Paleontological Resource and Monitoring Assessment for the Proposed Kimball Business Park Project in the City of Chino, San Bernardino County, California," dated August 31, 2016, were prepared by Brian F. Smith and Associates, Inc. (BFSA) and are included as *Technical Appendix D1* (BFSA, 2016a) and *Technical Appendix D2* (BFSA, 2016b) to this EIR, respectively. Information used to support the analysis in this Subsection also was obtained from the Open Space and Conservation Element of the City of Chino General Plan (Chino, 2010a, pp. OSC-1 - 29), the Cultural and Paleontological Resources section (Chino, 2010b, pp. 4.5-1 - 14) of the certified Final Program EIR prepared for the City of Chino General Plan (SCH No. 2008091064), dated May 2010, and The Preserve Specific Plan Final EIR (SCH No. 2000121036) prepared for the City of Chino (Chino, 2003). Refer to Section 7.0, *References*, for a complete list of reference sources.

Please note that written and oral communication between Native American tribes, BFSA, and the City of Chino is considered confidential in respect to places that have tribal cultural significance (Gov. Code § 65352.4), and although all communications pertaining to the Project site that occurred between Native American tribes, BFSA, and the City of Chino pertaining to the Project site were relied upon to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.5.1 EXISTING CONDITIONS

A. Paleontological Resources

1. Regional Setting

According to the City of Chino General Plan EIR, alluvial soils in the City have the potential to yield fossils of importance. The Preserve Specific Plan EIR disclosed that older (Pleistocene) alluvium soils that have the potential to yield significant vertebrate fossils are present throughout the Specific Plan area. Vertebrate land mammal fossils that have been discovered in the City – and near, but not within The Preserve Specific Plan area – include mammoth, ground sloth, camel, bison, horse, and deer. (Chino, 2010b, pp. 4.5-9 - 4.5-10; Chino, 2003, p. 5.13-6)

2. Project Site Conditions

The Project site is located on the distal margins of the broad alluvial floodplain of the ancestral Santa Ana River and is underlain by Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits. These types of Quaternary sediments contain high paleontological sensitivity and often yield important, fossils of large, terrestrial, Ice Age vertebrates (e.g., bison, mammals, mastodon, horse, camel, giant ground sloth, short-faced bears, saber-toothed cats, and others). (BFSA, 2016b)

BFSA reviewed records databases at the San Bernardino County Museum (SBCM) and Natural History Museum of Los Angeles County (LACM) to determine whether fossils have been recovered in proximity of the Project site or elsewhere in southern California from the same geologic units that underlie the Project site. None of these records searches revealed any previously recorded fossils on the Project site. The closest

known fossil localities to the Project site were collected approximately 2.0 miles from the current Project site. The recovered fossils – terrestrial mammal remains, including extinct camel (*Camelops* cf. *hesternus*) and extant bighorn sheep (*Ovis Canadensis*) – were found within same types of ancestral Santa Ana River fluvial (floodplain) sediments that are present on the Project site. The proximity of these fossil localities to the Project site suggests that Pleistocene-age older alluvium and alluvial fan deposits in the Project area have a "High" paleontological sensitivity. (BFSA, 2016b, pp. 1-2)

B. Prehistoric Resources

1. Regional Setting

The Project site is located in the southeastern portion of the City of Chino, San Bernardino County, California. The Paleo-Indian Period, Archaic Period, and the Late Prehistoric Period are the three general cultural periods represented in San Bernardino County, as summarized briefly below. Refer to *Technical Appendix D1* for a more detailed discussion about the prehistoric cultural periods in San Bernardino County.

- Paleo-Indian Period (Late-Pleistocene: 11,500 to 9,000 years ago). The Paleo-Indian Period is associated with the terminus of the late Pleistocene period. During this time, the climate became warmer, causing sea levels to rise and major vegetation changes to occur. Paleo Indians were attracted to multiple habitats, including mountains, marshlands, estuaries, and lakeshores, and used a more generalized adaptation of hunting and gathering to survive. (BFSA, 2016a, p. 3.0-2)

- Archaic Period (Early and Middle Holocene: 9,000 to 1,300 years ago). The Archaic Period marks a shift from the Pleistocene to the Holocene period, representing a time when substantial environmental changes occurred. In southern California, this period is associated with a number of different cultures, complexes, traditions, periods, and horizons, including San Dieguito, La Jolla, Encinitas, Millingstone, Pauma, and Intermediate. (BFSA, 2016a, pp. 3.0-2 - 3.0-3)

- Late Prehistoric Period (Late Holocene: 1,300 years ago to 1790). Approximately 1,350 years before present, a Shoshonean-speaking group moved into San Bernardino County, marking the transition to the Late Prehistoric period. This Period is characterized by higher population densities, the expansion of social, economic, and political systems, and innovations in technological systems. During this Period, the San Bernardino County area was inhabited by the Cahuilla, Gabrielino, and Luiseño Indians. (BFSA, 2016a, p. 3.0-3)

2. Project Site Conditions

BFSA conducted an intensive pedestrian survey of the Project site on August 11, 2016. The pedestrian survey consisted of a series of parallel transects, spaced at approximately 3-meter intervals, which covered the entire Project site. The entire property was accessible and approximately 30 percent of the ground surface was visible. The Project site has been disturbed as part of historic agriculture and dairy operations. No prehistoric archaeological resources were identified on the Project site during the pedestrian survey. (BFSA, 2016a, pp. 1.0-1, 4.0-1)

BFSA also reviewed an archaeological records search conducted by the South Central Coastal Information Center (SCCIC) at California State University (CSU), Fullerton. The records search provided information regarding previous archaeological studies in the Project area and any previously recorded prehistoric sites/resources found within a one-mile radius of the Project site. The results of this records search indicate that, as part of 43 past cultural resource studies conducted in the Project vicinity, no prehistoric artifacts had

been previously recorded on the Project site; however, four (4) prehistoric artifact scatters and one (1) prehistoric isolated artifact had been recorded within a one-mile radius of the Project site. (BFSA, 2016a, pp. 1.0-1, 5.0-1)

C. Historic Resources

1. Regional Setting

The general historical setting for the southern California region and the City of Chino is summarized below. Refer to *Technical Appendix D1* for a more detailed discussion of the local historic setting.

European settlement of southern California began with a Spanish colonizing expedition in 1769. Soon after the first expedition, the San Gabriel (presently Los Angeles County), San Juan Capistrano (presently Orange County), and San Luis Rey (presently San Diego County) missions began to colonize southern California, and gradually expanded to the interior valley (presently western Riverside County). The indigenous groups who inhabited these lands were recruited and converted by missionaries and worked in the missions. During this time, Native American populations were devastated by the introduction of diseases, new diets that resulted in poor nutrition, and social conflicts brought on by an entirely new social order. (BFSA, 2016a, pp. 3.0-5 - 3.0-6)

In 1846, war broke out between Mexico and the United States and ended in 1848 with the signing of the Treaty of Guadalupe Hidalgo. Upon signing of the Treaty, the region was annexed as a territory of the United States and, in 1850, California became a state which sparked an influx of settlers into the region, including gold miners, entrepreneurs, health-seekers, speculators, politicians, adventurers, those who sought religious freedom, and individuals who desired to create utopian societies. (BFSA, 2016a, p. 3.0-7)

In 1881, former miner Richard Gird purchased the former Rancho Santa Ana del Chino which encompassed approximately 46,000 acres and includes the present-day Chino. The town plat for Chino was laid out by Gird in 1887. Gird created an agricultural experimental station within the Rancho Santa Ana del Chino that tested a variety of crops in the local area to determine what crops would thrive locally. Gird also built the narrow-gauge Chino Valley Railroad which was ultimately replaced by a Southern Pacific Railroad spur to the main railroad line in the City of Ontario. The Chino Valley Sugar Beet Factory opened in 1887 and it is likely that lands in the Project area were used to grow sugar beets for processing until closure of the Factory in 1917 or 1918. In the late-1930s, the State purchased large quantities of farmland in the Chino area for the future construction of new prison facilities (the present-day California Institution for Men and the California Institution for Women). Around this same time, the Cal Aero Field (present-day Chino Airport) was constructed and used as training grounds for the United States Army Air Force. The 1930s also marked the beginning of the boom of dairy production in southern California (particularly in southwestern San Bernardino County), which peaked in 1950s through 1980s, due to advances in technology and dairying techniques and dairy-friendly zoning regulations. The city of Chino's large, highly-efficient dairies made it the largest milk-producing community in the nation's largest milk-producing state. (BFSA, 2016a, pp. 3.0-7 - 3.0-8)

2. Project Site Conditions

BFSA conducted a pedestrian survey of the Project site and reviewed historical records databases to identify the presence or absence of historic resources on the Project site.

Based on archival research, there is one (1) previously recorded historic (1930s to 1940s) structure on the Project site and 23 historic resources located within a one-mile radius of the Project site. (BFSA, 2016a, pp. 5.0-1 and 5.0-9) The previously recorded historic structure on the Project site is a 1930s-1940s farmworker residence located at 7262 Bickmore Avenue, in the southwestern portion of the property. A previous study by Jacquemain and Smallwood (2006) evaluated the farmworker as not significant in accordance with CEQA, as the structure lacked any significant architectural or aesthetic qualities, and was not associated with any important historic figures or events. (BFSA, 2016a, pp. 5.0-1 and 5.0-9)

The Project site contains numerous structures in the northeast and southwest portions of the Project site, including several single-family residences, barns, agriculture/dairy support structures, and a trinquet court (a handball game from the Basque region of Spain). Most of the structures on the Project site are relatively modern (constructed between 1966 and 1977) and do not meet the age threshold required to be considered historic resources. Several structures in the southeast corner of the site (near Bickmore Avenue), including a farmworker residence, a barn, and agricultural outbuildings, date from the 1930s-1940s and are the only structures on the Project site that meet the age threshold for historic resources. Of the historic-era structures on the Project, the best preserved is a small farmworker residence (the same residence evaluated by the Jacquemain and Smallwood study described in the preceding paragraph); however, BFSA determined that this structure has been significantly modified, which has removed any historic integrity for the structure. The dilapidated nature of the other historic-era structures on the Project site (i.e., a barn and agricultural outbuildings) indicate that they do not maintain the appropriate integrity to be considered significant features or structures. (BFSA, 2016a, pp. 5.0-2, 5.0-4 and 5.0-9)

4.5.2 Applicable Environmental Plans, Policies, and Regulations

A. Federal Plans, Policies, and Regulations

1. National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) was passed primarily to acknowledge the importance of protecting our nation's heritage. While Congress recognized that national goals for historic preservation could best be achieved by supporting the drive, enthusiasm, and wishes of local citizens and communities, it understood that the Federal Government must set an example through enlightened policies and practices. In the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and "foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony." (ACHP, 2002)

NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal Government, led by the National Park Service (NPS) provides funding assistance; basic technical knowledge and tools; and a broad national perspective on America's heritage. The States, through State Historic Preservation Officers (SHPOs) appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. (ACHP, 2002)

An Advisory Council on Historic Preservation, the first and only Federal entity created solely to address historic preservation issues, was established as a cabinet-level body of Presidentially-appointed citizens, experts in the field, and Federal, State, and local government representatives, to ensure that private citizens,

local communities, and other concerned parties would have a forum for influencing Federal policy, programs, and decisions as they impacted historic properties and their attendant values. (ACHP, 2002)

Section 106 of NHPA granted legal status to historic preservation in Federal planning, decision-making, and project execution. Section 106 requires all Federal agencies to take into account the effects of their actions on historic properties, and provide ACHP with a reasonable opportunity to comment on those actions and the manner in which Federal agencies are taking historic properties into account in their decisions. (ACHP, 2002)

A number of additional executive and legislative actions have been directed toward improving the ways in which all Federal agencies manage historic properties and consider historic and cultural values in their planning and assistance. Executive Order 11593 (1971) and, later, Section 110 of NHPA (1980, amended 1992), provided the broadest of these mandates, giving Federal agencies clear direction to identify and consider historic properties in Federal and federally assisted actions. The National Historic Preservation Amendments of 1992 further clarified Section 110 and directed Federal agencies to establish preservation programs commensurate with their missions and the effects of their authorized programs on historic properties. (ACHP, 2002)

2. National Register of Historic Places (NRHP)

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the NPS's National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. (NPS, n.d.)

To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance, as follows:

- Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?

- Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archeological investigation about our past? (NPS, n.d.)

Nominations can be submitted to a SHPO from property owners, historical societies, preservation organizations, governmental agencies, and other individuals or groups. The SHPO notifies affected property owners and local governments and solicits public comment. If the owner (or a majority of owners for a district nomination) objects, the property cannot be listed but may be forwarded to the National Park Service (NPS) for a Determination of Eligibility (DOE). Listing in the National Register of Historic Places provides formal recognition of a property's historical, architectural, or archeological significance based on national standards used by every state. (NPS, n.d.)

Under Federal Law, the listing of a property in the National Register places no restrictions on what a non-federal owner may do with their property up to and including destruction, unless the property is involved in a project that receives Federal assistance, usually funding or licensing/permitting. National Register listing does not lead to public acquisition or require public access. (NPS, n.d.)

3. *Native American Graves Protection and Repatriation Act (NAGPRA)*

The Native American Graves Protection and Repatriation Act (NAGPRA; Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. (NPS, 2016b)

One major purpose of this statute is to require that Federal agencies and museums receiving Federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The agencies and museums must consult with Indian Tribes and Native Hawaiian organizations to attempt to reach agreements on the repatriation or other disposition of these remains and objects. Once lineal descent or cultural affiliation has been established, and in some cases the right of possession also has been demonstrated, lineal descendants, affiliated Indian Tribes, or affiliated Native Hawaiian organizations normally make the final determination about the disposition of cultural items. Disposition may take many forms from reburial to long term curation, according to the wishes of the lineal descendent(s) or culturally affiliated Tribe(s). (NPS, 2016b)

The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act. This NAGPRA requirement is likely to encourage the in-situ preservation of archaeological sites, or at least the portions of them that contain burials or other kinds of cultural items. (NPS, 2016b)

Other provisions of NAGPRA: (1) stipulate that illegal trafficking in human remains and cultural items may result in criminal penalties; (2) authorizes the Secretary of the Interior to administer a grants program to assist museums and Indian Tribes in complying with certain requirements of the statute; (3) requires the Secretary of the Interior to establish a Review Committee to provide advice and assistance in carrying out key provisions of the statute; authorizes the Secretary of the Interior to penalize museums that fail to comply with the statute; and, (5) directs the Secretary to develop regulations in consultation with this Review Committee. (NPS, 2016b)

B. *State Plans, Policies, and Regulations*

1. *California Administrative Code, Title 14, Section 4308*

Section 4308, Archaeological Features, of Title 14 of the California Administrative Code provides that: “No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value.”

2. *California Code of Regulations Title 14, Section 1427*

California Code of Regulations Title 14, Section 1427 provides that: “No person shall collect or remove any object or thing of archeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archeological or historical interest or value is found.”

3. California Register of Historic Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. (OHP, n.d.)

In order for a resource to be included on the Register of Historic Resources, the resources must meet one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Associated with the lives of persons important to local, California or national history (Criterion 2).
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4). (OHP, n.d.)

For resources included on the Register of Historic Resources, environmental review may be required under CEQA if property is threatened by a project. Additionally, local building inspectors must grant code alternatives provided under State Historical Building Code. Further, the local assessor may enter into contract with property owner for property tax reduction pursuant to the Mills Act. A property owner also may place his or her own plaque or marker at the site of the resource. (OHP, n.d.)

Consent of owner is not required, but a resource cannot be listed over an owner's objections. The State Historical Resources Commission (SHRC) can, however, formally determine a property eligible for the California Register if the resource owner objects. (OHP, n.d.)

4. Traditional Tribal Cultural Places Act (Senate Bill 18, "SB 18")

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 *et seq.*) and specific plans (defined in Government Code § 65450 *et seq.*). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

Because the Project does not propose to amend or adopt a general plan or specific plan, or designate land as open space, the Project is not subject to SB 18.

5. Assembly Bill 52 (AB 52)

California Assembly Bill 52 (AB 52) Chapter 532 is an act to amend § 5097.94 of, and add §§ 21073, 21074, The legislature added new requirements regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes 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.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)

Section (§) 21074 of the Public Resources Code defines "tribal cultural resources." In brief, in order to be considered a "tribal cultural resource," a resource must be either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2015)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2015)

6. State Health and Safely Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery…" until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. § 7051 specifies that the removal of human remains from "internment or a place of storage while awaiting internment" with the intent to sell them or to dissect them with "malice or wantonness" is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that "all California Indian human remains and cultural items are to be treated with dignity and respect." It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

7. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).

- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- 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 may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. 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 (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
    - 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.

- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

4.5.3 Basis for Determining Significance

The proposed Project would result in a significant impact to cultural resources if the Project or any Project-related component would:

a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;*

b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;*

c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*

d. *Disturb any human remains, including those interred outside of formal cemeteries;*

The proposed Project also would 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, if the Project or any Project-related component would impact a resource that is:

e. *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*

f. *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 the 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 above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects that development projects could have on cultural and/or tribal cultural resources. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold.

4.5.4 IMPACT ANALYSIS

Threshold a:	***Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?***

As described under Subsection 4.5.1C, the Project site contains numerous structures; however, only one (1) structure warrants consideration as a potential historic resource, specifically, a 1930s-1940s single-family residence located at 7262 Bickmore Avenue. Although the residence meets the minimum age threshold to be considered historic, BFSA concluded that the structure did not qualify as a significant historic resource because past modifications to the structure (i.e., repair work and remodeling) diminished any possible historic integrity and the structure's lack of architecturally distinguishing features reduced its noteworthiness. Further, BFSA concurs with Jacquemain and Smallwood's previous determination (2006) that the residence was not a significant historic resource because the structure lacked any significant architectural or aesthetic qualities and was not associated with any important historic figures or events. (BFSA, 2016a, p. 5.0-9)

Implementation of the Project would remove all existing structures from Project site, including the historic era single-family residence. Based on the foregoing information, the Project's removal of all existing structures on the Project site has no potential to result in a substantial adverse change to any historic resource as defined by California Code of Regulations § 15064.5. No impact would occur.

Threshold b:	***Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?***

According to the archival records search, five (5) prehistoric archaeological resources were previously recorded within a one-mile radius of the Project site, however, no prehistoric archaeological resources were previously recorded on the Project site or within the immediate vicinity of the Project site (including the Project's off-site improvement area (BFSA, 2016a, p. 5.0-1 and Appendix B). Additionally, no prehistoric archaeological resources were observed on the Project site during a pedestrian survey of the property. (BFSA, 2016a, p. 5.0-9) Accordingly, implementation of the Project site would not result in a substantial adverse change in the significance of any known archaeological resources, as defined in California Code of Regulations § 15064.5.

Notwithstanding, there is a remote potential for the Project's construction activities to uncover archaeological resources during excavation and/or grading activities within the Project site and/or off-site development area. If significant resources – as defined in California Code of Regulations § 15064.5 – are unearthed, they could be significantly impacted if not appropriately treated. The Project's potential to impact buried, previously undiscovered prehistoric archaeological resources is a significant impact for which mitigation is required.

Threshold c:	***Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Although the Project site does not contain any known unique geologic features and no paleontological resources or sites were observed by BFSA during a field investigation, the Project site and off-site development area is underlain with Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits that have a high paleontological sensitivity for fossils of large, terrestrial Ice Age vertebrates (BFSA, 2016b, pp. 1-2). In an event that the Project's construction activities encroach into previously undisturbed Quaternary very old alluvial fan deposits and/or late-Quaternary sandy axial channel deposits, the Project could result in impacts to important

paleontological resources that may exist below the ground surface *if* they are unearthed and not properly treated. Therefore, the Project's potential to directly or indirectly destroy a unique paleontological resource buried beneath the ground surface determined to be a significant impact and mitigation is required.

Threshold d:	***Would the Project disturb any human remains, including those interred outside of formal cemeteries?***

Neither the Project site nor the off-site development area contains a cemetery and no known formal cemeteries are located within the immediate site vicinity. Field surveys conducted on the Project site did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. (BFSA, 2016a, p. 4.0-1) Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code § 7050.5 "Disturbance of Human Remains." According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98, any potential impacts to human remains, including human remains of Native American ancestry, that may result from development of the Project would be less than significant.

Threshold e:	***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)?***

BFSA conducted an intensive pedestrian survey and found no prehistoric resources on or near the Project site (BFSA, 2016a, p. 6.0-1). BFSA also conducted a records search with SCCIC and the Native American Heritage Commission (NAHC) Sacred Lands File; neither database identified any resources of Native American provenance on or within one-mile of the Project site that is listed or eligible for listing in the California Register of Historical Resources or a local register of historic resources (BFSA, 2016a, p. 5.0-2). Accordingly, the Project would not cause a substantial adverse change in the significance of a tribal cultural

resource, defined in Public Resources Code Section 21074, and that is listed or eligible for listing in in the California Register of Historical Resources and/or a local register of historical resources as defined in Public Resources Code Section 5020.1(k). No impact would occur.

Threshold f:	***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 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 order to evaluate whether tribal cultural resources are present at the Project site, BFSA conducted a Sacred Lands File (SLF) records search through the Native American Heritage Commission (NAHC). The results of the SLF search are included in *Technical Appendix D1*. The results of the SLF search did not identify any previously identified Native American cultural resources within the Project site boundary (BFSA, 2016a, p. 5.0-2)

Notwithstanding, the Project's CEQA compliance process is subject to Assembly Bill 52 (AB 52). The primary intent of AB 52 is to establish a consultation process between potentially affected Native American tribes and CEQA lead agencies that aims to identify tribal cultural resources that would potentially be impacted by a proposed project.

During the AB 52 consultation process, the City of Chino was notified by one (1) Native American tribe with a traditional use area that encompasses the Project site that tribal cultural resources had the potential to be uncovered on the Project site during construction. Accordingly, although considered unlikely, implementation of the Project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074. Mitigation would be required.

4.5.5 Cumulative Impact Analysis

The Project's potential to contribute to cumulative impacts to historical resources was analyzed in conjunction with other projects located in areas that were once similarly influenced by the historical agricultural industry of the City of Chino and the region. Record searches and field surveys indicate the absence of significant historical sites and resources on the Project site; therefore, the Project has no potential to contribute towards a significant cumulative impact to historical sites and resources.

The Project's potential to result in cumulatively considerable impacts to archaeological resources was also analyzed in conjunction with other projects located in areas that were once similarly influenced by the historical agricultural industry of the City of Chino and the region, in addition to the traditional use areas of Native American tribes that are affiliated to the Project site. Although development activities on the Project site would not impact any known prehistoric archaeological resources, there is the remote potential that prehistoric archaeological resources are buried beneath the surface of the Project site and could be impacted during construction. Other projects within region would similarly have the potential to impact unknown, subsurface prehistoric archaeological resources during ground-disturbing activities. Therefore, the potential for development on the Project site to impact subsurface archaeological deposits is a cumulatively-considerable impact for which mitigation is required.

The Project's potential to result in cumulatively considerable impacts to paleontological resources were analyzed in conjunction with other projects located in the region that are underlain by older Pleistocene deposits. Although development activities on the Project site would not impact any known paleontological resources, the Project site sits atop early and late-Pleistocene soils that contain high paleontological sensitivity indicating there is the remote potential that paleontological resources are buried beneath the surface of the Project site and could be impacted during construction. Other development projects in the cumulative study area with similar geologic characteristics as the Project site would have a similar potential to uncover unique paleontological resources. Therefore, the potential for the Project to impact subsurface paleontological resources is a cumulatively-considerable impact for which mitigation is required.

Mandatory compliance with the provisions of California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 *et. seq.*, would assure that all future development projects within the region treat human remains that may be uncovered during development activities in accordance with prescribed, respectful, and appropriate practices, thereby avoiding cumulative impacts.

The Project's potential to result in cumulatively considerable impacts to tribal, religious, and cultural resources were analyzed in conjunction with other projects located in the influence areas of the tribes in the region. One (1) Native American tribe stated that there is potential for tribal cultural resources to be uncovered during construction on the Project site. This Native American tribe has a traditional use area that encompasses the Chino Valley, and other development projects within the Chino Valley would have a similar potential to uncover tribal cultural resources. Therefore, the potential for the Project to impact tribal cultural resources is a cumulatively-considerable impact for which mitigation is required.

4.5.6 Significance of Impacts Before Mitigation

Threshold a: No Impact. The Project would not impact a historic resource. No historic resources are present on the Project site; therefore, no historic resources could be altered or destroyed by construction or operation of the Project.

Threshold b: Significant Direct and Cumulatively Considerable Impact. Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact significant prehistoric archaeological resources that may be buried beneath the ground surface.

Threshold c: Significant Direct and Cumulatively Considerable Impact. The Project would not impact any known paleontological resource or unique geological feature. However, the Project site contains alluvium soils with a high sensitivity for paleontological resources. Accordingly, construction activities on the Project site have the potential to unearth and adversely impact paleontological resource that may be buried beneath the ground surface.

Threshold d: Less-than-Significant Impact. In the unlikely event that human remains are discovered during Project grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 *et. seq.* Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated, and would preclude the potential for significant impacts to human remains.

Threshold e: No Impact. The Project site does not contain any recorded Native American cultural resources; therefore, the Project would not cause a substantial adverse change in the significance of a tribal cultural

resource that is listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources.

Threshold f: Significant Direct and Cumulatively Considerable Impact. Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact tribal cultural resources that may be buried beneath the ground surface.

4.5.7 MITIGATION

The following mitigation measures are recommended to reduce the Project's potential impact to prehistoric archaeological resources and tribal cultural resources that have the potential to be present beneath the Project site and/or off-site improvement area and discovered during ground-disturbing construction activities.

MM 4.5-1 Prior the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that a professional archaeologist (hereafter "Project Archaeologist") has been retained to conduct monitoring of all mass grading activities. The Project Archaeologist shall have the authority to redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction.

MM 4.5-2 Prior the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that the Native American Tribe(s) that requested consultation with the City during the AB 52 process (hereafter referred to as "Native American Tribal Representatives") received a minimum of 30 days' advance notice of all mass grading and trenching activities. The Native American Tribal Representatives also shall be notified of and allowed to attend the pre-grading meeting with the City and Project construction contractors and/or monitor all Project mass grading and trenching activities. In the event that suspected archaeological resources are unearthed, the Native American Tribal Representatives shall have the authority to redirect earth moving activities in the affected area.

MM 4.5-3 Prior to the issuance of a grading permit, the Project Applicant or construction contractor shall provide evidence to the City of Chino that the construction site supervisors and crew members involved with grading and trenching operations have received training by the Project Archaeologist to recognize tribal cultural resources should such resources be unearthed during ground-disturbing construction activities. Any Native American Tribal Representatives shall be allowed to attend the training session. The training will include a brief review of the cultural sensitivity of the Project site and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols.

MM 4.5-4 If a suspected tribal cultural resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource by the Project Archaeologist and the Native American Tribal Representative. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a

determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure MM 4.5-5 shall apply.

MM 4.5-5 If a significant archaeological and/or tribal cultural resource is discovered on the property, ground disturbing activities shall be suspended 50 feet around the resource until a treatment plan is implemented. A treatment plan shall be prepared and implemented, subject to approval by the City of Chino, to protect the identified tribal cultural resource(s) from damage and destruction. The treatment plan shall contain a research design and data recovery program necessary to document the size and content of the discovery such that the resource(s) can be evaluated for significance under CEQA criteria. The research design shall list the sampling procedures appropriate to exhaust the research potential of the tribal cultural resource(s) in accordance with current professional archaeology standards. The treatment plan shall require monitoring by the appropriate Native American Tribe(s) during data recovery and shall require that all recovered artifacts undergo basic field analysis and documentation or laboratory analysis, whichever is appropriate. At the completion of the basic field analysis and documentation or laboratory analysis, any recovered tribal cultural resource(s) shall be processed and curated according to current professional repository standards. The collections and associated records shall be donated to an appropriate curation facility, or, the artifacts may be delivered to the appropriate Native American Tribe(s) if that is recommended by the City of Chino. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of Chino, the South Central Coastal Information Center (SCCIC) at California State University (CSU), Fullerton, and the appropriate Native American Tribe(s).

The following mitigation measures are recommended to reduce the Project's potential impact to paleontological resources that have the potential to be present beneath the Project site and/or off-site improvement area and discovered during ground-disturbing construction activities.

MM 4.5-6 Prior to the issuance of a grading permit, the Project Applicant shall provide evidence to the City of Chino that a qualified paleontologist has been retained to conduct monitoring of grading and excavation operations in Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits.

MM 4.5-7 The paleontological monitor shall conduct full-time monitoring in areas of grading or excavation in the shallow subsurface of Quaternary (early-Pleistocene) very old alluvial fan deposits and late-Quaternary (late-Pleistocene and Holocene) sandy axial channel deposits. The paleontological monitor shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that may contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow the removal of abundant and large specimens in a timely manner. The significance of the discovered resources shall be determined by the paleontologist. If the resource is significant, Mitigation Measure MM 4.5-8 shall apply. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.

MM 4.5-8 If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist.

Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontological storage. Prior to grading permit inspection approval, a qualified paleontologist shall prepare a final report that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and contains evidence that the resources were curated by an established museum repository. The report shall be submitted to the City of Chino.

4.5.8 Significance After Mitigation

Threshold b: Less-Than-Significant with Mitigation Incorporated. Implementation of MM 4.5-1 through MM 4.5-5 would ensure that an archaeological monitoring program is implemented during ground disturbing activities, and would ensure that any archaeological resources that may be uncovered are appropriately treated as recommended by a qualified archaeologist. With implementation of the required mitigation, the Project's potential impact to archaeological resources would be reduced to less-than-significant.

Threshold c: Less-Than-Significant with Mitigation Incorporated. Mitigation Measures MM 4.5-6 through MM 4.5-8 would ensure the proper identification and subsequent treatment of any paleontological resources that may be encountered during ground-disturbing activities associated with implementation of the proposed Project. Therefore, with implementation of Mitigation Measures MM 4.5-6 through MM 4.5-8, the Project's potential impact to paleontological resources would be reduced to less-than-significant.

Threshold f: Less-Than-Significant with Mitigation Incorporated. Implementation of MM 4.5-1 through MM 4.5-5 would ensure the proper identification and subsequent treatment of any tribal cultural resources that may be encountered during ground-disturbing activities associated with implementation of the proposed Project. Therefore, implementation of MM 4.5-1 through MM 4.5-5, the Project's potential impact to tribal cultural resources would be reduced to less-than-significant.

4.6 GEOLOGY AND SOILS

The following analysis primarily is based on information contained on a geotechnical evaluation of the Project site prepared by LGC Geo-Environmental, Inc. (hereafter, "LGC") titled, "Geotechnical Investigation and Manure Evaluation for the Proposed 121 Acre Richland/Chino Bickmore Properties Business Center and Residential Development in the City of Chino, San Bernardino County, California," and dated September 13, 2016. The technical report is included as *Technical Appendix E* to this EIR (LGC, 2016). Additional sources of information used to support the analysis in this Subsection include the Geology and Soils section (Section 4.6) of the certified Final Program EIR prepared for the City of Chino General Plan (SCH No. 2008091064), dated May 21, 2010 (Chino, 2010b), the Chino Municipal Code (Chino, 2018) and field observations by T&B Planning, Inc. (Atalla, 2016). Refer to Section 7.0, *References*, for a complete list of reference sources used in this analysis.

4.6.1 EXISTING CONDITIONS

A. Soils

Five (5) types of soils are located on the Project site, as determined by a soils and geotechnical investigation conducted by LGC in 2015 and 2016: manure/organic soil, undocumented artificial fill, topsoil, alluvium, and older alluvium. The characteristics of the soil conditions encountered on the Project site are summarized below.

1. Manure/Organic Soil

Manure and partially organic soils are found at the ground surface in the northeastern portion of the Project site and typically range in thickness between 0.3-foot and 1.2 feet. Isolated areas of the Project site feature deposits of manure and partially organic soils about 2.4 to 9.0 feet thick. (LGC, 2016, p. 5)

2. Undocumented Artificial Fill

Undocumented, non-engineered artificial fills are scattered over the majority of the Project site. These areas include backfilled former retention basins from the previous dairy operations in the northeast, northwest, and southwest corners of the Project site. The approximate depth of these fill soils is estimated to range in depth from approximately 0.5 foot to 6.5 feet, to as much as 9.0 feet. Where observed these non-engineered fill soils are generally comprised of silty sand, clayey sand and sandy silt, which are very fine to coarse grained, various shades of yellow, brown and olive, dry to very moist, loose to dense and soft to stiff, desiccated, locally porous, some gravel, root and rootlets with some organics and traces of manure. (LGC, 2016, p. 5)

3. Topsoil

Topsoil was encountered at the ground surface during geological field investigations across the majority of the Project site, ranging in depth from 0.6-foot to 6.0 feet. These materials were generally consisted of silty sand, clayey sand and sandy silt, which were very fine to coarse grained, various shades of olive, brown, gray and orange, dry to moist, loose to medium dense and soft to stiff, with some gravel, desiccated, porous, locally micaceous and slightly mottled, with some organics, roots, and rootlets. (LGC, 2016, p. 5)

4. Alluvium

Alluvium was found below the undocumented artificial fill and topsoil during geological field investigations, ranging in depths to approximately 0.8 foot to 20.0 feet. These materials were generally comprised of silty sand, clayey sand, sandy silt, clayey silt, silty clay and sandy clay; with a trace of gravel; which were very

fine to coarse grained; various shades of brown, olive, gray and orange, dry to very moist, medium dense to dense and firm to very stiff, local areas of abundant calcium nodules and caliche, some pinhole pores, with a trace of mottling and locally desiccated. Portions of the alluvium are wet at various depths. (LGC, 2016, p. 5)

5. Older Alluvium

Older alluvium soils observed below alluvium soils during geological field investigations, ranging in depth from 0.8 foot to 20.0 feet. These materials were generally comprised of sand, silty sand, clayey silt, silty clay and sandy clay that were very fine to coarse grained; damp to wet; medium dense to very dense and firm to very stiff, locally friable, with some pinhole pores, root casts and rootlets, and traces of caliche. (LGC, 2016, p. 5)

B. Surface and Groundwater

Groundwater was encountered by LGC on the Project site at depths between 24 feet to 30 feet below the existing ground surface. Based on a review of current and archival groundwater information, LGC estimates that groundwater in the Project area ranges between 25 feet and 75 feet below the ground surface. No surface water was observed on the Project site. (LGC, 2016, p. 6)

C. Seismic Hazards

The Project site is located in an area of southern California that is subject to strong ground motions due to seismic events (i.e., earthquakes). The geologic structure of southern California is dominated mainly by northwest-trending faults associated with the San Andreas system. The San Andreas Fault system includes several major branches, including the San Jacinto and Elsinore faults, as well as numerous minor branches. The Chino-Central Avenue Fault (located approximately 3.4 miles to the south) and the Whittier Fault (located approximately 7.1 miles to the southwest) are the nearest active faults to the Project site (LGC, 2016, p. 6). An active fault is defined by the California Geological Survey as a fault that has experienced surface displacement within the Holocene Epoch (roughly the last 11,000 years).

Secondary hazards associated with earthquakes include surface rupture, ground failure, unstable soils, and slopes. Each of these hazards is briefly described below.

1. Fault Rupture

Fault rupture can occur along pre-existing, known active fault traces; however, fault rupture also can splay from known active faults or rupture along unidentified fault traces. There are no active or potentially active faults occurring on the Project site and no known faults are mapped trending through or toward the site. Therefore, the potential for fault rupture on the Project site is negligible. (LGC, 2016, p. 6)

2. Liquefaction

Liquefaction is a phenomenon in which loose, saturated, relatively cohesion-less soil deposits lose shear strength during strong ground motions, which causes the soil to behave as a viscous liquid. Liquefaction is generally limited to the upper 50 feet of subsurface soils. Research indicates that loose granular soils of Holocene- to late Pleistocene-age below a near-surface groundwater table are most susceptible to liquefaction, while the stability of most clayey material is not adversely affected by vibratory motion (Southern California Earthquake Center, 1999, pp. 5-6). Therefore, in order for liquefaction to occur, soils

must be, generally, of Holocene to late Pleistocene age, granular, loose-to-medium dense, relatively saturated near the ground surface and subjected to a sufficient magnitude and duration of ground shaking.

Based on soil borings and a review of current and archival groundwater information, LGC determined that the Project site contained potentially liquefiable soils at depths approximately 15 to 20 feet below the existing ground surface. (LGC, 2016, pp. 6-7)

3. Unstable Soils and Slopes

The Project site is generally flat and does not contain steep natural or manufactured slopes, nor is the Project site located adjacent to any existing steep natural or manufactured slopes (Google Earth, 2017). As such, the site is not susceptible to seismically induced landslides and rockfalls.

D. Slope and Soil Instability Hazards

1. Soil Erosion

Erosion is the process by which the upper layers of the surface (such as soils) are worn and removed by the movement of water or wind. Soils with characteristics such as low permeability and/or low cohesive strength are more susceptible to erosion than those soils having higher permeability and cohesive strength. Additionally, the slope gradient on which a given soil is located also contributes to the soil's resistance to erosive forces. Because water is able to flow faster down steeper gradients, the steeper the slope on which a given soil is located, the more readily it will erode. According to the City of Chino General Plan EIR, soils on the Project site and in the surrounding area are moderately susceptible to water erosion (Chino, 2010b, p. 4.6-7).

Wind erosion can damage land and natural vegetation by removing soil from one place and depositing it in another. It mostly affects dry, sandy soils in flat, bare areas, but wind erosion may occur wherever soil is loose, dry, and finely granulated. According to the City of Chino General Plan EIR, soils on the Project site and in the surrounding area are moderately susceptible to wind erosion (Chino, 2010b, p. 4.6-7). Under existing conditions, the Project site has the potential to contribute windblown soil and sand because portions of the Project site are undeveloped with no or little vegetative cover and loose and dry topsoil conditions.

2. Settlement Potential

Settlement refers to unequal compression of a soil foundation, shrinkage, or undue loads being applied to a building after its initial construction that affect the soil foundation. The City of Chino General Plan EIR indicates that soil settlement is a common occurrence throughout the City of Chino (Chino, 2010b, p. 4.6-7). According to LGC, the existing non-engineered artificial, topsoil, and weathered portions of the upper alluvium in their existing state exhibit the potential to settle or hydro-consolidate. (LGC, 2016, p. 9)

3. Shrinkage/Subsidence Potential

Subsidence is a gradual settling or sudden sinking of the ground surface (i.e., loss of elevation). The principal causes of subsidence are aquifer-system compaction, drainage of organic soils, underground mining, and natural compaction. Shrinkage is the reduction in volume in soil as the water content of the soil drops (i.e., loss of volume).

According to the City of Chino General Plan EIR, the Project site is located in an area of the City with "low" potential for soil shrinkage (Chino, 2010b, Figure 4.6-3). Testing conducted by LGC on soils collected from the Project site confirmed the potential for shrinkage/subsidence (LGC, 2016, p. 13).

4. Soil Expansion Potential

Expansive soils are soils that exhibit cyclic shrink and swell patterns in response to variations in moisture content. According to the City of Chino General Plan EIR, the Project site is located in an area of the City with "low" potential for expansive soils (Chino, 2010b, p. 4.6-8, Figure 4.6-3). Based on laboratory test results, LGC determined that the upper onsite soils have a low expansion potential (LGC, 2016, p. 9).

5. Landslide Potential

The Project site and immediately surrounding properties are flat to gently sloping and contain no steep natural or manufactured slopes (Atalla, 2016); thus, there is no potential for landslides to occur on or immediately adjacent to the site.

4.6.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the federal, State, and local environmental laws and related regulations governing issues related to geology and soils that are applicable to the Project.

A. Federal Plans, Policies, and Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017a)

B. State Plans, Policies, and Regulations

1. Alquist-Priolo Earthquake Fault Zoning Act (A-P Act)

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. (CGS, n.d.)

The A-P Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. ["Earthquake Fault Zones" were

called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet). (CGS, n.d.)

Under existing conditions, there are no active faults on the Project site, and the Project site is not located within any Alquist-Priolo Earthquake Fault Zone (LGC, 2016, p. 6).

2. Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. (CGS, n.d.)

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake–induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CGS, n.d.)

The SHMA requires site-specific geotechnical investigations be conducted within the ZORI to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CGS, n.d.)

The Project site is not located within a Seismic Hazard Zone or ZORI (CGS, 2018).

3. Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. (CGS, n.d.)

The law requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-

family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. (CGS, n.d.)

As noted above, the Project site is not located within a Seismic Hazard Zone or ZORI (CGS, 2018).

4. Building Earthquake Safety Act

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "…designed and constructed to minimize fire hazards and to resist…the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CAB, n.d.)

5. California Building Standards Code (Title 24)

California Code of Regulations (CCR) Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) § 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). (CBSC, 2016, p. 3)

The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code §§ 17958.7 and 18941.5). (CBSC, 2016, pp. 53, 56)

6. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows: 1) That the quality of all the waters of the State shall be protected; 2) That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and 3) That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards, RWBs, (based on hydrogeologic barriers) and the State Water Board, SWB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWB provides program guidance and oversight, allocates funds, and reviews RWB decisions. In addition, the SWB allocates rights to the use of surface water. The RWBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWB and RWBs have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The RWBs regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the RWBs and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

C. Local Plans, Policies, and Regulations

1. City of Chino General Plan

The Safety Element of the City of Chino General Plan provides information about natural and human-made hazards in Chino and establishes goals, objectives, and policies to prepare and protect the community from such risks. The Safety Element states that the City shall reduce the risk of geologic hazards to the community by enforcing building codes, requiring the preparation of soils and geologic reports, and using the most current and comprehensive geological hazard mapping available to assist in the evaluation go potential seismic hazards to proposed new development. (Chino, 2010a)

2. City of Chino Building Code

The City of Chino Building Code is based on the CBSC and is supplemented with local amendments. The Building Code regulates the construction, alteration, repair, moving, demolition, conversion, occupancy, use, and maintenance of all buildings and structures in the City of Chino. The Building Code is included in Chapter 15 of the City of Chino Municipal Code. (Chino, 2018, Chapter 15.04)

3. City of Chino Municipal Code

Chino Municipal Code Section 19.08.010 requires development projects to be evaluated by geologic engineering reports that identify site-specific geologic and seismic conditions and provide site-specific recommendations to preclude adverse impacts from unstable soils and strong seismic ground-shaking. These reports shall recommend corrective action to preclude any structural damage/hazards that may be caused by geological hazards or unstable soils. (Chino, 2018, Section 19.08.010)

The City of Chino Municipal Code (§ 19.09.030) also requires development projects to incorporate an erosion and dust control plan into proposed clearing/grubbing, stockpile, grading, or demolition activities to minimize water- and windborne erosion. Specific dust control measures – and a schedule for their implementation – are required to be listed on the grading/construction plan as well as the name and contact information of the person responsible for carrying out the dust control measures. The erosion and dust control plan is required to be approved by City of Chino staff prior to the issuance of the applicable construction permit. (Chino, 2018, Section 19.09.030)

Lastly, Chino Municipal Code Chapter 13.25 et seq. requires the City to participate as a "Co-permittee" under the NPDES permit program to accomplish the requirements of the CWA. Pursuant to this chapter, the City is required to participate in the improvement of water quality and comply with Federal requirements for the control of urban pollutants to stormwater runoff. (Chino, 2018, Chapter 13.25)

4. SCAQMD Rule 403 (Fugitive Dust)

SCAQMD Rule 403 (Fugitive Dust) requires the implementation of best available dust control measures (BACMs) during active operations capable of generating fugitive dust. The purpose of this Rule is to minimize the amount of particulate matter in the ambient air as a result of anthropogenic fugitive dust sources. (SCAQMD, 2005)

4.6.3 Basis for Determining Significance

The proposed Project would result in a significant impact related to geology and soils if the Project or any Project-related component would:

a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
    i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
    ii. *Strong seismic ground shaking?*
    iii. *Seismic-related ground failure, including liquefaction?*
    iv. *Landslides?*
b. *Result in substantial soil erosion or the loss of topsoil?*
c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e. Have soils incapable of inadequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects related to geology and soils that could result from development projects. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold. Of note, the December 2018 revisions to Appendix G of the CEQA Guidelines recommend presenting the evaluation of paleontological resources within the discussion of the Geology and Soils topic, instead of under the topic of Cultural Resources (where Appendix G previously recommended the presentation of the paleontological resources evaluation). In this EIR, refer to EIR Subsection 4.5, *Cultural and Tribal Cultural Resources*, for an evaluation of potential impacts to paleontological resources.

4.6.4 IMPACT ANALYSIS

Threshold a:	***Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:***
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
	ii. Strong seismic ground shaking?
	iii. Seismic-related ground failure, including liquefaction?
	iv. Landslides?

The Project would not construct any structures within its potential off-site development area. (Improvements within the potential off-site development area would be limited to underground utility improvements and roadway improvements). Accordingly, the Project's potential activities within the off-site development area would have no potential to expose people or structures to potential adverse effects from seismic-related hazards. The analysis on the following pages evaluates the potential for the Project to expose people or structures on the Project site to substantial seismic-related hazards.

A. Rupture of Known Earthquake Fault

There are no known active or potentially active faults on or trending toward the Project site and the Project site is not located within an Alquist-Priolo Earthquake Fault Zone (LGC, 2016, p. 6). Because there are no known faults located on or trending towards the Project site, there is no potential for Project to directly or indirectly expose people or structures to substantial adverse effects related to ground rupture. No impact would occur.

B. Strong Seismic Ground Shaking

The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. This risk is not considered substantially different than the risk to other similar properties in the southern California area. The City of Chino will apply a mandatory condition of approval on the Project that will require all buildings on the

Project site to be constructed in accordance with the California Building Standards Code (CBSC), also known as California Code of Regulations (CCR), Title 24 (Part 2), and the City of Chino Building Code. The CBSC and City of Chino Building Code provide standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures, and have been specifically tailored for California earthquake conditions. In addition, the CBSC (Chapter 18) and the City of Chino Municipal Code (§ 19.08.010) require development projects to be analyzed by geologic engineering reports to identify site-specific geologic and seismic conditions and provide site-specific recommendations to preclude adverse effects involving unstable soils and strong seismic ground-shaking, including, but not limited to, recommendations related to ground stabilization, selection of appropriate foundation type and depths, and selection of appropriate structural systems. The Project Applicant has retained a professional geotechnical firm, LGC, to prepare a geologic engineering report for the Project site, which is included as *Technical Appendix E* to this EIR. In conformance with the Municipal Code, the City will condition the Project to comply with the site-specific ground preparation and construction recommendations contained in *Technical Appendix E*. With mandatory compliance with standard and site-specific design and construction measures (contained in *Technical Appendix E*), implementation of the Project would not directly or indirectly expose people or structures to substantial adverse effects, including loss, injury or death, involving seismic ground shaking. Impacts would be less than significant.

C. Seismic-Related Ground Failure

As noted above, the Project would be required to be designed and constructed in accordance with applicable seismic safety guidelines, including the standard requirements of the CBSC and City of Chino Building Code. Furthermore, and pursuant to Municipal Code § 19.08.010, the Project also would be required to comply with the grading and construction recommendations contained within the geologic engineering report for the Project site, including the recommendations to over excavate and compact on-site soils to minimize the potential for liquefaction (see *Technical Appendix E*). LGC modeled the liquefaction potential for the Project and concluded that, with implementation of geologic engineering report's recommendations, the liquefaction potential at the Project site would be low (LGC, 2016, p. 7). As such, development on the Project site would not expose people or structures to substantial hazards associated with seismic-related ground failure and/or liquefaction hazards. Impacts would be less than significant.

D. Landslides

The Project site is relatively flat, as is the surrounding area. There are no hillsides or steep slopes on the Project site or in the immediate vicinity of the site. The Project would not substantially alter the existing topographic conditions on the Project site or create substantial manufactured slopes. Furthermore, any manufactured slopes on the Project site would be required to comply with the design recommendations contained in the Project's site-specific geologic engineering report (as required by Municipal Code § 19.08.010), which would ensure that all slopes are engineered and constructed to maximize stability and preclude safety hazards to on- and off-site areas. Accordingly, the Project would not be exposed landslide risks from adjacent off-site areas and development of the Project would not pose a substantial direct or indirect landslide risk to surrounding properties. No impact would occur.

Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?

A. Impact Analysis for Temporary Construction-Related Activities

Development of the Project would result in the demolition of all structures on the Project site, and grading and construction would occur on all portions of the Project site and within the Project's off-site development areas. Exposed/disturbed soils would be subject to potential erosion during rainfall events or high winds due to the removal of stabilizing vegetation and impervious surfaces and exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project site will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities, including grading (pursuant to Chino Municipal Code Section 13.25.235). The NPDES permit is required for all development projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. The City's Municipal Separate Storm Sewer System (MS4) NPDES Permit requires development projects to prepare and submit to the City for approval a site-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is required to identify a combination of erosion control and sediment control measures (i.e., Best Management Practices) that will reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges during construction. In addition, the Project will be required to comply with SCAQMD Rule 403's requirements related to fugitive dust control, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. Lastly, the Project would be required to implement an erosion and dust control plan pursuant to Chino Municipal Code §19.09.030. With mandatory compliance to the requirements noted in the respective SWPPP, as well as applicable regulatory requirements, the potential for water and/or wind erosion during construction of the Project site and the Project's off-site development area would be less than significant.

B. Impact Analysis for Long-Term Operational Activities

Upon Project build-out, the Project site would be covered by buildings, landscaping, and/or impervious surfaces. Stormwater runoff from the Project site would be captured, treated to reduce waterborne pollutants (including sediment), and conveyed via an on-site storm drain system. Chino Municipal Code Section 13.25.500 requires development projects to prepare and submit to the City for approval a Water Quality Management Plan (WQMP). The WQMP is required to identify an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges. The WQMP also is required to establish a post-construction implementation and maintenance plan to ensure on-going, long-term erosion protection. Compliance with the WQMP will be required as a condition of approval for the Project, as would the long-term maintenance of erosion and sediment control features. The preliminary WQMP for the Project is provided as *Technical Appendix E* to this EIR. Because the Project will be required to utilize erosion and sediment control measures to preclude substantial, long-term soil erosion and loss of topsoil, the Project would result in less-than-significant impacts related to soil erosion.

Upon Project building, the Project's off-site development area would be covered by impervious surfaces and/or landscaping. The Project's off-site development area would not contain any exposed soils and would not be exposed to any disturbance that would expose or loosen soils. The potential for soil erosion within the Project's off-site development area would be less than significant.

Threshold c:	***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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?***

The Project would not construct any above-ground improvements within its potential off-site development area. (Improvements within the potential off-site development area would be limited to underground utility improvements and roadway improvements). Accordingly, the Project's potential activities within the off-site development area would have no potential to cause the instability of any geologic units or soils. The analysis that follows evaluates the potential for development on the Project site to cause the instability of geologic units and/or soils.

The Project site is relatively flat and no substantial natural or man-made slopes are located on or adjacent to the Project site (Atalla, 2016). The Project is not anticipated to result in the creation of any new slopes that could be subject to landslides. Any manufactured slopes that would be necessary to accommodate the Project are required to be engineered for long-term stability and would be required to be constructed in accordance with the applicable geologic engineering report for the Project site (as required by Chino Municipal Code § 19.08.010). Accordingly, the Project would result in less-than-significant impacts associated with landslide hazards.

Based on laboratory testing of subsurface soils from the Project site, LGC determined that near surface soils have potential for shrinkage/subsidence and collapse (LGC, 2016, pp. 10, 13). However, the geotechnical report for the Project site (*Technical Appendix E*) indicate that the site's shrinkage/subsidence and settlement potential could be attenuated through the removal of undocumented fill down to competent materials and replacement with properly compacted fill (LGC, 2016, pp. 11-12). Through standard conditions of approval, the City will condition the Project to comply with the site-specific ground preparation and construction recommendations contained in the Project's geologic engineering report. Based on the foregoing, potential impacts related to soil shrinkage/subsidence and collapse would be less than significant.

Lateral spreading is primarily associated with liquefaction hazards. As noted above under the discussion of Threshold "a," the potential for liquefaction at the Project site is considered low based on the Project site's soil conditions and the design/construction features that would be incorporated into the Project. Accordingly, impacts associated with lateral spreading would not occur.

Threshold d:	***Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

Based on laboratory test results, LGC determined that the near surface soils on the Project site have a low expansion potential (LGC, 2016, p. 16). As such, Project implementation would not create substantial direct or indirect risks to life or property associated with the presence of expansive soils. Impacts would be less than significant.

[Note: Threshold (d) is based on Appendix G of the CEQA Guidelines and references Table 18-1-B of the 1994 Uniform Building Code (UBC) which has been superseded by the current building code, the 2013 CBSC. The 2013 CBSC references ASTM D-4829, a standard procedure for testing and evaluating the expansion index (or expansion potential) of soils established by ASTM International, which was formerly known as the American Society for Testing and Materials (ASTM). ASTM D-4829 was used as the standard for evaluating the Project's potential impact related to expansive soils in the above analysis.]

Threshold e:	***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 Project would be required to connect to the City's municipal wastewater system and would not be permitted to use septic tanks or alternative wastewater disposal systems. Accordingly, the Project would result in no impact related to the use of or performance of septic tanks and/or alternative wastewater systems.

4.6.5 Cumulative Impact Analysis

As noted in the foregoing analysis, all potential Project-related direct and indirect impacts related to geology and soils would be precluded through mandatory conformance with the California Buildings Standards Code, City of Chino Municipal Code, other standard regulatory requirements and site-specific geotechnical recommendations contained within *Technical Appendix E*, which will be incorporated into the Project's design and construction.

With the exception of erosion hazards, potential hazardous effects related to geologic and soil conditions addressed under Thresholds "a," "c," "d," and "e" are unique to individual development sites, and inherently restricted to the specific property proposed for development. That is, issues including fault rupture, seismic ground shaking, liquefaction, landslides, and expansive soils would involve effects to (and not from) a proposed development project, are specific to conditions on the subject property, and are not influenced by or additive with the geologic and/or soils hazards that may occur on other, off-site, properties. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no direct or indirect connection to similar potential issues or cumulative effects to or from other properties.

As discussed under Threshold "b," regulatory requirements would mandate that the Project incorporate measures design during construction and long-term operation to ensure that significant erosion impacts do not occur. Other development projects in the vicinity of the Project site would be required to comply with the same regulatory requirements as the Project to preclude substantial adverse water and wind erosion impacts. Because the Project and other projects within the cumulative study area would be subject to similar mandatory regulatory requirements to control erosion hazards during construction and long-term operation, cumulative impacts associated with wind and water erosion hazards would be less than significant.

4.6.6 Significance of Impacts Before Mitigation

Threshold a): Less-than-Significant Impact. The Project would not expose people or structures to substantial direct or indirect adverse effects related to liquefaction or fault rupture. The Project site is subject to seismic ground shaking associated with earthquakes; however, mandatory compliance with local and state ordinances and building codes including, but not limited to, the CBSC (Chapter 18) and the Chino Municipal Code (Section 19.08.010), would ensure that the Project minimizes potential hazards related to seismic ground shaking.

Threshold b): Less-than-Significant Impact. The Project would not result in substantial soil erosion or loss of topsoil. The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP), SCAQMD Rule 403, and Chino Municipal Code § 19.09.03 to minimize water and wind erosion. Following completion of development, the Project would be required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.

Threshold c): Less-than-Significant Impact. There is no potential for the Project to cause on- or off-site landslides or lateral spreading. Potential hazards associated with unstable soils would be precluded through mandatory adherence to the recommendations contained in the site-specific geologic engineering report.

Threshold d): Less-than-Significant Impact. The Project site contains soils with low susceptibility to expansion. Thus, implementation of the Project would not create substantial direct or indirect risks to life or property associated with the presence of expansive soils.

Threshold e): No Impact. No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.

4.6.7 MITIGATION

Impacts would be less than significant; therefore, mitigation is not required.

4.7 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based on a report prepared by Urban Crossroads, Inc. titled "Altitude Business Center Greenhouse Gas Analysis," dated May 24, 2018, and included as *Technical Appendix F* to this EIR (Urban Crossroads, 2018c). The analysis provided in this Subsection evaluates the Project's potential to generate greenhouse gas (GHG) emissions that could contribute substantially to Global Climate Change (GCC) and its associated environmental effects.

4.7.1 EXISTING CONDITIONS

A. *Introduction to Global Climate Change*

GCC is defined as the change in average meteorological conditions on Earth with respect to temperature, precipitation, and storms. GCC is a controversial environmental issue in the United States and there is much debate within the scientific community about the degree to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred over the course of thousands or millions of years, and that these historical changes to Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in planet Earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. (Urban Crossroads, 2018c, p. 9)

An individual land development project is not capable of generating the magnitude of GHG emissions necessary to cause a discernible effect on global climate. However, individual development projects may contribute to GCC by generating GHGs that combine with other regional and global sources of GHGs. (Urban Crossroads, 2018c, p. 9)

B. *Greenhouse Gases*

Carbon dioxide (CO_2), methane (CH_4), and Nitrous Oxide (N_2O) emissions are the focus of evaluation in this Subsection because these gases are the primary contributors to GCC resulting from land development projects. Although other substances, such as fluorinated gases, also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate the emissions of these gases. (Urban Crossroads, 2018c, p. 11)

GHGs have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. CO_2 is used as the base reference unit for GWP and, therefore, has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.7-1, *GWP and Atmospheric Lifetime of Select GHGs*. As shown in the Table 4.7-1, GWP ranges from 1 for CO_2 to 22,800 for Sulfur Hexafluoride (SF_6). (Urban Crossroads, 2018c, p. 14)

Provided below is a description of the various gases that contribute to GCC. For more information about these gases and their associated human health effects, refer to Section 2.4 of *Technical Appendix F* and the reference sources cited therein.

- Water Vapor (H_2O) is the most abundant and variable GHG in the atmosphere. Changes in the concentration of water vapor in the atmosphere are considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization.

Table 4.7-1 GWP and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	25
Nitrous Oxide	120	298
HFC-23	264	14,800
HFC-134a	14.6	1,430
HFC-152a	1.5	124
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: (Urban Crossroads, 2018c, Table 2-2)

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity rises (in essence, the air is able to 'hold" more water when it is warmer), leading to more water vapor in the atmosphere. The higher concentration of water vapor in the atmosphere is then able to absorb more indirect thermal energy radiated from the Earth, further warming the atmosphere and causing the evaporation cycle to perpetuate. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are able to reflect incoming solar radiation and thereby allow less energy to reach the Earth's surface and heat it up. There are no human health effects from water vapor itself; however, certain pollutants can dissolve in water vapor and the water vapor can then act as a pollutant-carrying agent. (Urban Crossroads, 2018c, pp. 11-12)

- Carbon Dioxide (CO_2) is an odorless and colorless GHG that is emitted from natural and man-made sources. Natural CO_2 sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Man-made CO_2 sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, human activities that produce CO_2 have increased dramatically. As an example, prior to the industrial revolution, CO_2 concentrations in the atmosphere were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Exposure to CO_2 in high concentrations can cause adverse human health effects, but outdoor (atmospheric) levels are not high enough to be detrimental to human health. (Urban Crossroads, 2018c, p. 12)

- Methane (CH_4) absorbs thermal radiation extremely effectively (i.e., retains heat). Over the last 50 years, human activities such as rice cultivation, cattle ranching, natural gas combustion, and coal mining have increased the concentration of methane in the atmosphere. Other man-made sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane; however, methane is an asphyxiant that may displace oxygen in enclosed spaces. (Urban Crossroads, 2018c, p. 12)

- Nitrous Oxide (N_2O) concentrations began to rise in the atmosphere at the beginning of the industrial revolution. N_2O can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. N_2O is produced by microbial processes in soil and water, including reactions that occur in nitrogen-containing fertilizer. In addition to agricultural

sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N_2O also is used as an aerosol spray propellant, as a preservative in potato chip bags, and in rocket engines and in race cars. Also, known as laughing gas, N_2O is a colorless GHG that can cause dizziness, euphoria, and hallucinations. In small doses, it is considered harmless; however, heavy and extended use can cause brain damage. (Urban Crossroads, 2018c, p. 12)

- Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were first synthesized in 1928 and have no natural source. CFCs were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and has been extremely successful, so much so that levels of CFCs are now remaining steady or declining. However, due to their long atmospheric lifetime, some of the CFCs will remain in the atmosphere for over 100 years. (Urban Crossroads, 2018c, p. 13)

- Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs and have one of the highest global warming potential ratings. The HFCs with the largest measured atmospheric abundances are (in order largest to smallest), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). No human health effects are known to result from exposure to HFCs, which are man-made and used for applications such as automobile air conditioners and refrigerants. (Urban Crossroads, 2018c, p. 13)

- Perfluorocarbons (PFCs) are primarily produced for aluminum production and semiconductor manufacture. PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). No human health effects are known to result from exposure to PFCs. (Urban Crossroads, 2018c, p. 13)

- Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. (Urban Crossroads, 2018c, p. 13)

C. Greenhouse Gas Emissions Inventory

1. Global and National

Worldwide, man-made GHG emissions are tracked by the Intergovernmental Panel on Climate Change. Man-made GHG emissions data is available through 2015. In 2015, total GHG emissions was approximately 28,872,564 gigagrams (Gg) of carbon dioxide equivalent (CO_2e) and the United States was the world's second-largest emitter of GHGs. (Urban Crossroads, 2018c, pp. 9-10)

The primary man-made GHG emitted in the United States was CO_2, representing approximately 83 percent of the United States' total GHG emissions. CO_2 emissions from fossil fuel combustion is the largest source

of GHG emission in the United States, accounting for 78 percent of the United States' total GHG emissions. (Urban Crossroads, 2018c, p. 10)

2. State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on 2017 GHG inventory data, California emitted approximately 440.4 million metric tons (MMT) CO_2e. California is the second-largest emitter of GHGs in the United States. (Urban Crossroads, 2018c, p. 10)

3. Project Site

Under existing conditions, the Project site contains residential and agricultural uses. Sources of GHG emissions on-site under existing conditions include residential activity from the three on-site residences (e.g., energy use, vehicular transportation to-and-from the site) and from agricultural operations (e.g., transporting goods to and from the site, on-site maintenance). For purposes of the analysis herein, the existing GHG emissions on the Project site are assumed to be zero and all GHG emissions generated by the Project would be "new" emissions.

D. Potential Effects of Climate Change in California

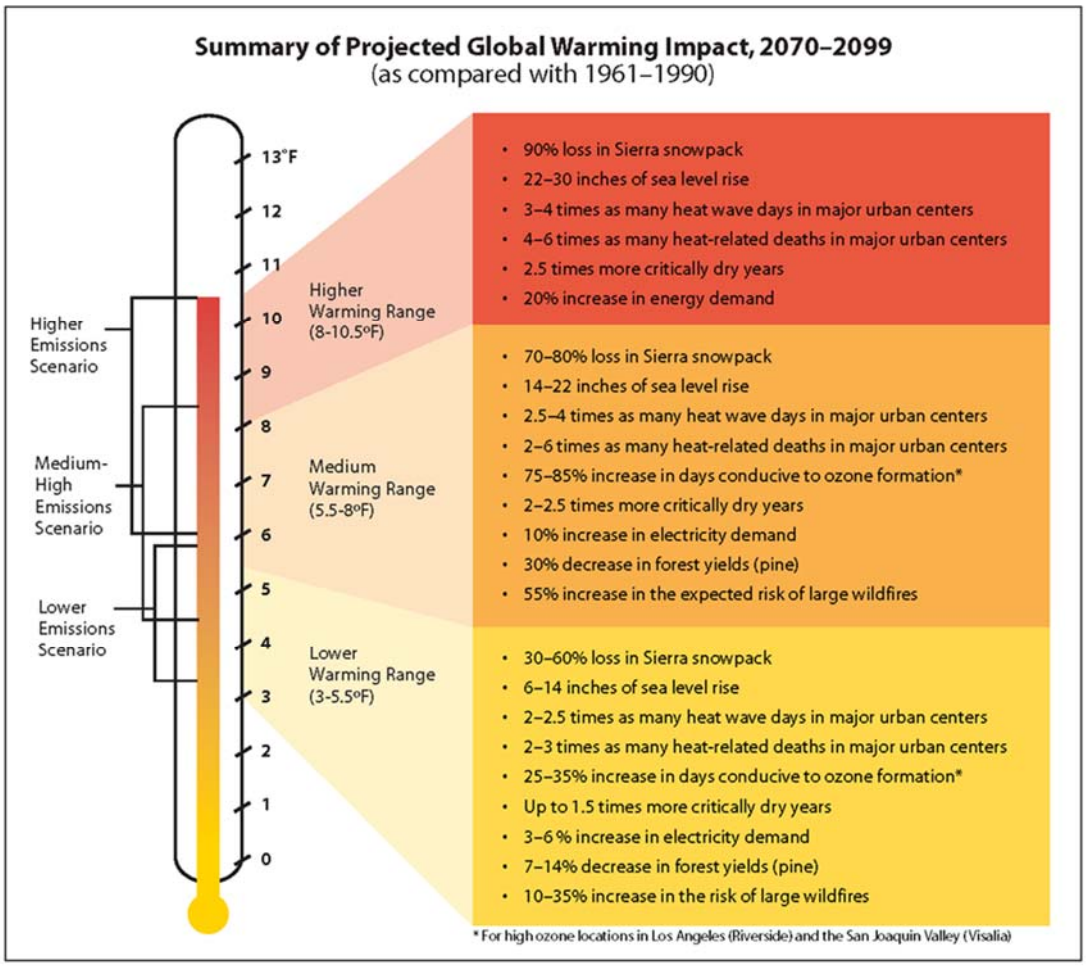
In February 2006, the California Climate Change Center (CCCC) published a report titled "Scenarios of Climate Change in California: An Overview" (the "Climate Scenarios report") that is generally instructive about effects of climate change in California. The Climate Scenarios report used a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.4°F); medium warming range (5.5-7.8°F); and higher warming range (8.0-10.4°F). (CCCC, 2006, p. 7)

In addition, the California Natural Resources Agency adopted a "California Climate Adaptation Strategy" in 2009. This report details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes, and responds to the Governor's Executive Order (EO) S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts. (California Natural Resources Agency, 2009, p. 4)

Based on the estimated scenarios presented in the Climate Scenario and California Climate Adaption Strategy reports, Table 4.7-2, *Summary of Projected Global Warming Impact, 2070-2099*, presents potential impacts of global warming within California. The potential effects of climate change in California are summarized in more detail below and include, but are not limited to, the following:

- Human Health Effects. Climate change can affect the health of Californians by increasing the frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires. The primary concern is not the change in average climate, but rather the projected increase in extreme conditions that are responsible for the most serious health consequences. In addition, climate change has the potential to influence asthma symptoms and the incidence of infectious disease. (CCCC, 2006, p. 26)

Table 4.7-2 Summary of Projected Global Warming Impact, 2070-2099



Source: (Urban Crossroads, 2018c, Exhibit 2-A)

- Water Resource/Supply Effects. Although most climate model simulations predict relatively moderate changes in precipitation over the 21st century, rising temperatures are expected to lead to diminishing snow accumulation in mountainous watersheds, including the Sierra Nevada. Warmer conditions during the last few decades across the western United States have already produced a shift toward more precipitation falling as rain instead of snow, and snowpacks over the region have been melting earlier in the spring. Delays in snow accumulation and earlier snowmelt can have cascading effects on water supplies, natural ecosystems, and winter recreation. (CCCC, 2006, p. 14)

- Agriculture Effects. Agriculture, along with forestry, is the sector of the California economy that is most likely to be affected by a change in climate. California agriculture is a $68 billion industry. California is the largest agricultural producer in the nation and accounts for 13% of all U.S. agricultural sales, including half of the nation's total fruits and vegetables. Regional analyses of climate trends over agricultural regions of California suggest that climate change is already affecting the agriculture industry. Over the period 1951 to 2000, the growing season has lengthened by about a day per decade, and warming temperatures resulted in an increase of 30 to 70 growing degree days per decade, with much of the increase occurring in the spring. Climate change affects agriculture

directly through increasing temperatures and rising CO_2 concentrations, and indirectly through changes in water availability and pests. (CCCC, 2006, p. 19)

- Forest and Landscape Effects. Climate changes and increased CO_2 concentrations are expected to alter the extent and character of forests and other ecosystems. The distribution of species is expected to shift; the risk of climate-related disturbance such as wildfires, disease, and drought is expected to rise; and forest productivity is projected to increase or decrease – depending on species and region. In California, these ecological changes could have measurable implications for both market (e.g., timber industry, fire suppression and damages costs, public health) and nonmarket (e.g., ecosystem services) values. (CCCC, 2006, p. 22)

- Sea Level Effects. Coastal observations and global model projections indicate that California's open coast and estuaries will experience rising sea levels during the next century. Sea level rise already has affected much of the coast in southern California, Central California, and the San Francisco Bay and estuary. These historical trends, quantified from a small set of California tide gages, have approached 0.08 inches per year (in/yr), which are rates very similar to those estimated for global mean sea level. So far, there is little evidence that the rate of rise has accelerated, and indeed the rate of rise at California tide gages has actually flattened since about 1980. However, projections indicate that substantial sea level rise, even faster than the historical rates, could occur during the next century. Sea level rise projections range from 5.1–24.4 inches (in.) higher than the 2000 sea level for simulations under the lower emissions scenario, from 7.1–29.9 in. for the medium-high emission scenario, and from 8.5–35.2 in. for the higher emissions scenario. (CCCC, 2006, p. 10)

4.7.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the international, federal, State, and local environmental plans, policies, and regulations related to GHG emissions.

A. International Plans, Policies, and Regulations

1. Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." (UNFCCC, n.d.)

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. The detailed rules for the implementation of the Protocol were adopted at Conference of the Parties (COP) 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012. (UNFCCC, n.d.)

In Doha, Qatar, on December 8, 2012, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;

- A revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and

- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period. (UNFCCC, n.d.)

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. (UNFCCC, n.d.)

During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of five percent against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, n.d.)

2. The Paris Agreement

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. (UNFCCC, n.d.)

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. (UNFCCC, n.d.)

The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. (UNFCCC, n.d.)

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There will also be a global stock-taking every five years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties. (UNFCCC, n.d.)

The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, n.d.)

On June 1, 2017, President Donald Trump announced he would begin the process of withdrawing the United States from the Paris Agreement. In accordance with articles within the Paris Agreement, the earliest effective date for the United States' withdrawal from the Agreement is November 4, 2020.

B. Federal Plans, Policies, and Regulations

1. Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

C. State Plans, Policies, and Regulations

1. Title 24 Building Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2013 Building Energy Efficiency Standards) were adopted in 2012 and became effective on July 1, 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than the previous Building Energy Efficiency Standards for residential construction and 30 percent more efficient than the previous Standards for nonresidential construction.

Title 24, Part 11 is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

2. California Assembly Bill No. 1493 (AB 1493)

On September 24, 2009, CARB adopted amendments to the "Pavley" regulations that reduce greenhouse gas (GHG) emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September amendments cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the CAA requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions." (CARB, 2017a)

CARB's Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017a)

The regulations had been threatened by automaker lawsuits and were stalled by the EPA's delay in reviewing and then initially denying California's waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, 2017a)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017a)

3. Executive Order S-3-05

Executive Order (EO) S-3-05 documents GHG emission reduction goals, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the GHG reduction targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually to report: progress toward meeting the GHG goals; GHG impacts to California; and applicable Mitigation and Adaptation Plans. EO S-3-05 goals for GHG emissions reductions include: reducing GHG emissions to 2000 levels by the year 2010; reducing GHG emissions to 1990 levels by the year 2020; and reducing GHG emissions to 80 percent below 1990 levels by 2050. (CCC, n.d.)

4. California Assembly Bill 32 – Global Warming Solutions Act of 2006

In September 2006, former Governor Schwarzenegger signed Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, which represents a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to AB 32, the CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will

help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste. (CARB, 2014)

AB 32 specifically requires that CARB shall do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020, and update the Scoping Plan every five years.
- Maintain and continue reductions in emissions of GHG beyond 2020.
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020.
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010.
- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions.
- Convene an Environmental Justice Advisory Committee to advise the Board in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32.
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures. (CARB, 2014)

In November 2007, CARB completed its estimated calculations of Statewide 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs) (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 $MMTCO_2e$ for 2000 and without emissions reduction measures 2010 emissions were projected to be 532 $MMTCO_2e$. "Business as usual" conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 $MMTCO_2e$. (CARB, 2007)

AB 32 required CARB to develop a Scoping Plan which lays out California's strategy for meeting the goals. The Scoping Plan must be updated every five years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Table 4.7-3, *Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 $MMTCO_2e$, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the State's reduction target. According to the Measure Documentation Supplement to the

Table 4.7-3 Scoping Plan GHG Reduction Measures Towards 2020 Target

Recommended Reduction Measures	*Reductions Counted toward 2020 Target of 169 MMT CO2e*	*Percentage of Statewide 2020 Target*
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

Source: CARB. 2008, MMTons CO2e: million metric tons of CO2e
[1]Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.
[2]According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 $MMTCO_2e$ (or approximately 1.2 percent of the GHG reduction target). (CARB, 2014)

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team (CAT) early actions and additional GHG reduction measures,

identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.

When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 metric tons of carbon dioxide equivalent ($MTCO_2e$). As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 $MTCO_2e$, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

In May 2014, CARB approved the *First Update to the Climate Change Scoping Plan (Update)*, which builds upon the initial Scoping Plan with new strategies and recommendations. The *Update* highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in Executive Order S-3-05. The *Update* recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 $MTCO_2e$ 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 $MTCO_2e$. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 $MTCO_2e$ (down from 509 $MTCO_2e$), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition. (CARB, 2014)

In January 2017, CARB released the draft *Second Update to the Scoping Plan*, which identifies the State's post-2020 reduction strategy. The *Second Update* would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Senate Bill (SB) 32. Key GHG emissions reductions programs that the draft *Second Update* proposes to build upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, cleaner car, truck and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. It should be noted the *Second Update* was under consideration by CARB and was not adopted at the time the NOP for this EIR was published.

5. California Senate Bill No. 1368 (SB 1368)

In 2006, the State Legislature adopted Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006), which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (CEC, n.d.)

6. Executive Order S-01-07

Executive Order (EO) S-01-07 is known as the Low Carbon Fuel Standard (LCFS). The EO seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuels they sell to the California market meet a declining standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold. (CCC, n.d.)

7. Senate Bill 1078

Senate Bill (SB) 1078 establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CCC, n.d.)

8. Senate Bill 107

SB 107 directed California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010. (CCC, n.d.)

9. Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, revising California's existing Renewable Portfolio Standard (RPS) upward to require all retail sellers of electricity to serve 33% of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities.

10. Senate Bill 97

The CEQA Guideline amendments do not identify a quantitative threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The GHG analysis thresholds incorporated into the CEQA Guidelines' Environmental Checklist (Guidelines Appendix G) are addressed in this EIR. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. (OPR, n.d.)

11. Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. (CARB, 2017b)

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed. (CARB, 2017b)

Each of California's MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if

implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate "alternative planning strategy" (APS) to meet the targets. The APS is not a part of the RTP. (CARB, 2017b)

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region's SCS (or APS) that meets the targets (see Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28.). (CARB, 2017b)

12. Executive Order B-30-15 & Senate Bill 32

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal set by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80 percent below 1990 greenhouse gas emissions levels by 2050). (CCC, n.d.)

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050.

At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15 and SB 32 because the Project's horizon (buildout) year would occur in 2020. Pursuant to guidance from the Association of Environmental Professionals (AEP), GHG emissions "…should be identified for the project horizon year and lead agencies should consider the project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Because the Project's opening year would be 2020 the Project's GHG emissions are instead evaluated against California Assembly Bill 32 (AB 32), which identifies a target to reduce GHG emissions statewide to 1990 levels by 2020. Demonstrating compliance with AB 32's target for 2020 also would show that the Project would not inhibit the State's ability to achieve the 2030 target established by SB 32, as the bulk of the GHG reductions needed by 2030 would occur at the state and regional levels and compliance with the AB 32 threshold would demonstrate that the Project is on trajectory to meet the year 2030 SB 32 emissions target.

D. Local Plans, Policies, and Regulations

1. City of Chino Climate Action Plan

The City adopted the Chino Climate Action Plan (CAP) on November 19, 2013; and the CAP went into full effect as of January 2, 2014. The CAP is the City of Chino's long-range plan to reduce local GHG emissions that contribute to climate change. The components of the Chino CAP that are applicable to private development are implemented through City of Chino Municipal Code Chapter 15.45. As part of the CAP, the City of Chino selected a goal to reduce the City's GHG emissions to a level 15-percent below its 2008 GHG emissions levels by 2020, which the City determined would achieve the GHG emissions reduction mandates of AB 32 and also would be consistent with the recommendations contained in the CARB AB 32 Scoping Plan to meet the State's GHG reduction goals (Chino, 2013, p. 13). The Cap also is intended to

support tiering and streamlining of future development projects within the City of Chino pursuant to CEQA Guidelines §§ 15152 and 15183.5. Individual development projects such as the proposed Project are required to demonstrate consistency with applicable measures from the CAP. The City concluded that City-wide GHG emissions consistent with the CAP would result in a less-than-significant environmental impact (Chino, 2013, pp. 5, 13).

A majority of the local GHG reduction policies specified in the adopted CAP require compliance with existing City ordinances and/or provide guidance to City staff and decision-makers to ensure that GHGs are reduced at a policy level; as such, a majority of the GHG reduction policies specified in the CAP are not directly applicable to private development projects (Chino, 2013, pp. 21-54). However, the CAP does establish performance standards for new development projects to reduce GHG emissions through implementation of one or a combination of the following three (3) options: Option 1) exceed by 3-percent the mandatory California Energy Code (Title 24, Part 6) standards in effect at the time of development application submittal; Option 2) achieve an equivalent reduction through voluntary measures in the California Green Building Standards Code (Title 24, Part 11, CALGreen) in effect at the time of development application submittal; or Option 3) provide other equivalent GHG reductions through design measures that would result in GHG emissions reductions of 0.04 metric tons (MT) of carbon dioxide equivalent (CO_2e) per residential dwelling unit per year and/or 0.11 MT CO_2e per thousand square feet (TSF) of commercial/industrial use per year (pursuant to City of Chino Municipal Code § 15.45.070).

A lawsuit challenging the validity of the City's CAP was dismissed by the California Superior Court and the CAP and its EIR (SCH No. 2013071037) were determined by the Court to be in compliance with California law. Therefore, for purposes of this EIR, the analysis considers the proposed Project's consistency with the CAP, which the City of Chino implements with full force and effect.

4.7.3 Methodology for Estimating Greenhouse Gas Emissions

The California Emission Estimator Model (CalEEMod), developed by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA), was used to quantify GHG emissions from Project-related construction and operational activities. CalEEMod is the software analysis tool recommended by the SCAQMD for the quantification of GHG emissions associated with the construction and operation of land development projects because it is the only software model maintained by CAPCOA and incorporates locally-approved emission factors and methodologies for estimating air pollutant emissions. The most recent version of CalEEMod available at the time the NOP for this EIR was published was used in the Project analysis (v2016.3.2, released on October 17, 2017). (Urban Crossroads, 2018c, p. 43) Inputs and outputs from the model runs for both Project-related construction and operational activities are provided in Appendix 3.1 of *Technical Appendix F*.

Although CalEEMod is a comprehensive analysis tool, CalEEMod is limited to quantifying GHG emissions that are known as of the publication date of the model, there may be sources of GHG emissions that are not known (or not quantifiable) at this time but may be measurable by the time the Project is constructed and operational. Furthermore, CalEEMod relies on data published by the CARB and other data sources that are representative of local/regional averages but that may not be completely representative of the Project's construction and/or operational characteristics (and, as a result, may slightly underestimate or overestimate the Project-related emissions). Lastly, not all the CalEEMod calculation data files are known or publicly available for peer-review, although it is reasonable to assume that the data contained in CalEEMod is accurate and grounded in science because CalEEMod is developed by CAPCOA in collaboration with 35 local air pollution control districts.

A life-cycle analysis (LCA), which assesses economy-wide GHG emissions from construction (i.e., the processes in manufacturing and transporting all raw materials used in the project development and infrastructure) and operation, was not conducted for the Project due to the lack of scientific consensus on LCA methodology. A LCA depends on emission factors or econometric factors that are not well established for all processes as of the date the NOP for this EIR was published. Additionally, SCAQMD recommends analyzing a project's direct and indirect GHG emissions generated within California in-lieu of a LCA because the life-cycle effects from a project could occur outside of California and these effects might not be well understood or well documented and would be infeasible to mitigate. (Urban Crossroads, 2018c, p. 43)

A. Methodology for Estimating Project-Related Construction Emissions

The Project's construction-related GHG emissions were calculated using the same methodology, construction schedule information, and equipment fleet information that were used to calculate construction-related criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.3, *Air Quality* (Urban Crossroads, 2018c, p. 43). Refer to EIR Subsection 4.3 and *Technical Appendix F* for a detailed description of the methodology used to calculate the construction GHG emissions of the Project's implementing actions.

In accordance with the SCAQMD recommendations, the Project's construction-related GHG emissions were quantified, amortized over a 30-year period, and then added to the sum of the Project's annual, operational GHG emissions (Urban Crossroads, 2018c, p. 44).

B. Methodology for Estimating Project-Related Operational Emissions

The Project's operational GHG emissions were calculated using the same methodology that was used to calculate operational criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.3, *Air Quality* (Urban Crossroads, 2018c, pp. 44-49). Refer to EIR Subsection 4.3 and *Technical Appendix F* for a detailed description of the methodology used to calculate the Project's operational GHG emissions.

4.7.4 Basis for Significance

In order to assess the significance of a project's environmental impacts, it is necessary to identify quantitative or qualitative thresholds that, if exceeded, would constitute a finding of significance. As discussed above in Subsection 4.7.1, that although the Project's estimated GHG emissions can be calculated, the direct impacts of Project-related emissions on GCC and global warming cannot be determined on the basis of available science because of the small proportion of the Project's GHG emissions relative to worldwide sources of GHG. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect the global climate. (Urban Crossroads, 2018c, p. 9)

AB 32 states, in part, that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the proposed Project and its implementing actions would have no potential to result in a direct impact to global warming; rather, Project-related contributions to GCC, if any, only have potential significance on a cumulative basis. Therefore, the analysis below focuses on the potential for the Project and its implementing actions to contribute to GCC in a cumulatively considerable way.

The CEQA Guidelines, as of the publication date of the NOP for this EIR (May 20, 2017), indicate that a project would result in a significant impact on climate change if a project were to:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As part of the November, 30, 2015, decision in *Center for Biological Diversity v. California Department of Fish and Wildlife ("Newhall Ranch")*, the California Supreme Court outlined four potential pathways that CEQA compliance documents could use to determine if GHG emissions from a specific project would be significant under Threshold "a:"

- Substantiation of Project Reductions from "Business as Usual" (BAU). A lead agency may use a BAU comparison based on the CARB Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project level reductions from new land use development at the proposed location;

- Compliance with Regulatory Programs or Performance-based Standards. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities;

- Compliance with GHG Reduction Plans or Climate Action Plans (CAPs). A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis; or

- Compliance with Local Air District Thresholds. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts.

Based on the foregoing guidance from the California Supreme Court, GHG emissions that are consistent with the City of Chino's CAP would result in a less-than-significant impact under Threshold "a." The City of Chino's CAP is a geographically-specific GHG emissions reduction plan that was adopted by the City for purposes of reducing City-wide GHG emissions in a manner consistent with AB 32 and applicable state legislation. Further, the validity of the City's CAP was challenged and the challenge was dismissed by the California Superior Court. As such, the Court upheld the validity of the CAP and the City of Chino enforces the CAP with full force and effect. For purposes of evaluation under CEQA, the City of Chino determined that GHG emissions from a private development project found to be consistent with the CAP would result in a less-than-significant impact to the environment pursuant to Threshold "a."

4.7.5 IMPACT ANALYSIS

Threshold a: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The City determined that GHG emissions consistent with the City's CAP would achieve the GHG emissions reduction mandate of AB 32 and would result in a less-than-significant impact to the environment (Chino, 2013, pp. 5, 13). The City's CAP is codified as Chapter 15.45 of the Chino Municipal Code and is applicable to all new development projects in the City. The Project's Master Site Assessment and/or Site Assessment proposals would receive conditions of approval requiring compliance with the CAP, and the City would review future Project-related development actions, including grading and building permit applications, to assure compliance with the Master Site Approval and Site Approval conditions of approval. With mandatory compliance to applicable measures of the City of Chino CAP, the Project would not generate GHG emissions that have a substantial effect on the environment. Impacts would be less than significant.

For informational purposes, the Project's annual GHG emissions – in consideration of the Project's compliance with the CAP, specifically Section 15.45.070.1 of the Chino Municipal Code – are summarized in Table 4.7-4, *Project Annual GHG Emissions*.

Table 4.7-4 Project Annual GHG Emissions

Emission Source	Emissions (metric tons per year)			
	CO2	CH4	N2O	Total CO2E
Annual construction-related emissions amortized over 30 years	82.04	0.02	0.00	82.47
Area	0.03	0.00	0.00	0.03
Energy from Building Envelope	2,559.04	0.09	0.03	2,569.78
Energy from On-Site Equipment	121.01	0.04	0.00	121.99
Mobile (Trucks)	30,541.68	0.96	0.00	30,565.56
Mobile (Passenger Cars)	8,740.67	0.18	0.00	8,745.11
Waste	265.59	15.70	0.00	657.99
Water Usage	70/06	0.45	0.01	84.65
Total CO_2E (All Sources)	**42,827.60**			

Source: (Chino, 2013, Table 3-1)

Threshold b: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purposed of reducing the emissions of greenhouse gases?

The City of Chino's CAP was designed to further GHG reduction efforts at the local level. Because the Project would not conflict with the City's CAP (as summarized under the analysis for Threshold "a"), the Project and its implementing actions would reflect specific local requirements that would substantially lessen GHG emissions.

The Project also would comply with (or not obstruct) a number of State regulations, policies, plans, and policy goals that would further reduce GHG emissions, including Title 24 California Building Standards Code (CBSC), Assembly Bill 32 (AB 32), and Senate Bill 32 (SB 32).

The Project would include contemporary, energy-efficient/energy-conserving design features and operational procedures. Warehouse land uses are not inherently energy-intensive and the total Project energy demands would be comparable to, or less than, other warehouse projects of similar scale and configuration due to the

Project's modern construction and requirement to be constructed in accordance with the most recent CBSC (Urban Crossroads, 2018e, p. 1). The CBSC includes the California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential Buildings. The California Energy Code was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated approximately every three years to improve energy efficiency by allowing incorporating new energy efficiency technologies and methods. The Project would be required to comply with all applicable provisions of the CBSC. As such, the Project's energy demands would be minimized through design features and operational programs that, in aggregate, would ensure that Project energy efficiencies would comply with – or exceed – incumbent CBSC energy efficiency requirements, thereby minimizing GHG emissions produced during from energy consumption. The Project has no potential to be inconsistent with the mandatory regulations of the CBSC.

As previously discussed in Subsection 4.7.2B, CARB identified measures in its Scoping Plan that would reduce statewide GHG emissions and achieve the emissions reductions goals of AB 32. Thus, projects that are consistent with the CARB Scoping Plan would not conflict with AB 32's mandate to reduce state GHG emissions. Table 4.7-5, *CARB Scoping Plan Summary*, presents the 39 recommended actions identified by CARB in its Scoping Plan. Of the 39 measures identified, those that would be applicable to the Project consist primarily of actions related to energy efficiency, green building design, recycling and waste, sustainable forests, and water uses. A summary of the Project's consistency with the CARB Scoping Plan recommended actions is presented on the following pages and also summarized in Table 4.7-5.

- Energy Efficiency & Green Buildings: Actions E-1, E-2, CR-1, CR-2, and GB-1 target regulatory and building practices to increase energy efficiency. The Project is designed to surpass the incumbent Title 24 Energy Efficiency standards and would not conflict with these actions. Based on the foregoing, implementation of the Project would not conflict with or preclude implementation of the CARB Scoping Plan energy efficiency or green building strategy actions. (Urban Crossroads, 2018c, pp. 50-53)

- Recycling and Waste: Actions RW-1 through RW-3 involve reducing methane emissions at landfills, increasing waste diversion, and mandating commercial recycling. The Project will be required to recycle a minimum of 50 percent from construction activities and parcel delivery operations per State and County requirements; therefore, the Project and its implementing actions would not conflict with the CARB Scoping Plan recycling and waste actions. (Urban Crossroads, 2018c, pp. 50-53)

- Sustainable Forests: Action F-1 targets preserving forest sequestration and encouraging the use of forest biomass for sustainable energy generation. The Project will increase carbon sequestration by increasing on-site trees per the Project landscaping plan. Based on the foregoing, the Project would not conflict or preclude implementation of the CARB Scoping Plan sustainable forest actions. (Urban Crossroads, 2018c, pp. 50-53)

- Water Use: Actions W-1 through W-6 are applicable to development proposals like the Project; however, because Project implementation would not exceed the audit threshold for these actions, the Project would be considered consistent with Actions W-1 through W-6. The Project will include use of low-flow fixtures and efficient landscaping per State requirements. Based on the foregoing, the operation of the Project would not conflict with or preclude implementation of the CARB Scoping Plan water use actions.

Table 4.7-5 CARB Scoping Plan Summary

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	NO	NO
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	NO	NO
T-3	Transportation	Regional Transportation-Related GHG Targets	NO	NO
T-4	Transportation	Vehicle Efficiency Measures	NO	NO
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	NO	NO
T-6	Transportation	Goods-movement Efficiency Measures	NO	NO
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	NO	NO
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	NO	NO
T-9	Transportation	High Speed Rail	NO	NO
E-1	Electricity & Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	YES	NO
E-2	Electricity & Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	NO	NO
E-3	Electricity & Natural Gas	Renewable Portfolio Standard	NO	NO
E-4	Electricity & Natural Gas	Million Solar Roofs	YES	NO
CR-1	Electricity & Natural Gas	Energy Efficiency	YES	NO
CR-2	Electricity & Natural Gas	Solar Water Heating	NO	NO
GB-1	Green Buildings	Green Buildings	YES	NO
W-1	Water	Water Use Efficiency	YES	NO
W-2	Water	Water Recycling	NO	NO
W-3	Water	Water System Energy Efficiency	YES	NO
W-4	Water	Reuse Urban Runoff	NO	NO
W-5	Water	Increase Renewable Energy Production	NO	NO
W-6	Water	Public Goods Charge (Water)	NO	NO
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	YES	NO
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	NO	NO
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	NO	NO
I-4	Industry	Refinery Flare Recovery Process Improvements	NO	NO
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	NO	NO
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	NO	NO
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	NO	NO
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	NO	NO
F-1	Forestry	Sustainable Forest Target	NO	NO
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	NO	NO
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility & Non-Semiconductor Applications (Discrete Early Action)	NO	NO
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	NO	NO
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	NO	NO
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	NO	NO
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	NO	NO
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	NO	NO
A-1	Agriculture	Methane Capture at Large Dairies	NO	NO

Source: (Urban Crossroads, 2018c, Table 3-2)

As demonstrated by the foregoing analysis, the Project would not conflict with or preclude implementation of the CARB Scoping Plan.

In April 2015, Governor Edmund Brown Jr. signed EO B-30-15, which advocated for a statewide GHG-reduction target of 40 percent below year 1990 levels by 2030 and 80 percent below 1990 levels by 2050. In September 2016, Governor Brown signed the Senate Bill (SB) 32. SB 32 formally established a statewide goal to reduce GHG emissions to 40 percent below year 1990 levels by 2030. To date, no statutes or regulations have been adopted to translate the year 2050 GHG reduction goal into comparable, scientifically-based statewide emission reduction targets.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the years 2020 and 2030 reduction targets established by AB 32 and SB 32, respectively (Urban Crossroads, 2018c, p. 26). As described above, the Project would not conflict with or obstruct implementation of the CARB Scoping Plan; therefore, the Project would not interfere with the State's ability to achieve the year 2030 GHG-reduction target established by SB 32.

Rendering a significance determination for year 2050 GHG emissions relative to EO B-30-15 would be speculative because EO B-30-15 establishes a goal more than three decades into the future; no agency with GHG subject matter expertise has adopted regulations to achieve these statewide goals at the project-level; and, available analytical models cannot presently quantify all project-related emissions in those future years. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the Project's emissions in 2050. (Urban Crossroads, 2018c, p. 54)

As described on the preceding pages, the Project would not conflict with the State's ability to achieve the State-wide GHG reduction mandates and would be consistent with applicable policies and plans related to GHG emissions reductions. Implementation of the Project would not actively interfere with any future federally-, State-, or locally-mandated retrofit obligations enacted or promulgated to require development projects to assist in meeting State-adopted GHG emissions reductions targets, including those established by EO S-3-05, EO B-30-15, or SB 32. For example, California has set a goal to obtain 100 percent of its electric power from zero-emission sources by 2045 and the uses proposed by the Project would be served by energy purveyors that will be required to rely increasingly on zero-emission sources. Additionally, vehicular traffic associated with the Project would be subject to increasingly stringent federal and State standards for fuel efficiency and related air emissions. Thus, the Project would be directly or indirectly obligated to comply with federal, State, and local energy efficiency standards intended to reduce GHG emissions and the Project would not obstruct the implementation of any such future requirements. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and would result in a less-than-significant impact.

4.7.6 Cumulative Impact Analysis

GCC occurs as the result of global emissions of GHGs. An individual development project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130[f]). Accordingly, the analysis provided in Subsection 4.7.5 reflects a cumulative impact analysis of the GHG emissions related to the Project. As concluded in Subsection 4.7.5, the Project would not conflict

with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Accordingly, the Project would not result in a cumulatively-considerable impact related to GHG emissions.

4.7.7 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The GHG emissions generated by the Project would be consistent with the City of Chino CAP. As such, implementation of the Project would not generate substantial GHG emissions – either directly or indirectly – that would have a significant impact on the environment.

Threshold b: Less-than-Significant Impact. The Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce GHG emissions.

4.7.8 Mitigation

Impacts would be less than significant; therefore, mitigation is not required.

4.8 HAZARDS AND HAZARDOUS MATERIALS

The information and analysis presented in this Subsection is primarily based on two (2) investigations documents that were performed by Hillmann Consulting (hereafter "HMC") to determine the potential presence of hazards hazardous materials on the Project site under existing conditions. The report titled "Phase I Environmental Site Assessment" (dated April 10, 2017) is included as *Technical Appendix G1* to this EIR (HMC, 2017a). The report titled "Phase II Environmental Site Assessment" (dated June 12, 2017) is included as *Technical Appendix G2* to this EIR (HMC, 2017b). This Subsection also relies on information from the City of Chino General Plan (Chino, 2010a), the City of Chino General Plan EIR (Chino, 2010b), and Google Earth (Google Earth, 2017).

For the purposes of this EIR, the term "toxic substance" is defined as a substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include chemical, biological, flammable, explosive, and radioactive substances.

For purposes of this EIR, the term "hazardous material" is defined as a substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness. Hazardous waste is defined in the California Code of Regulations, Title 22, § 66261.3. The defining characteristics of hazardous waste are: ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity, (explosives or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States Environmental Protection Agency (USEPA) as capable of inducing systemic damage to humans or animals). Certain wastes are called "Listed Wastes" and are found in the California Code of Regulations, Title 22, §§66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous nature or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

4.8.1 EXISTING CONDITIONS

As previously described in EIR Section 2.0 and illustrated on Figure 2-4, *Aerial Photograph*, the Project site contains a variety of residential and agricultural uses. The southern portion of the site, abutting Bickmore Avenue, is occupied by one residential structure, ornamental landscape nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use. The northeastern portion of the site, which abuts Kimball Avenue, is occupied by two residential structures, a non-operational dairy farm, and ancillary structures/facilities associated with the shuttered dairy farm. The north-central portion of the Project site contains agricultural fields and vacant land that has been subject to weed abatement activities (i.e., discing).

A. Historical Review, Regulatory Records Review, and Field Reconnaissance

1. Historical Review

HMC reviewed various sources of information to determine the historical use of the Project site, including historical aerial photographs, historical topographic maps, fire insurance maps, city directories, petroleum/natural gas wells review, and interviews. Please refer to *Technical Appendix G1* for a more detailed description of HMC's research results.

No information regarding the Project site is available prior to 1902; however, on topographic maps dating between 1902 and 1933, the Project site is depicted as undeveloped land. In aerial photographs dating to 1938, the entire Project site appeared to be agricultural land. By 1946, a dairy farm and feed lots are present in the southwest corner of the Project site while the remaining portions of the site continue to be used for agriculture. The Project site remains largely unchanged until the mid-1970s, when two dairy farms with feedlots appear in the northeastern portion of the Project site. At some point prior to 1994, the dairy farm in the southwest corner of the site is converted to a nursery for ornamental landscape plants, which continues to operate on the site today. Between 1994 and 2005, one of the dairy farms in the northeast portion of the site is abandoned and razed; stockpiles of concrete from the demolition activities are still present on the Project site today. The final dairy farm on the Project site – located in the northeast corner of the site – was shuttered prior to 2014 and its structures remain on the Project site. (HMC, 2017a, pp. 18-21)

2. Regulatory Records Review

HMC researched federal, State, and local environmental records databases to identify properties within one mile of the Project site with reported environmental issues. A summary of the research results is provided below; a detailed description of the environmental record review results is included in *Technical Appendix G1* to this EIR.

The Project site is listed on five (5) regulatory databases related to hazardous materials and hazardous wastes. Four (4) of the listings are historic listings related to stormwater discharge and solid wastes (likely manure) generated by the former dairy farms on the Project site. The final site listing is related to a 2003 release of mineral oil, possibly polychlorinated biphenyl (PCB), following an accident where a vehicle struck a pole-mounted transformer. (HMC, 2017a, pp. 13-14)

Properties within a one-mile radius are listed on a combined seven (7) federal, State, and/or local hazardous materials-related databases, related to hazardous waste handling, underground storage tanks, and stormwater discharge (HMC, 2017a, p. 14). Refer to *Technical Appendix G1* for a detailed summary of the hazardous materials sites in close proximity to the Project site. None of the hazardous materials listings for properties near the Project site would result in a substantial environmental hazard at the Project site (HMC, 2017a, p. 16).

3. Field Reconnaissance

HMC conducted four (4) inspections of the Project site, with the most recent inspection occurring in 2017. During these visits, HMC observed numerous structures on the Project site, including occupied residences, ancillary agricultural structures that support existing on-site nursery operations, and abandoned dairy farm buildings and support structures. Given the age of the structures on the Project site, HMC determined it was reasonable to assume that asbestos containing materials (ACMs) and/or lead based paint (LBP) are present in some or all of the on-site structures. Multiple septic systems are located in the northeastern and southern portions of the Project site to dispose wastewater from the on-site structures. HMC observed on-site storage of hazardous and non-hazardous substances, including pesticides and fertilizer, in support of existing nursery operations. No stained or odorous soils were observed on the Project site; however, minor staining was observed on pavements in the southern portion of the site. Large piles of broken concrete and rebar are present on the northern portion of the Project site; this debris is the remnants of a former dairy on the Project site that was demolished in 2005. No staining or corrosion was observed on or near the debris piles and the debris is not considered hazardous. No ponds or waste pits were observed on the Project site; however, an agricultural waste pond was formerly present on the northern portion of the Project site; this pond was closed

in accordance with proper Regional Water Quality Control Board (RWQCB) procedures in 2004. Ten (10) abandoned water wells are located across the Project site as are four (4) pole mounted transformers that are suspected to contain polychlorinated biphenyls (PCBs) – although no leaks were observed on any of the transformers and no stained soils were observed in their vicinity. No evidence of underground storage tanks (USTs), drums, petroleum products, significant chemical release, corrosion, or stressed vegetation were found on the Project site. (HMC, 2017a, pp. 24-28, Appendix D)

B. Airport Hazards

The Project site is located approximately 0.1-mile south of the nearest runway at the Chino Airport and is located within the Airport's Airport Influence Area (AIA). At present, there is no valid Airport Land Use Compatibility Plan (ALUCP) applicable to the City of Chino that addresses the Chino Airport, as the adopted 1991 Plan does not reflect the current Airport Master Plan for the Chino Airport. Regardless, based on the 1991 ALUCP, the City of Chino General Plan establishes safety zones for areas within the Chino Airport AIA. As previously shown on Figure 2-4, *Chino Airport Safety Zones*, the northwestern corner of the Project site located within Airport Safety Zone I, the southwestern portion of the Project site located within Airport Safety Zone II, and the remainder of the property located within Airport Safety Zone III. Within Safety Zone I, the General Plan recommends no residential and industrial development and is designated in the General Plan Land Use Element for public uses. Within Safety Zone II the General Plan discourages residential development and recommends that non-residential uses in enclosed structures be limited to no more than 25 persons per acre. Within Safety Zone III, the General Plan recommends no restrictions on residential or other land uses. (Chino, 2010a, Figure LU-4; ALUC, 1991, Figure III-7; Chino, 2003, Exhibit 5.6-1)

The Project site also is located approximately 6.6 miles southwest of the nearest runway at the Ontario International Airport. The Project site is not located within the AIA for the Ontario Airport and, as such, would not be exposed to airport safety hazards associated with operations at the Ontario Airport (Ontario, 2011, Map 2-1; Google Earth, 2017).

C. Wildland Fire Hazards

The Project site is located in an urbanized portion of the City of Chino and is not located adjacent to any wildlands. According to the California Department of Forestry and Fire Protection (CalFire), the Project site is located within a "Non-Very High Fire Hazard Severity Zone" (CalFire, 2008). The Chino General Plan designates the Project site and its surrounding area as being subject to "little or no threat" from wildland fires (Chino, 2010a, Figure SAF-4).

4.8.2 Applicable Environmental Plans, Policies, and Regulations

Hazardous materials and hazardous wastes are regulated by various federal, State, and local regulations to protect public health and the environment. The section summarizes the overall regulatory framework governing hazardous materials management that is applied to the Project and the Project site.

A. Federal Plans, Policies, and Regulations

1. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment.

Through CERCLA, the Environmental Protection Agency (EPA) was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. (EPA, 2017e)

The EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act. Through various enforcement tools, the EPA obtains private party cleanup through orders, consent decrees, and other small party settlements. The EPA also recovers costs from financially viable individuals and companies once a response action has been completed. (EPA, 2017e)

The EPA is authorized to implement the Act in all 50 states and U.S. territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. (EPA, 2017e)

The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). (EPA, 2017e)

2. Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. (EPA, 2017f)

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. (EPA, 2017f)

3. Hazardous Materials Transportation Act (HMTA)

The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (OSHA, n.d.)

Hazardous materials regulations are subdivided by function into four basic areas:

- Procedures and/or Policies 49 CFR Parts 101, 106, and 107
- Material Designations 49 CFR Part 172
- Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
- Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177 (OSHA, n.d.)

The HMTA is enforced by use of compliance orders [49 U.S.C. 1808(a)], civil penalties [49 U.S.C. 1809(b)], and injunctive relief (49 U.S.C. 1810). The HMTA (Section 112, 40 U.S.C. 1811) preempts state and local

governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement. (OSHA, n.d.)

4. Hazardous Materials Transformation Uniform Safety Act of 1990

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. (OSHA, n.d.)

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. (OSHA, n.d.)

5. Occupational Safety and Health Act (OSHA)

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. (EPA, 2017g)

In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. (EPA, 2017g)

6. Toxic Substances Control Act

The Toxic Substances Control Act of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. (EPA, 2017h) Various sections of the TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture.
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found.
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.

- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information. EPA screens all TSCA b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons. (EPA, 2017h)

B. State Plans, Policies, and Regulations

1. Cal/OSHA and the California State Plan

Under an agreement with OSHA, since 1973 California has operated an occupational safety and health program in accordance with Section 18 of the federal OSHA. The State of California's Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as Cal/OSHA. The State of California's Division of Occupational Safety and Health (DOSH) is the principal agency that oversees plan enforcement and consultation. In addition, the California State program has an independent Standards Board responsible for promulgating State safety and health standards, and reviewing variances. It also has an Appeals Board to adjudicate contested citations and the Division of Labor Standards Enforcement to investigate complaints of discriminatory retaliation in the workplace.

Pursuant to 29 CFR 1952.172, the California State Plan applies to all public and private sector places of employment in the state, with the exception of federal employees, the United States Postal Service, private sector employers on Native American lands, maritime activities on the navigable waterways of the United States, private contractors working on land designated as exclusively under federal jurisdiction and employers that require federal security clearances. Cal/OSHA is the only agency in the state authorized to adopt, amend, or repeal occupational safety and health standards or orders. In addition, the Standards Board maintains standards for certain things not covered by federal standards or enforcement, including: elevators, aerial passenger tramways, amusement rides, pressure vessels and mine safety training. The Cal/OSHA enforcement unit conducts inspections of California workplaces in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries with high rates of occupational hazards, fatalities, injuries or illnesses.

2. California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Article 2, Section 25100, *et seq*.) is the primary hazardous waste statute in California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the state. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure its proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and broadening requirements for permitting facilities that treat hazardous waste. It also regulates a number of waste types and waste management activities not covered by federal law (RCRA).

3. *California Code of Regulations (CCR), Titles 22 and 26*

A variety of California Code of Regulation (CCR) titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Because California is a fully-authorized state according to RCRA, most regulations (i.e., 40 CFR 260, *et seq.*) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, the integration of state and federal hazardous waste regulations that make up Title 22 does not contain as many exemptions or exclusions as does 40 CFR 260. As with the HSC, Title 22 also regulates a wider range of waste types and waste management activities than does RCRA. To aid the regulated community, California has compiled hazardous materials, waste, and toxics-related regulations from CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24 and 27 into one consolidated listing: CCR Title 26 (Toxics). However, the hazardous waste regulations are still commonly referred to collectively as "Title 22."

C. *Local Plans, Policies, and Regulations*

The aforementioned federal and State hazardous materials regulations require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials to obtain a hazardous materials permit and submit a business plan to its local Certified Unified Program Agency (CUPA). The CUPA also ensures local compliance with all applicable hazardous materials regulations. The CUPA with responsibility for the City of Chino is the San Bernardino County Fire Department, Hazardous Materials Division (Chino, 2010b, p. 4.7-3). The San Bernardino County Fire Department, Hazardous Materials Division also manages the following hazardous waste programs: 1) Hazardous Materials Release Response Plans and Inventory; 2) California Accidental Release Program; 3) Underground Storage Tanks; 4) Aboveground Petroleum Storage Act/Spill Prevention, Control, and Countermeasure Plan; 5) Hazardous Waste Generation and Onsite Treatment; and 6) Hazardous Materials Management Plans and Inventory.

4.8.3 Basis For Determining Significance

The proposed Project would result in a significant impact to hazards and hazardous materials if the Project or any Project-related component would:

a. *Create a significant hazard to the public or the environment through routine transport use, or disposal of hazardous materials;*

b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment;*

c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*

d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result would it create a significant hazard to the public or the environment?*

e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?*

f. *For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?*

g. Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical adverse hazards- and hazardous materials-related effects that could result from development projects. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold.

4.8.4 IMPACT ANALYSIS

Threshold a:	***Would the Project create a significant hazard to the public or the environment through routine transport use, or disposal of hazardous materials?***
Threshold b:	***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 material into the environment?***

A. Impacts Analysis for Existing Site Conditions

As previously described under Subsection 4.8.1A, areas of the Project site may contain hazardous materials or substances related to the past and on-going agricultural activities and related development. Implementation of the Project would require demolition and removal of all existing structures, improvements, and organic wastes from the Project site and, therefore, has the potential to expose construction workers, the public, and the environment to a substantial safety hazard during the Project's construction process. In the event that persistent hazards or hazardous materials are present on-site, as described below, then the Project also has the potential to expose future on-site employees, the public, and the environment to a substantial safety hazard during the Project's operation.

1. Soils

HMC conducted soil and soil gas sampling on-site across current and former agricultural areas and in the vicinity of pole-mounted transformers to test for the presence of organo-chlorine pesticides (OCP), heavy metals (including lead, arsenic, and mercury), volatile organic compounds (VOCs) and methane. Refer to *Technical Appendix G2* for a detailed discussion of the methodology used to collect and test soil samples. None of the collected soil samples had detectable levels of OCPs and none of the collected soil samples contained heavy metals at concentrations that exceeded applicable screening level thresholds. Furthermore, none of the collected soil gas samples had detectable levels of VOCs and only one soil gas sample had detectable levels of methane (the detected level of methane, 26.1 parts per million by volume, was less than 1 percent of the action level threshold). (HMC, 2017b, p. 3) Accordingly, implementation of the Project would not expose on-site construction workers or future employees, the public, or the environment to significant hazards associated with soils contaminated with OCPs, heavy metals, or soil vapors. Impacts would be less than significant.

2. Building Materials

The use of ACMs (a known carcinogen) and lead paint (a known toxin) was common in building construction prior to 1978 (the use of ACMs in concrete products was common through the 1950s). Because

the Project site contains structures known to be constructed before 1978 and concrete debris that could date to before 1960, there is the potential that ACMs and/or lead paint is present on the Project site.

Asbestos is a carcinogen and is categorized as a hazardous air pollutant by the federal Environmental Protection Agency (EPA). Federal asbestos requirements are found in National Emission Standards for Hazardous Air Pollutants (NESHAP) within the Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M, and are enforced in the Project area by the SCAQMD. In conformance with the NESHAP, SCAQMD Rule 1403 establishes survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Assuming that ACMs are present in the existing construction debris and/or structures located on the property, then Rule 1403 requires notification of the SCAQMD prior to commencing any demolition or renovation activities. Rule 1403 also sets forth specific procedures for the removal of asbestos, and requires that an on-site representative trained in the requirements of Rule 1403 be present during the stripping, removing, handling, or disturbing of ACM. Mandatory compliance with the provisions of Rule 1403 would ensure that Project-related demolition, clearing, and grading activities do not expose construction workers or nearby sensitive receptors to significant health risks associated with ACMs. Because the Project would be required to comply with AQMD Rule 1403 during demolition activities, impacts due to asbestos would be less than significant.

During demolition of the existing buildings on-site, there also is a potential to expose construction workers to health hazards associated with lead-based paint (LBP). Title 17, California Code of Regulations (CCR), Division 1, Chapter 8: Accreditation, Certification and Work Practices for Lead-Based Paint and Lead Hazards, defines and regulates lead-based paint. Any detectable amount of lead is regulated. The Project would be required to comply with Title 17, California Code of Regulations (CCR), Division 1, Chapter 8, which includes requirements such as employer provided training, air monitoring, protective clothing, respirators, and hand washing facilities. Mandatory compliance with these mandatory requirements would ensure that construction workers and the public are not exposed to significant LBP health hazards during demolition and/or during transport of demolition waste to an appropriate disposal facility, and would ensure that impacts related to LBP remain less than significant.

3. Septic Systems

The existing septic systems on the Project site (and the associated leach fields) would be required to be removed, handled, and disposed in accordance with all applicable local and State regulations, including but not limited to California Code of Regulations Title 24, Plumbing Code (related to private sewage disposal systems). Accordingly, implementation of the Project would not expose the public or the environment to significant hazards associated with the removal and disposal of the on-site septic systems. Impacts would be less than significant.

4. Water Wells

Ten (10) groundwater wells are located on the Project site that would be abandoned as part of the proposed Project. The abandonment of the existing water wells would be required to occur in accordance with applicable State water well standards, including but not limited to a mandatory decommissioning and capping procedure as part of proposed construction activities. Contaminated groundwater does not exist beneath the surface of the site; therefore, in the event of an accident during the well abandonment process, there is no potential to release contaminated groundwater. As such, a significant hazard to the public or the environment would not be created and impacts would be less than significant.

B. Impact Analysis for Temporary Construction-Related Activities

Heavy equipment (e.g., dozers, excavators, tractors) would be operated on the Project site during implementation of the Project. This heavy equipment likely would be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited requirements imposed by the EPA, DTSC, and the Santa Ana RWQCB. With mandatory compliance with applicable hazardous materials regulations, the Project would not create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. A less-than-significant impact would occur.

C. Impact Analysis for Long-Term Operation

It is possible that hazardous materials (e.g., architectural coatings, lubricants, cleaning chemicals) could be used on the Project site during the course of normal business operations at any of the businesses that may occupy the Project. Federal and State Community-Right-to-Know laws allow the public access to information about the amounts and types of chemicals that may be used by businesses on the Project site. Laws also are in place that require businesses to plan and prepare for possible chemical emergencies. Any business that occupies a building on the Project site and that handles/stores substantial quantities hazardous materials (as defined in § 25500 of California Health and Safety Code, Division 20, Chapter 6.95) will require a permit from the Chino Valley Fire District and/or San Bernardino County Fire Department, Hazardous Materials Division in order to register the business as a hazardous materials handler. Such businesses also are required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the Chino Valley Fire District, County of San Bernardino Fire Department and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business, and prepare a Hazardous Materials Business Emergency Plan (HMBEP). An HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material.

If hazardous materials are used or stored on the Project site, then the individual businesses that occupy the Project would be required to comply with all applicable federal, State, and local regulations to ensure proper use, storage, emission, and disposal of hazardous substances (as described above and in Subsection 4.8.2). With mandatory regulatory compliance, the Project would not pose a significant hazard to the public or the environment through the routine transport, use, storage, emission, or disposal of hazardous materials, nor would the Project increase the potential for accident conditions which could result in the release of hazardous materials into the environment. Based on the foregoing information, potential hazardous materials impacts associated with long-term operation of the Project are regarded as less than significant and no mitigation is required.

Threshold c:	***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?***

No existing or proposed schools are located within one-quarter mile of the Project site. The nearest school to the Project site is Cal Aero Preserve Academy, located at 15850 Main Street, approximately 0.90-mile east of the Project site (Google Earth, 2017). Accordingly, the proposed Project has no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, and/or wastes within one-quarter mile of an existing or proposed school.

As described above under the analysis for Thresholds "a" and "b," the transport of hazardous substances or materials to-and-from the Project site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. Accordingly, there would be no potential for existing or proposed schools to be exposed to substantial safety hazards associated with the routine transport of hazardous substances or materials to-and-from the Project site. Thus, no impact would occur and no mitigation is required.

Refer to EIR Subsection 4.3, *Air Quality*, for analysis pertaining to human health risks associated with air pollutant emissions associated with the Project, including risks to the maximally exposed school child located more than one-quarter mile from the Project site. As concluded in EIR Subsection 4.3, *Air Quality*, the Project's toxic air contaminant emissions (and their associated health risks) would be less than significant.

Threshold d:	***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?***

The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5 (DTSC, n.d.). Accordingly, no impact would occur.

Threshold e:	***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?***

The proposed design and land uses for the Project are consistent with the Chino General Plan's compatibility standards for development within Chino Airport's Safety Zones (Chino, 2010a, LU-26). Additionally, the Project would not interfere with flight operations at the Chino Airport because the buildings proposed by the Project would be less than 50 feet tall and the Project does not include an air travel component (e.g., runway, helipad). Because the land uses proposed by the Project would be compatible with the applicable Chino Airport Safety Zones and because the Project would not interfere with operations at the Chino Airport, the Project would not result in safety hazards for people residing or working in the Project area. Impacts would be less than significant and mitigation is not required.

The Project site is located approximately 6.6 miles southwest of the nearest runway at the Ontario International Airport. The Project site is not located within the AIA for the Ontario International Airport; therefore, the Project would not be exposed to airport safety hazards associated with this facility. (Google Earth, 2017)

Based on the foregoing, implementation of the proposed Project would not result in a safety hazard for people living or working on the Project area and impacts would be less than significant.

Threshold f:	***For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?***

The Project site is not located within the vicinity of a private airstrip or heliport (Google Earth, 2017). As such, implementation of the Project would have no potential to expose on-site workers to safety hazards associated with private airfields or airstrips. Thus, no impact would occur and no mitigation is required.

Threshold g:	***Would the Project impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route (Chino, 2010a; Chino, 2010b). During construction and long-term operation, the Project site would be required to maintain adequate emergency access for emergency vehicles. As part of the City's discretionary review process, the City of Chino reviewed the Project to ensure that appropriate emergency ingress and egress would be available to-and-from the Project site and the Project's eight proposed buildings, and determined that the Project would not substantially impede emergency response times in the local area. Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and no impact would occur.

Threshold h:	***Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?***

The Project site and surrounding areas generally consist of agricultural, industrial and/or residential uses, which are generally not associated with wildland fire hazards. The Project site is not located within a State Responsibility Area or a very high fire hazard severity zone and neither CAL FIRE nor the City of Chino identify the Project site within an area susceptible to wildland fires (Google Earth, 2017; CAL FIRE, 2008; Chino, 2010a, Figure SAF-4). Accordingly, the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

4.8.5 Cumulative Impact Analysis

As discussed above under the responses to Thresholds "a" and "b," the Project would be required to comply with all applicable federal, State, and local regulations to ensure proper use, storage, and disposal of hazardous substances. Similarly, any other developments in the area proposing the construction of uses with the potential for use, storage, or transport of hazardous materials also would be required to comply with applicable federal, state, and local regulations, and such uses would be subject to additional review and permits from their applicable fire department. Therefore, the potential for release of toxic substances or hazardous materials into the environment, either through accidents or due to routine transport, use, or disposal of such materials, would be reduced to a less-than-cumulatively-significant level. Accordingly, the Project's potential to contribute to a cumulatively significant hazardous materials impact would be less than significant.

The Project site is not located within one-quarter mile of an existing or planned school; therefore, the Project would not contribute to a cumulatively significant hazards/hazardous materials impact on any public or private schools located within one-quarter mile of the site.

The Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code § 65962.5. In the unlikely event that hazardous materials are encountered beneath the surface of the site during grading or construction, the materials would be handled and disposed of in accordance with regulatory requirements. Therefore, the Project would not contribute to a cumulatively significant hazardous materials impact associated with a listed hazardous materials site.

As discussed above under the response to Threshold "e," the Project would not introduce any land use to the Project site that would conflict with the Chino Airport Land Use Compatibility Plan. As such, cumulatively-considerable impacts associated with airport-related hazards would be less than significant and no mitigation would be required.

The Project site is not located within the vicinity of any private airstrips or helipads. Thus, the Project has no potential to result in cumulatively significant impacts associated with such facilities.

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route; thus, there is no potential for the Project to contribute to any cumulative impacts associated with an adopted emergency response plan or emergency evacuation plan.

As discussed above under the response Threshold "h," the Project site is not located within or in close proximity to areas identified as being subject to wildland fire hazards. Additionally, as the surrounding area continues to develop, lands that are currently vacant would be developed in a manner consistent with jurisdictional requirements for fire protection and would generally decrease the fire hazard potential in the local area. As such, within the cumulative context of the Project vicinity, fire hazards are anticipated to decline over time, and the Project's contribution to cumulative wildfire potential is less than cumulatively-considerable.

4.8.6 Significance of Impacts Before Mitigation

Threshold a) and b): Less-Than-Significant Impact. During Project construction and operation, mandatory compliance to federal, State and local regulations would ensure that the proposed Project would not create a significant hazard to the environment due to routine transport, use, disposal, or upset of hazardous materials.

Threshold c): No Impact. The Project site is not located within one-quarter mile of any existing or proposed school. Accordingly, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts to schools located more than one-quarter mile of the Project site would be less than significant.

Threshold d): No Impact. The Project site is not listed on any list of hazardous materials compiled pursuant to Government Code § 65962.5.

Threshold e): Less-Than-Significant Impact. The Project is consistent with the restrictions and requirements of the Chino Airport Land Use Compatibility Plan. As such, the Project would not result in an airport safety hazard for people residing or working in the Project area.

Threshold f): No Impact. The Project site is not located within the vicinity of a private airstrip or a helipad. Accordingly, implementation of the Project would have no potential to expose on-site workers to safety hazards associated with a private airfield or an airstrip.

Threshold g): No Impact. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency vehicle access is required to be provided. Accordingly, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.

Threshold h): No Impact. The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a significant wildfire risk.

4.8.7 MITIGATION

Impacts would be less than significant; therefore, mitigation is not required.

4.9 HYDROLOGY AND WATER QUALITY

Information in this Subsection relies on two technical reports prepared for the Project by ProActive Engineering Consultants (hereafter, "ProActive"): 1) "Preliminary Water Quality Management Plan for Tentative Parcel Map 19756," dated February 1, 2019 (ProActive, 2019a); and 2) "Preliminary Drainage Study for Tentative Parcel Map 19756" dated March 21, 2019 (ProActive, 2019b). These reports are provided as *Technical Appendices H1 and H2* to this EIR, respectively.

The Project site is located within the Santa Ana River watershed and is under the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). As such, information for this Subsection also was obtained from the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan* (February 2016) and the *Integrated Regional Water Management Plan* (IRWMP) for the Santa Ana River Watershed (also referred to as "One Water One Watershed," (February 4, 2014) prepared by the Santa Ana Watershed Project Authority (SAWPA). These documents are herein incorporated by reference and are available for public review at the physical locations and website addresses given in EIR Section 7.0, *References*.

4.9.1 EXISTING CONDITIONS

A. *Regional Hydrology*

The Project site is located within the Santa Ana River watershed, which drains a 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River rises in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The total length of the Santa Ana River and its major tributaries is approximately 700 miles. (SAWPA, 2014, p. 1) The Project site's location within the Santa Ana River Watershed is depicted on Figure 4.9-1, *Santa Ana River Watershed Map*.

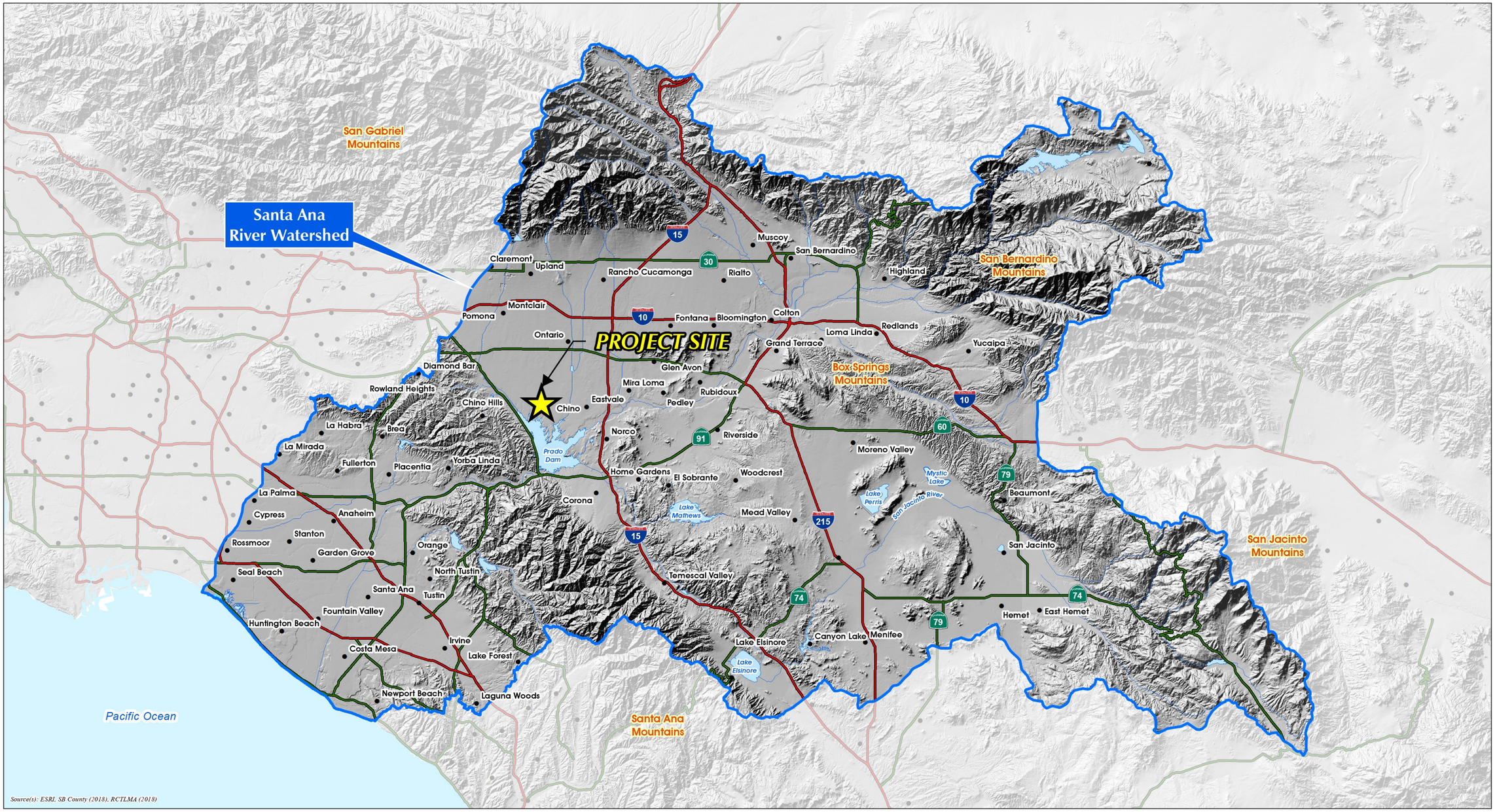
B. *Site Hydrology*

The Project site generally slopes from the northeast to the southwest. Under existing conditions, runoff flows across the site as surface sheet flow. The Project site drains to the south, toward an existing channel located within the planned alignment of Mayhew Avenue between Bickmore Avenue and Pine Avenue (hereafter "Mayhew Channel"). The Mayhew Channel carries runoff from the site to Pine Avenue where it ultimately commingles with natural drainage courses and is discharged into the Prado Dam. During a peak storm event (i.e., 100-year storm), the runoff flow on the Project site is calculated to be approximately 262.4 cubic feet per second (cfs). The Project site receives minimal run-on from areas to the north (i.e., Chino Airport and Kimball Avenue) under existing conditions because stormwater flows from these areas are captured and conveyed to an existing network of off-site detention basins. (ProActive, 2019b, pp. 2, 8)

C. *Flooding and Dam Inundation*

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06071C9335H, dated August 28, 2008, the Project site is not identified within a special flood hazard area or a 100-year flood zone (1-percent annual flood). The FEMA FIRM for the Project area is shown on Figure 4.9-2, *FEMA Flood Insurance Map Panel No. 06071C9335H*.

According to the City of Chino General Plan, the Project site is not located within the inundation area for the Prado Dam (see to Figure 4.9-3, *Prado Dam Inundation Area*).



Source(s): ESRI, SB County (2018), RCTLMA (2018)

Figure 4.9-1

SANTA ANA RIVER WATERSHED MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11 North. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography collected by the U.S. Department of Agriculture Farm Service Agency. This imagery was flown in 2005 and was produced with a 1-meter ground sample distance.

This map may reflect more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

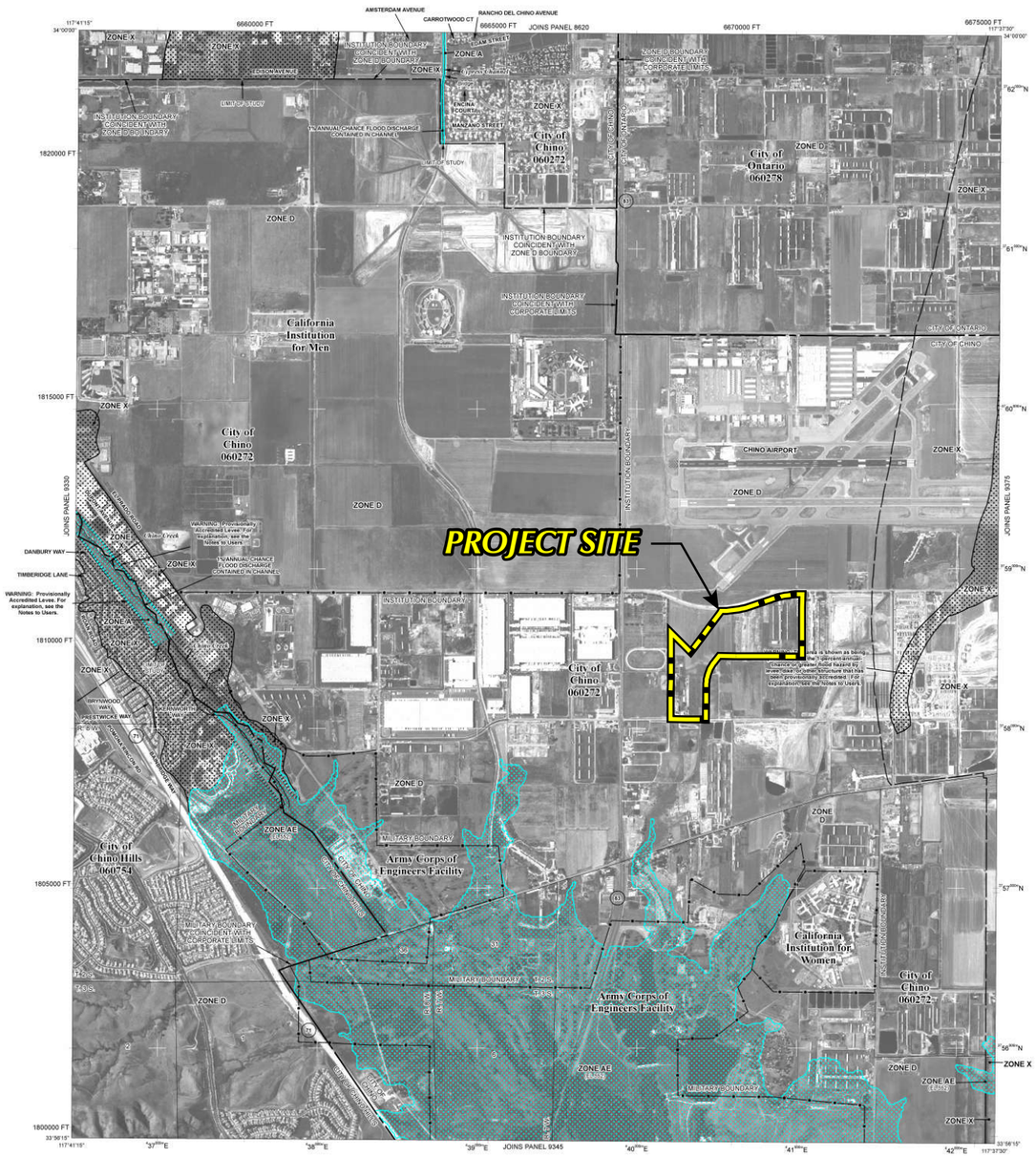
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

WARNING: This map contains levees, dikes, or other structures that have been provisionally accredited and mapped as providing protection from the 1-percent–annual-chance flood. To maintain accreditation, the levee owner or community is required to submit documentation necessary to comply with 44 CFR Section 65.10 by August 8, 2009. Because of the risk of overtopping or failure of the structure, communities should take proper precautions to protect lives and minimize damages in these areas, such as issuing an evacuation plan and encouraging property owners to purchase flood insurance.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) — Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988
- (A)—(A) — Cross section line
- (23)—(23) — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 3760000mN — 1000-meter Universal Transverse Mercator grid values, zone 11N
- 600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone V (FIPSZONE 0405), Lambert Conformal Conic projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
March 18, 1996

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
August 28, 2008 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 9335H

FIRM
FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS
PANEL 9335 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHINO HILLS, CITY OF	060754	9335	H
CHINO, CITY OF	060272	9335	H
ONTARIO, CITY OF	060278	9335	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06071C9335H

MAP REVISED
AUGUST 28, 2008

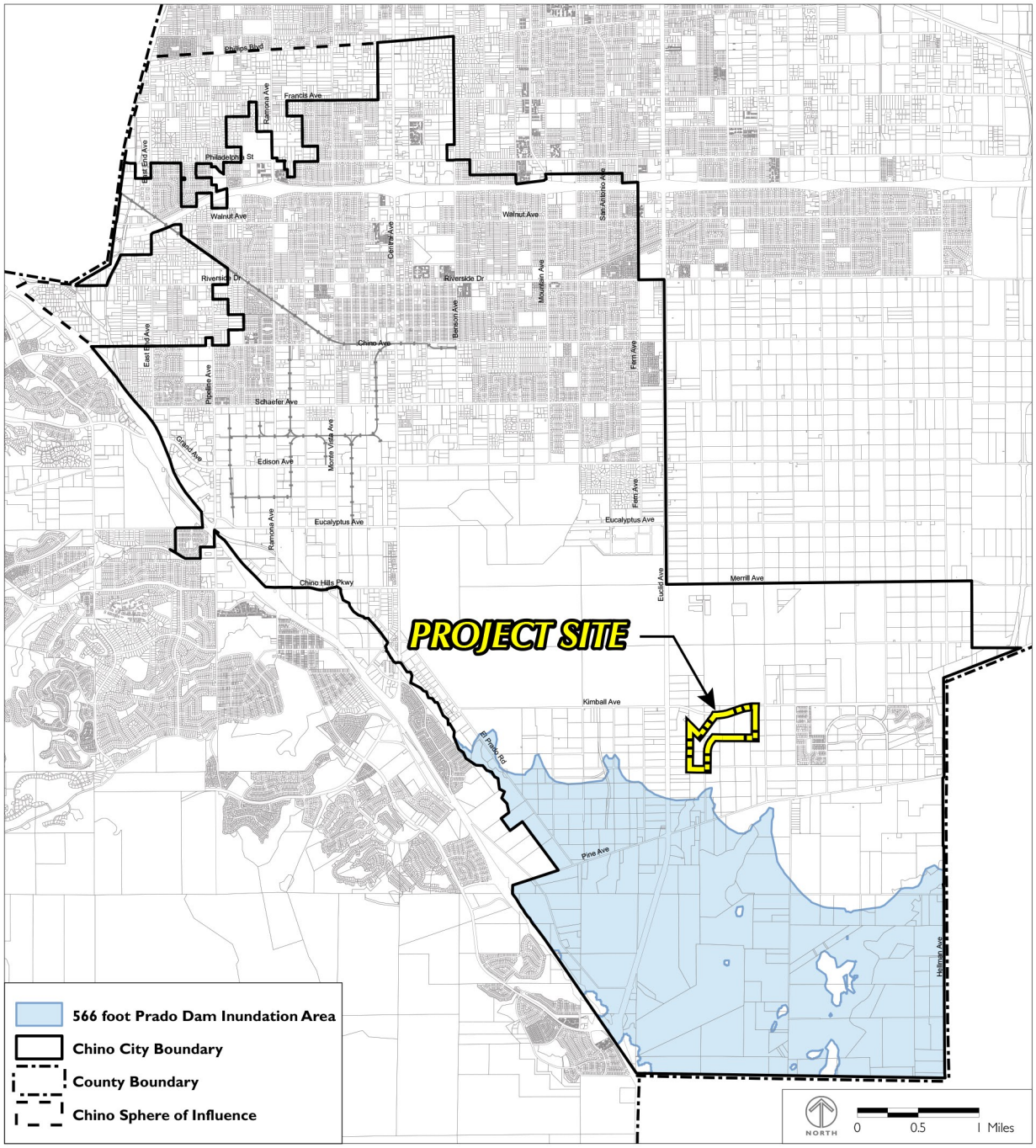
Federal Emergency Management Agency

Source(s): FEMA (08-28-2008)

Figure 4.9-2

NOT TO SCALE

FEMA FLOOD INSURANCE MAP PANEL NO. 06071C9335H



Source(s): City of Chino General Plan (07-2010)

Figure 4.9-3

NOT TO SCALE

PRADO DAM INUNDATION AREA

D. Water Quality

The Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act, CWA) requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. Water bodies that do not meet water quality standards due to excessive concentrations of pollutants are placed on a list of impaired waters pursuant to Section 303(d) of the CWA. The Project site's receiving waters include Santa Ana Watershed. The Santa Ana Watershed is included on the CWA's Section 303(d) list of impaired waters because of excessive concentrations of four (4) "Pollutants of Concern," including: indicator bacteria, pathogens, nutrients, and chemical oxygen demand (ProActive, 2019a, p. 3-4).

E. Groundwater

The City of Chino is underlain by groundwater resources associated with the Chino Groundwater Basin. The City of Chino's Water Utility relies on groundwater resources from this groundwater basin for a portion of its total water supply. According to the Chino Basin Watermaster, groundwater elevations beneath the Project site occur at elevations at approximately 550 feet AMSL, indicating that the groundwater table beneath the site occurs approximately 90 to 120 feet below the ground surface (CBWM, 2017, Exhibit 4-4)

According to a site survey conducted by HMC, there are no active water wells on the Project site. Ten (10) inactive water wells are located throughout the northeastern and southern portions of the Project site, and would be removed prior to construction. (HMC, 2017a, p. 25)

4.9.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the federal, State, and local environmental laws, related regulations, and plans related to hydrology and water quality.

A. Federal Plans, Policies, and Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017)

B. State Plans, Policies, and Regulations

1. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act

applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq*.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

2. California Water Code

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters;

and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the applicable RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

3. California Toxics Rule (CTR)

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016)

4. CDFG Code Section 1600 et seq. (Lake or Streambed Alteration Agreement Program)

Fish and Game Code § 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following (CDFW, 2017c):

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- Deposit debris, waste or other materials that could pass into any river, stream, or lake.

It should be noted that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2017c)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2017c)

5. Watershed Management Initiative (WMI)

The State and Regional Water Boards are currently focused on looking at entire watersheds when addressing water pollution. The Water Boards adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and state mandated priorities. As such, the WMI helps the Water Boards achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2013) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds.
- Involve stakeholders to develop solutions.
- Better coordinate point source and nonpoint source regulatory efforts.
- Establish working relationships between staff from different programs.
- Better coordinate local, State, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2013)

C. Local Plans, Policies, and Regulations

1. City of Chino Master Drainage Plan

The Project site is located within the boundary of the Storm Drain Master Plan for Subarea 2 of the Chino Agricultural Preserve Area (hereafter "Storm Drain Master Plan"), which corresponds to the boundaries of The Preserve Specific Plan area. The Storm Drain Master Plan was prepared on behalf of the City of Chino to identify master-planned drainage and flood control facilities that are needed to safely convey the peak runoff from a 100-year storm through The Preserve Specific Plan area upon full buildout. The Storm Drain Master Plan identifies a planned storm drain line (Line H) beneath Mayhew Avenue between Kimball Avenue and Pine Avenue; the diameter of the storm drain line would vary between 78 inches and 102 inches. Line "H" is planned to ultimately convey stormwater runoff from the Project area to the Prado Dam (ProActive, 2019b, p. 2).

2. City of Chino Municipal Code

Chapter 13.25 (Storm Water Drainage System Regulations) of the City of Chino Municipal Code requires the City to participate as a "Co-permittee" under the NPDES permit program to accomplish the requirements of the CWA. Pursuant to this chapter, the City is required to participate in the improvement of water quality and comply with Federal requirements for the control of urban pollutants to stormwater runoff. (Chino, 2018)

In accordance with City of Chino Municipal Code Section 19.07.140, development proposals shall ensure that on-site areas are protected, at a minimum, from flooding during peak storm events (i.e., 100-year storm) and that downstream areas are not exposed to increased flooding risks during peak storm events. Development proposals are required to prepare hydrologic and hydraulic calculations and studies to demonstrate that proposed grading and development will not result in flooding risks on-site or downstream. The hydraulic calculations and studies shall be subject to the review and approval of the City's engineer. In addition, City of Chino Municipal Code Section 19.07.140 requires all grading and improvements be designed to prevent undue soil erosion or sedimentation. (Chino, 2018)

Lastly, the City of Chino Municipal Code (§19.09.030) requires development projects to incorporate an erosion and dust control plan into proposed clearing/grubbing, stockpile, grading, or demolition activities to minimize water- and windborne erosion. Specific dust control measures – and a schedule for implementation – are required to be listed on the grading/construction plan as well as the name and contact information of the person responsible for carrying out the dust control measures. The erosion and dust control plan shall be approved by City of Chino staff prior to the issuance of the applicable construction permit. (Chino, 2018)

4.9.3 Basis for Determining Significance

The proposed Project would result in a significant impact to hydrology and water quality if the Project or any Project-related component would:

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

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects related to hydrology and water quality that could result from development projects.

4.9.4 IMPACT ANALYSIS

Threshold a: Would the Project violate any water quality standards or waste discharge requirements?

A. Construction-Related Water Quality Impacts

Development of the Project would involve demolition, clearing, grading, paving, utility installation, building construction, and landscaping activities, all of which have the potential to generate potential pollutants such as silt, debris, chemicals, paints, and other solvents that could adversely affect water quality. As such, the Project has the potential to result produce short-term water quality impacts during construction in the absence of any protective or avoidance measures.

Pursuant to the requirements of the Santa Ana RWQCB and Chino Municipal Code Chapter 13.25, the Project would be required to obtain coverage under the State's General Construction Storm Water Permit for construction activities (NPDES permit). The NPDES permit is required for all development projects that include construction activities, such as clearing, grading, and/or excavation, that disturb at least one (1) acre of total land area. In addition, the Project would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. Compliance with the NPDES permit and the *Santa Ana River Basin Water Quality Control Program* involves the preparation and implementation of a SWPPP for construction-related activities. The SWPPP will specify the Best Management Practices (BMPs) that would be required to be implemented during construction activities to ensure that potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Examples of BMPs that may be utilized during construction include, but are not limited to, sandbag barriers, geotextiles, storm drain inlet protection, sediment traps, rip rap soil stabilizers, and hydro-seeding. Pursuant to Chino Municipal Code §19.09.030, the Project Applicant also would be required to implement an erosion and dust control plan to minimize water- and windborne erosion. Mandatory compliance with the SWPPP and the erosion control plan would ensure that the Project's implementation does not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant and no mitigation measures would be required.

B. Post-Development Water Quality Impacts

Stormwater pollutants that may be produced by the Project include pathogens, phosphorous, nitrogen, sediment, metals, oils and grease, trash/debris, pesticides/herbicides, organic compounds, and oxygen demanding compounds (ProActive, 2019a, p. 2-3).

To meet the requirements of the City's Municipal Storm Water Permit – and in accordance with Chino Municipal Code Section 13.25.500 – the Project would be required to prepare and implement a Water Quality Management Plan (WQMP), which is a site-specific post-construction water quality management program designed to minimize the release of potential waterborne pollutants, including pollutants of concern for downstream receiving waters, under long-term conditions via BMPs. Implementation of the WQMP ensures on-going, long-term protection of the watershed basin. The Project's Preliminary WQMP prepared by ProActive, is included as *Technical Appendix H1* to this EIR. As identified in *Technical Appendix H1*, the Project would be designed to include on-site structural source control BMPs consisting of underground stormwater infiltration chambers, infiltration trenches, catch basins with filter inserts, and water quality/detention basins as well as operational source control BMPs (including but not limited to: the installation of water-efficient landscape irrigation systems, storm drain system stenciling and signage, and implementation of a trash and waste storage areas) to minimize, prevent, and/or otherwise appropriately treat

stormwater runoff flows before they are discharged into the City's storm drain system. Compliance with the Preliminary WQMP would be required as a condition of approval for the Project. Long-term maintenance of on-site water quality features also would be required as a condition of approval to ensure the long-term effectiveness of all on-site water quality features.

Additionally, the NDPES program requires certain land uses, including the industrial land uses proposed by the Project, to prepare a SWPPP for operational activities and to implement a long-term water quality sampling and monitoring program, unless an exemption has been granted. On April 1, 2014, the California State Water Resources Control Board adopted an updated new NPDES permit for storm water discharge associated with industrial activities (referred to as the "Industrial General Permit"). The new Industrial General Permit, which is more stringent than the former Industrial General Permit, became effective on July 1, 2015. Under the newly effective NPDES Industrial General Permit, the Project would be required to prepare a SWPPP for operational activities and implement a long-term water quality sampling and monitoring program or receive an exemption. Because the permit is dependent upon a detailed accounting of all operational activities and procedures, and the Project's precise operations are not known at this time, details of the operational SWPPP (including BMPs) or potential exemption to the SWPPP operational activities requirement cannot be determined at this time. However, based on the performance requirements of the NPDES Industrial General Permit, it is reasonably assured that the Project's mandatory compliance with all applicable water quality regulations would further reduce potential water quality impacts during long-term operation.

Based on the foregoing analysis, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during long-term operation. Impacts would be less than significant.

Threshold b:	***Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?***

The Project would connect to the City of Chino's municipal water system and would not utilize wells or any other groundwater extractive activities. In addition, all wells located on the Project site would be abandoned in accordance with applicable regulatory requirements for private water well deconstruction during Project construction. Therefore, the Project would not directly draw water from the groundwater basin. Accordingly, implementation of the proposed Project has no potential to substantially deplete or decrease groundwater supplies and the Project's direct impact to groundwater supplies would be less than significant.

Development of the Project would increase impervious surface coverage on the Project site, which, in turn, would indirectly reduce the amount of ground surface area that would contribute to the percolation of water into the groundwater basin that underlies the Project site and a majority of the City. However, a majority of the groundwater recharge in the Chino Basin occurs in the northern portion of the Basin (and north of the City of Chino), within percolation basins located throughout San Bernardino County (Chino, 2010b, p. 4.8-13). The Project is located in the southern portion of the Chino Basin and would not physically impact any of the major groundwater recharge facilities in the Basin. Therefore, the Project would not result in substantial, adverse effects to local groundwater levels. Additionally, the Project includes design features that would maximize the percolation of on-site storm water runoff into the groundwater basin, such as water quality/detention basins, underground infiltration chambers, infiltration trenches, and permeable landscape

areas. Accordingly, buildout of the Project with these design features would not interfere substantially with groundwater recharge or impede sustainable groundwater management of the Chino groundwater basin. Based on the foregoing information, the Project would not interfere substantially with groundwater recharge.

The Chino groundwater basin is an adjudicated basin (refer to *Technical Appendix K* for more information), and adjudicated basins are exempt from the 2014 Sustainable Groundwater Management Act (SGMA) because such basins already operate under a court-ordered water management plan. As such, the Chino Basin is expressly included in the SGMA's list of exempt basins and the Project would not interfere with the implementation of the SGMA or the Chino Basin's water management plan (CBWM, 2014).

For the reasons stated above, the Project would neither substantially deplete groundwater supplies nor 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, or conflict with or obstruct the implementation of a sustainable groundwater management plan. Thus, impacts to groundwater supplies and recharge would be less than significant.

Threshold c:	***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, in a manner which would result in substantial erosion or siltation on- or off-site?***

The Project would construct an integrated stormwater drainage system that would include catch basins, underground storm drain pipes, and water quality/detention basins to capture on-site stormwater runoff and convey the runoff downstream. In the near-term, stormwater runoff discharged from the Project site would flow from an underground storm drain pipe into the same storm drain channel that receives runoff from the site under existing conditions (i.e., the Mayhew Channel). Under long-term conditions, stormwater runoff discharged from the Project site would be discharged into a planned Storm Drain Master Plan storm drain (Line "H") that would be constructed beneath the future alignment of Mayhew Avenue between Bickmore Avenue and Pine Avenue. Under both near- and long-term conditions, runoff from the Project site ultimately would discharge into a natural drainage course south of Pine Avenue and then to Prado Dam (similar to what occurs under existing conditions). Because the Project would not substantially alter downstream drainage patterns and because the Project would not increase the flow rate or total volume of stormwater runoff discharged from the site (refer to Threshold "d," below), the Project would not result in any alterations to the existing drainage pattern of the Project area that could result in substantial erosion or siltation. Furthermore, under post-development conditions, the site would be covered with impervious surfaces or landscaped areas; therefore, the amount of exposed soils on the Project site would be minimal and, as discussed under Threshold "a," the Project would construct an integrated storm drain system on-site with BMPs to minimize the amount of water-borne pollutants, including sediment, carried by runoff flows from the Project site. Therefore, stormwater runoff flows leaving the Project site would not carry substantial amounts of sediment and impacts would be less than significant.

Threshold d:	***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 substantially increase the rate or surface runoff in a manner which would result in flooding on- or off site?***

In both the pre- and post-development conditions (long-term), all surface water runoff from the Project site would ultimately discharge into the Prado Dam; therefore, the Project would not alter or divert downstream drainage patterns. Under existing conditions, peak surface water runoff flows from the Project site are

approximately 262.4 cubic feet per second (cfs) during the 100-year storm event. Upon buildout of the Project, the Project site's peak surface water runoff flow during the 100-year storm event would be approximately 135.8 cfs during the 100-year storm event; this runoff volume could be accommodated by existing and planned Storm Drain Master Plan facilities under interim and long-term conditions. (ProActive, 2019b, pp. 7-8) Based on the foregoing information, the Project would not substantially alter the existing drainage pattern of the subject property or substantially increase the rate of surface water runoff from the site in a manner that would result in flooding on- or off-site. Accordingly, flooding impacts would be less than significant.

Threshold e:	***Would the Project create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

As discussed above under Threshold "d," the Project's proposed storm drain improvements in conjunction with existing and planned Storm Drain Master Plan facilities would provide sufficient capacity to capture and convey peak storm water runoff generated by the Project. Furthermore, the City will impose a condition of approval on the Project that limits peak 2-year, 10-year, 25-year, and 100-year storm flow discharge from the Project site to no more than 80% of existing flows to ensure that adequate capacity within the downstream storm drain system remains available. Accordingly, the Project would not create or contribute runoff which would exceed the capacity of any existing or planned storm water drainage system, and impacts of runoff would be less than significant.

As discussed under the analysis of Threshold "a," the Project would be required to comply with a future SWPPP and the Project's Preliminary WQMP (*Technical Appendix H2*), which identify required BMPs to be incorporated into the Project to ensure that near-term construction activities and long-term post-development activities of the proposed Project would not result in substantial amounts of polluted runoff. Therefore, with mandatory compliance with the Project's SWPPP and WQMP, the Project would not create or contribute substantial additional sources of polluted runoff, and impacts would be less than significant.

Threshold f:	***Would the Project otherwise substantially degrade water quality?***

There are no conditions associated with the Project that could result in the substantial degradation of water quality beyond what is described above in the responses to Thresholds "a," "c," and/or "e." Accordingly, no additional impacts would occur and mitigation is not required.

Threshold g:	***Would the Project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?***
Threshold h:	***Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?***

The Project does not include housing. In addition, according to the FEMA Flood Insurance Rate Map (FIRM) No. 06071C9335H, the Project site is not located within a 100-year flood hazard area (FEMA, 2008). Accordingly, development on the Project site would have no potential to place housing, or other structures, within a 100-year floodplain or impede or redirect flood flows within a 100-year floodplain. No impact would occur.

Threshold i: Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

As shown on Figure 4.9-3, the Project site is not located within the inundation area of the Prado Dam. The Project site also is not located within the vicinity of a levee and would not be subject to flooding caused by the failure of a levee. Accordingly, and also based on the information provided under the responses to Thresholds "d," "g," and "h," the Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding. No impact would occur.

Threshold j: Would the Project cause inundation by seiche, tsunami, or mudflow?

The Pacific Ocean is located over 30 miles west of the Project site; consequently, there is no potential for the Project site to be impacted by a tsunami as tsunamis typically only reach up to a few miles inland. The Project site is not located near any steep hillsides and there are no steep hillsides present on the subject property; therefore, there is no potential for the site to be adversely affected by mudflow. The site also is not subject to flooding hazards associated with a seiche because the nearest large body of surface water (Prado Lake, located approximately 1 mile south of the Project site) is too far away from the subject property to impact the property with a seiche. Accordingly, implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow. No impact would occur.

4.9.5 Cumulative Impact Analysis

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the vicinity of the Project site and projects located in the Santa Ana River Basin. The analysis of potential cumulative impacts to hydrology and water quality is divided into six general topics of discussion by combining the Thresholds of Significance (listed above in Subsection 4.8.2) into groupings of like topics, as follows: 1) water quality (Thresholds "a" and "f"); 2) groundwater supply and recharge (Threshold "b" and "c") erosion and siltation (Threshold "c" and "d") flood hazards (Thresholds "d," "g," "h," "i" and "e") stormwater drainage system capacity (Thresholds "e" and "f") other hazards (Threshold "j").

A. Water Quality

Construction of the Project and the construction of other projects in the cumulative study area would have the potential to result in a cumulative water quality impact, including erosion and sedimentation to the Santa Ana River watershed. Pursuant to the requirements of the State Water Resources Control Board and the Santa Ana RWQCB, all construction projects that disturb one (1) or more acres of land area are required to obtain coverage for construction activities under the State's General Construction NPDES Permit. In order to obtain coverage, an effective site-specific SWPPP is required to be developed and implemented for all development projects. The SWPPP must identify potential on-site pollutants and identify and implement an effective combination of erosion control and sediment control measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. In addition, the Project and all cumulative developments in the Santa Ana River Basin would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. With compliance to these mandatory regulatory requirements, the Project's contribution to water quality impairments during construction would not be cumulatively considerable and mitigation is not required.

As discussed in detail under the analysis of Threshold "a," a WQMP would be required for all development on the Project site. Compliance with the applicable WQMP would be required as a condition of approval for future development activities pursuant to Chino Municipal Code Section 13.25.500. Other developments within the watershed would similarly be required to prepare site-specific WQMPs and to incorporate BMPs into site design as necessary to ensure that runoff does not substantially contribute to existing water quality violations. Accordingly, under long-term conditions, industrial land use on the Project site would not contribute to cumulatively-considerable water quality effects and no mitigation would be required.

B. Groundwater Supply and Recharge

Although the proposed Project would increase the impervious surfaces on the site, the Project incorporates design features that would allow some surface runoff to infiltrate into the groundwater basin, including water quality/detention basins, infiltration chambers and trenches, and permeable landscape areas. Also, as previously noted, the City is underlain by groundwater resources associated with the Chino Basin; however, most of the groundwater recharge in the Chino groundwater basin occurs in the northern portion of the Basin, north of Chino, and the Project site is located in the southern portion of the groundwater basin and would not adversely affect any designated groundwater recharge basin. Furthermore, no groundwater wells would be installed on the Project site as part of the Project's implementation and all existing wells on the Project site will be removed in accordance to local and State regulations. For these reasons, the proposed Project would not result in cumulatively-considerable impacts associated with the depletion of groundwater supplies or substantial interference with groundwater recharge.

C. Erosion and Siltation

Construction of development projects within the Santa Ana River Basin would alter existing ground contours throughout the Basin, which would result in changes to the basin's existing drainage patterns. However, developments throughout the Basin would be required to comply with federal, State, and local regulations to minimize stormwater pollution during construction (including erosion and siltation). Accordingly, grading plans would be required to be designed to preclude undue soil erosion and developments would be required to prepare and implement a SWPPP and WQMP to ensure that substantial soil erosion and/or sedimentation would not occur during temporary construction conditions or long-term conditions. Because the Project, and all other developments throughout the Basin, would need to comply with federal, State, and local regulations, a cumulatively-considerable impact related erosion and/or siltation would not occur.

D. Flood Hazards

Construction of the Project and other development projects within the Santa Ana River Basin would be required to comply with federal, State, and local regulations and applicable regional and local master drainage plans in order to mitigate flood hazards both on- and off-site. Compliance with federal, State, and local regulations and drainage plans would require on-site areas to be protected from flooding during peak storm events (i.e., 100-year storm) and also would require that proposed development projects would not expose downstream properties to increased flooding risks during peak storm events. In addition, future development proposals within the Santa Ana River Basin would be required to prepare hydrologic and hydraulic calculations, subject to review and approval by the responsible City/County Engineer, to demonstrate that substantial on- and/or off-site flood hazards would not occur. As discussed under the response to Threshold "e," the Project is designed to ensure that peak flood volumes and flows are substantially similar to those that occur under existing conditions and the Project would not conflict with the Storm Drain Master Plan. Because the Project and all other developments throughout the Santa Ana River

Basin, would need to comply with federal, State, and local regulations, implementation of the Project would not result in a cumulatively-considerable impact to flood hazards.

As discussed under the responses to Thresholds "g" and "h," the Project site is not located within a special flood hazard area subject to inundation by the 1-percent annual flood (i.e., 100-year floodplain). Accordingly, development on the Project site would have no potential to place housing, or other structures, within a 100-year floodplain or impede or redirect flood flows within a 100-year floodplain and no cumulatively considerable impact would occur.

As discussed under the analysis of Threshold "i," the Project site is not subject to flood hazards associated with failure of a levee or dam. As such, Project-related development has no potential to contribute to cumulative impacts associated with such failures.

E. Stormwater Drainage System Capacity

The Project's proposed storm drain improvements would have sufficient capacity to accommodate and convey stormwater runoff flows generated by the Project and would convey the expected future stormwater runoff flows associated with buildout of the Storm Drain Master Plan area. All development projects in the Storm Drain Master Plan area are required to demonstrate that storm drain capacity is available to service their anticipated flows. As such, cumulative impacts would be less than significant and the proposed Project's contribution of flows would thus be less than cumulatively-considerable.

F. Other Hazards

The Project site is not subject to hazards associated with seiches, tsunamis, or mudflows. There are no components of the proposed Project that would increase the potential for seiches, tsunamis, or mudflows. Accordingly, development of the Project has no potential to make a cumulatively-considerable contribution to these types of impacts.

4.9.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project would not violate any water quality standards or waste discharge requirements on a direct or cumulative basis. SWPPPs and WQMPs are required for future development to address construction-related water quality issues.

Threshold b: Less-than-Significant Impact. The Project site would not physically impact any of the major groundwater recharge facilities in the Basin. The Project does not propose potable water wells and would not substantially impact the availability of potable groundwater in the Project area.

Threshold c: Less-than-Significant Impact. The Project would retain the site's general drainage pattern and would be required to incorporate design features to minimize erosion and sediment within surface water runoff.

Threshold d: Less-than-Significant Impact. The Project site would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would development on the Project site provide substantial additional sources of polluted runoff.

Threshold e: Less-than-Significant Impact. The Project's stormwater drainage systems have sufficient available capacity to accommodate anticipated surface runoff flows on the Project site. Additionally, the

Project would be required to be designed in accordance with the City of Chino Storm Drain Master Plan, and comply with a SWPPP and a site-specific WQMP.

Threshold f: No Impact. There are no other components of the Project that would substantially degrade water quality.

Thresholds g and h: No Impact. The Project would not construct housing within a 100-year flood hazard area; nor is the Project site located within a 100-year flood hazard area.

Threshold i: No Impact. The Project site would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Threshold j): No Impact. The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.

4.9.7 Mitigation

Impacts would be less than significant; therefore, mitigation is not required.

4.10 NOISE

This Subsection addresses the environmental issue of noise, including existing noise levels in the Project area and the Project's potential to introduce new or elevated sources of noise. The information contained herein is based in part on information contained in a technical report prepared by Urban Crossroads, Inc., dated September 19, 2018, and titled "Altitude Business Centre Noise Impact Analysis" (Urban Crossroads, 2018c). The report is included as *Technical Appendix I* to this EIR. Refer to Section 7.0, *References*, for a complete list of reference sources.

4.10.1 NOISE FUNDAMENTALS

A. *Noise Definitions*

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes physical harm, or when it has adverse effects on health. Because the range of sound that the human ear can detect is large, the scale used to measure sound intensity is based on multiples of 10, the logarithmic scale. The unit of measure to describe sound intensity is the decibel (dB). Each interval of 10 dB indicates a sound energy 10 times greater than before and is perceived by the human ear as being roughly twice as loud. A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise sources by discriminating against very low and very high frequencies of the audible spectrum (i.e., frequencies that are not audible to the human ear). The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at a distance of three feet is roughly 60 dBA, while a jet engine is 110 dBA at approximately 100 feet. (Urban Crossroads, 2018c, pp. 13-14)

B. *Noise Descriptors*

Environmental noise descriptors are generally based on averages, rather than instantaneous noise levels. The most commonly used figure is the equivalent continuous noise level (L_{eq}). L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given time period. L_{eq} are not measured directly but are calculated from sound pressure levels typically measured in dBA. Consequently, L_{eq} can vary depending on the time of day. (Urban Crossroads, 2018c, p. 14)

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{50}, L_{25}, L_8, and L_2, are commonly used. The percentile noise descriptors are the noise levels equaled or exceeded during 50 percent, 25 percent, 8 percent, and 2 percent of a stated time. Sounds levels associated with the L_2 and L_8 typically describe transient or short-term events, while levels associated with the L_{50} describe the steady state (or median) noise conditions. The City of Chino Municipal Code relies on the percentile noise levels to describe stationary source noise level limits. While the L_{50} describes the mean noise levels occurring 50 percent of the time, the L_{eq} accounts for the total energy (average) observed for the entire hour. Therefore, the L_{eq} noise descriptor is generally 1-2 dBA higher than the L_{50} noise level. (Urban Crossroads, 2018c, p. 14)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour levels 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 five (5) dB to sound levels in the evening from 7:00 p.m.

to 10:00 p.m., and the addition of 10 dB to 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 nighttime hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Chino relies on the 24-hour CNEL level to assess land use compatibility with transportation-related noise sources. (Urban Crossroads, 2018c, p. 14)

C. 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 geometric spreading, ground absorption, atmospheric effects, and shielding. (Urban Crossroads, 2018c, p. 14)

1. 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. (Urban Crossroads, 2018c, pp. 14-15)

2. Ground Absorption of Noise

To account for the ground-effect attenuation (absorption) of noise, two types of site conditions are commonly used in noise models: soft site and hard site conditions. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., sites with an absorptive ground surface between the source and the receptor 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. (Urban Crossroads, 2018c, p. 15)

3. Atmospheric Impacts

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Other factors that may affect noise levels include air temperature, humidity, and turbulence. (Urban Crossroads, 2018c, p. 15)

4. Shielding

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Solid objects or barriers are most effective at attenuating noise levels. Effective noise barriers can reduce noise levels by 10 to 15 dBA. 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. (Urban Crossroads, 2018c, p. 11)

D. Traffic Noise Prediction

Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, provided by the Federal Highway Administration (FHWA), the level of traffic noise depends on three primary factors: 1) the

volume of the traffic, 2) the speed of the traffic, and 3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on CNEL. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, noise levels will increase. (Urban Crossroads, 2018c, p. 41)

E. Response to Noise

Approximately 10% of the population has a very low tolerance for noise and will object to any noise not of their own making. Consequently, even in the quietest environment, some complaints will occur. Another 25% 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 environment. Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels: an increase of 1 dBA cannot be perceived except in carefully controlled laboratory experiments; a change of 3 dBA is considered "barely perceptible;" and a change of 5 dBA is considered "readily perceptible." (Urban Crossroads, 2018c, p. 16)

F. Vibration

Vibration is the periodic oscillation of a medium or object. Sources of groundborne vibration 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, groundborne vibrations may be described by amplitude and frequency. Vibration is often described in units of velocity (inches per second) and decibels (dB) and is denoted as VdB. (Urban Crossroads, 2018c, pp. 17-18)

The background vibration-velocity level in residential areas is generally 50 VdB. Groundborne 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. (Urban Crossroads, 2018c, p. 18)

4.10.2 Existing Noise Conditions

A. Existing Study Area Ambient Noise Conditions

On June 14, 2017, Urban Crossroads recorded 24-hour noise readings at eight (8) locations near the Project site. More information about the sound monitoring locations and the sound level meter equipment is provided in *Technical Appendix I* to this EIR. The noise measurement locations are identified in Figure 4.10-1, *Noise Measurement Locations*. The existing ambient noise levels in the vicinity of the Project site are dominated by traffic noise associated with automobiles and truck traffic on the local arterial roadway network and aircraft flyovers from the Chino Airport. (Urban Crossroads, 2018c, pp. 35-37)

The results of the existing noise level measurements are summarized in Table 4.10-1, *Existing 24-Hour Ambient Noise Level Measurements*, and described on the following pages. Refer to Appendix 5.2 of *Technical Appendix I* for the noise measurement worksheets used by Urban Crossroads to calculate the noise levels reported in Table 4.10-1, including a summary of the hourly noise levels and the minimum and maximum observed noise levels at each of the measurement locations.

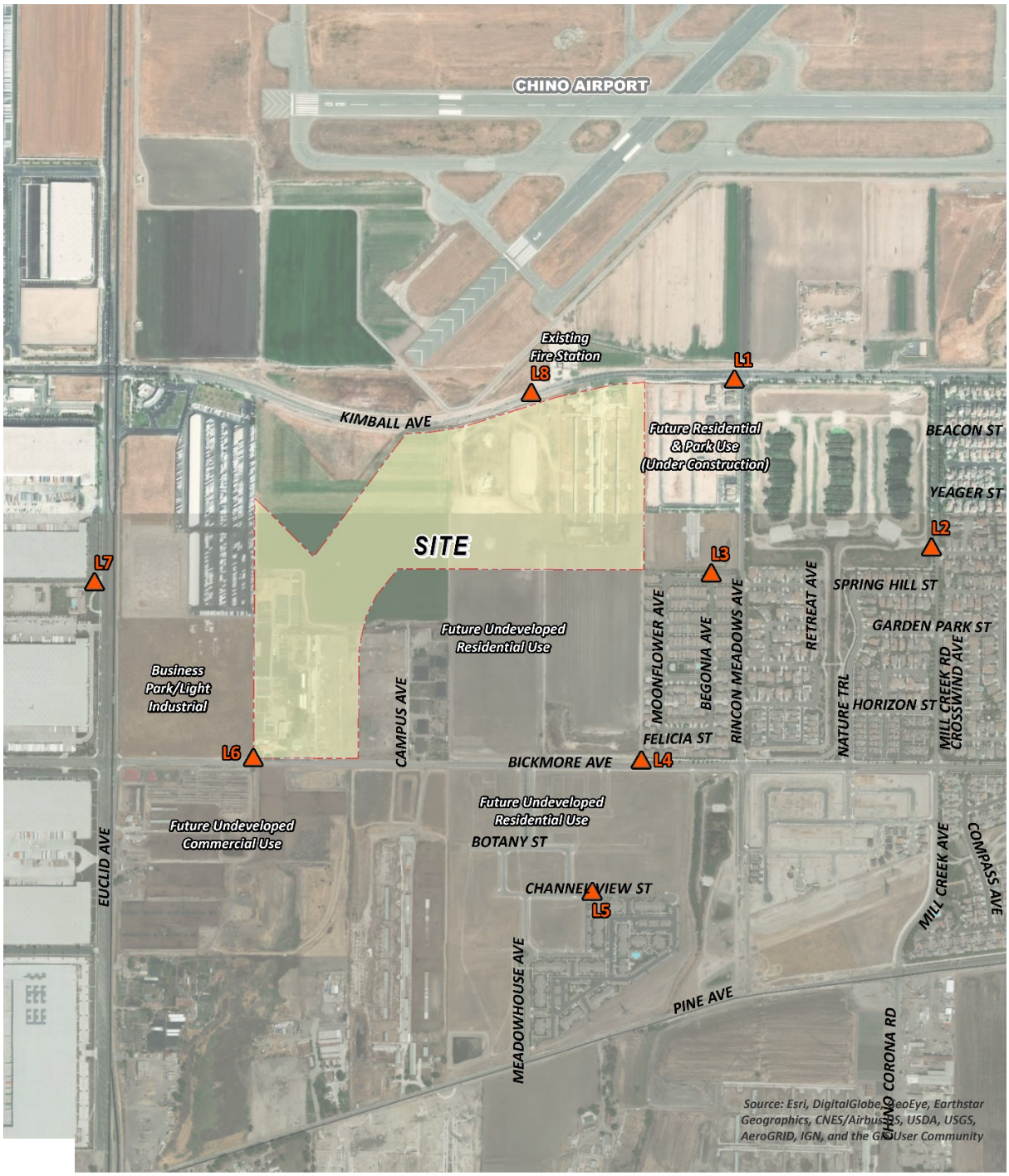


Figure 4.10-1

NOT TO SCALE

NOISE MEASUREMENT LOCATIONS

Table 4.10-1 Existing 24-Hour Ambient Noise Level Measurements

Location[1]	Distance to Project Boundary (Feet)	Description	Median Average Noise Level (dBA L_{50})[2]		CNEL
			Daytime	Nighttime	
L1	610'	Located east of the Project site on Kimball Avenue near future residential homes (currently under construction).	52.3	46.8	61.9
L2	1,950'	Located east of the Project site on Mill Creek Road near existing residential homes.	49.4	45.3	64.6
L3	460'	Located east of the Project site in an existing residential community on Begonia Avenue.	47.1	45.9	57.6
L4	1,290'	Located southeast of the Project site on Bickmore Avenue near existing and future residential homes.	51.9	46.1	66.2
L5	1,825'	Located south of the Project site on Channel View Street near an existing residential community.	47.6	44.7	56.9
L6	0'	Located at the southwest corner of the Project site on Bickmore Avenue near existing agricultural uses.	52.0	49.1	64.3
L7	1,090'	Located west of the Project site adjacent to and existing residential home and industrial uses.	58.5	56.0	69.3
L8	80'	Located north of the Project site on Kimball Avenue near an existing fire station, south of Chino Airport.	67.5	57.0	78.3

[1] See Exhibit 5-A for the noise level measurement locations.
[2] The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.
Source: (Urban Crossroads, 2018c, Table 5-1)

- Location L1 represents the noise levels east of the Project site on Kimball Avenue near future residential homes (currently under construction). The noise level measurements collected show an overall 24-hour exterior noise level of 61.9 dBA CNEL. The noise levels measured at Location L1 ranged from 49.0 to 55.0 dBA L_{50} during the daytime hours and from 42.0 to 54.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated as 52.3 dBA L_{50} and the average nighttime noise level was calculated as 46.8 dBA L_{50}. (Urban Crossroads, 2018c, p. 36)
- Location L2 represents the noise levels east of the Project site on Mill Creek Road near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 64.6 dBA CNEL. The noise levels measured at Location L2 ranged from 46.0 to 52.0 dBA L_{50} during the daytime hours and from 41.0 to 50.0 dBA L_{50} during the nighttime hours. The average daytime noise level was calculated as 49.4 dBA L_{50} and the average nighttime noise levels was calculated as 45.3 dBA L_{50}. (Urban Crossroads, 2018c, p. 36)

- Location L3 represents the noise levels east of the Project site, along Begonia Avenue, within an existing residential community. The noise level measurements collected show an overall 24-hour exterior noise level of 57.6 dBA CNEL. At Location L3 the background ambient noise levels ranged from 44.0 to 50.0 dBA L_{50} during the daytime hours to 44.0 to 49.0 dBA L_{50} during the nighttime hours. The average daytime noise level was calculated at 47.1 dBA L_{50} and the average nighttime noise level was calculated at 45.9 dBA L_{50}. (Urban Crossroads, 2018c, p. 36)
- Location L4 represents the noise levels located southeast of the Project site along Bickmore Avenue, near existing and future residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 66.2 dBA CNEL. The noise levels measured at Location L4 ranged from 45.0 to 60.0 dBA L_{50} during daytime hours and from 41.0 to 59.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated at 51.9 dBA L_{50} and the average nighttime noise level was calculated at 46.1 dBA L_{50}. (Urban Crossroads, 2018c, p. 36)
- Location L5 represents the noise levels south of the Project site on Channel View Street near an existing residential community. The noise level measurements collected show an overall 24-hour exterior noise level of 56.9 dBA CNEL. At Location L5 the background ambient noise levels ranged from 45.0 to 50.0 dBA L_{50} during daytime hours and from 42.0 to 49.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated at 47.6 dBA L_{50} and the average nighttime noise level was calculated at 44.7 dBA L_{50}. (Urban Crossroads, 2018c, p. 36)
- Location L6 represents the noise levels at the southwest corner of the Project site, on Bickmore Avenue, near existing agricultural uses. The noise level measurements collected show an overall 24-hour exterior noise level of 64.3 dBA CNEL. The noise levels measured at Location L6 ranged from 47.0 to 58.0 dBA L_{50} during daytime hours and from 43.0 to 58.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated at 52.0 dBA L_{50} and the average nighttime noise level was calculated at 49.1 dBA L_{50}. (Urban Crossroads, 2018c, pp. 36-37)
- Location L7 represents the noise levels measured west of the Project site adjacent to an existing residential home and industrial uses. The noise level measurements collected show an overall 24-hour exterior noise level of 69.3 dBA CNEL. The noise levels measured at Location L7 ranged from 53.0 to 62.0 dBA L_{50} during daytime hours and from 53.0 to 62.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated at 58.5 dBA L_{50} and the average nighttime noise level at 56.0 dBA L_{50}. (Urban Crossroads, 2018c, p. 37)
- Location L8 represents the noise levels north of the Project site, near an existing fire station. The 24-hour CNEL indicates that the overall exterior noise level is 78.3 dBA CNEL. At Location L8 the background ambient noise levels ranged from 61.0 to 73.0 dBA L_{50} during daytime hours and from 45.0 to 74.0 dBA L_{50} during nighttime hours. The average daytime noise level was calculated at 67.5 dBA L_{50} and the average nighttime noise level was calculated at 57.0 dBA L_{50}. (Urban Crossroads, 2018c, p. 37)

B. Existing Groundborne Vibration

There are no sources of perceptible groundborne vibration on the Project site under existing conditions.

C. Airport Noise

The Project site is located near the Chino Airport. According to noise modeling conducted on behalf of the Riverside County Airport Land Use Commission (ALUC), the Project site is located within the 55 dBA CNEL contour from aircraft noise (Urban Crossroads, 2018c, p. 29).

4.10.3 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the federal, State, and local environmental laws and regulations related to noise that are applicable to the Project, the Project site, and/or the surrounding area.

A. Federal Plans, Policies, and Regulations

1. Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of federal research and activities in noise control; (2) authorize the establishment of federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products. (EPA, 2017d)

While primary responsibility for control of noise rests with state and local governments, federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all federal agencies relating to noise research and noise control. (EPA, 2017d)

2. Federal Transit Administration

The Federal Transit Administration (FTA) published a *Noise and Vibration Impact Assessment* (*NVIA*), which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents. In the interest of promoting quality and uniformity in assessments, the manual is used by project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impact resulting from most federally-funded transit projects and for determining what can be done to mitigate such impact. (FTA, 2006, p. 1-1)

3. Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency responsible for administering the federal-aid highway program in accordance with federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway construction projects where a state department of transportation has requested federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either substantially change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design. (FHWA, 2017)

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with

the noise regulations is a prerequisite for the granting of federal-aid highway funds for construction or reconstruction of a highway. (FHWA, 2017)

4. Construction-Related Hearing Conservation

The Occupational Safety and Health Administration (OSHA) hearing conservation program is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (OSHA, 2002)

B. State Plans, Policies, and Regulations

1. State of California Noise Requirements

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 in the State of California adopt a General Plan that includes a Noise Element, which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels.

2. Building Standards Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Standards Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3. OPR General Plan Guidelines

Though not adopted by law, the 2003 California General Plan Guidelines, published by the California Governor's Office of Planning and Research (OPR), provides guidance for local agencies in preparing or updating General Plans. The Guidelines provide direction on the required Noise Element portion of the General Plans. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions. The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the Land Use, Circulation, and Housing Elements. The Noise Element must be used to guide decisions concerning land use and the location of new roads and

transit facilities since these are common sources of excessive noise levels. The noise levels from existing land uses, including mining, agricultural, and industrial activities, must be closely analyzed to ensure compatibility, especially where residential and other sensitive receptors have encroached into areas previously occupied by these uses. (OPR, 2003, p. 87)

C. *Local Plans, Policies, and Regulations*

1. *City of Chino General Plan Noise Element*

The City of Chino Noise Element addresses the control and abatement of environmental noise and specifies the maximum allowable exterior noise levels for developments that would be impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. The noise standards included in the General Plan are summarized in Table 4.10-2, *City of Chino Noise Element Interior and Exterior Noise Standards*.

2. *City of Chino Municipal Code*

❑ Construction Noise Standards

The Chino Municipal Code limits the hours during which construction activities may take place. Construction activities in the City of Chino may only occur between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday with no construction activities allowed on Sundays and federal holidays (unless a waiver is granted by the City pursuant to Municipal Code Section 15.44.030), and provided the noise levels do not exceed the levels listed below on a residential property (Urban Crossroads, 2018c, p. 25).

- 65 dBA for a cumulative period of no more than 30 minutes in any hour (L_{50})
- 70 dBA for a cumulative period of no more than 15 minutes in any hour (L_{25});
- 75 dBA for a cumulative period of no more than five (5) minutes in any hour (L_8);
- 80 dBA for a cumulative period of more than one (1) minute in any hour (L_2); and /or
- 85 dBA for any period of time.

❑ Operational Noise Standards

The City of Chino Municipal Code does not establish operational noise standards for commercial or industrial land uses; but, does establish maximum noise levels that residential properties can be exposed to, as listed below (Urban Crossroads, 2018c, p. 24).

- 55 dBA (daytime) or 50 dBA (nighttime) for a cumulative period of no more than 30 minutes in an hour (L_{50});
- 60 dBA (daytime) or 55 dBA (nighttime) for a cumulative period of no more than fifteen minutes in an hour (L_{25});
- 65 dBA (daytime) or 60 dBA (nighttime)for a cumulative period of no more than five minutes in an hour (L_8);
- 70 dBA (daytime) or 65 dBA (nighttime)for a cumulative period of more than one minute in an hour (L_2); and /or
- 75 dBA (daytime) or 70 dBA (nighttime)for any period of time.

Table 4.10-2 City of Chino Noise Element Interior and Exterior Noise Standards

Land Use Category	Uses	Energy Average L_{dn} Interior[a]	Exterior[b]
Residential	Single-family, duplex, multi-family	45[c]	65
	Mobile home	---	65[d]
Commercial, Industrial, Institutional	Hotel, motel, transient lodging	45	65
	Commercial retail, bank, restaurant	55	---
	Office building, research and development, professional offices, City office building	50	---
	Amphitheatre, concert hall, auditorium, meeting hall	45	---
	Gymnasium (multipurpose)	50	---
	Sports club	55	---
	Manufacturing, warehousing, wholesale, utilities	65	---
	Movie theaters	45	---
Institutional	Hospital, schools, classroom	45	65
	Church, library	45	---
Open Space	Parks	---	65

[a] Indoor environment excluding: bathrooms, toilets, closets, corridors.
[b] Outdoor environment limited to: private yard of single-family or multi-family private patio or balcony which is served by a means of exit from inside, mobile home park, hospital patio, park's picnic area, school's playground, and hotel and motel recreation area.
[c] Noise level requirement with closed windows. Mechanical ventilation system or other means of natural ventilation shall be provided per the California Building Code.
[d] Exterior noise level should be such that interior noise levels will not exceed 45 dB L_{dn}.
Source: (Urban Crossroads, 2018c, Exhibit 3-A)

❑ Vibration Standards

Chino Municipal Code Section 9.40.110 prohibits any operational activity that creates perceptible vibration (more than 0.05 inches per second, in/sec). Pursuant to Chino Municipal Code Section 9.40.060(D), construction activities are exempt from any vibration standards so long as construction activities do not generate vibration that endangers the public health, welfare, and/or safety. (Urban Crossroads, 2018c, p. 26).

❑ **Construction Management Plan**

Pursuant to City of Chino Municipal Code Section 20.23.210, a construction management plan is required for all construction activities that have the potential to impact adjacent residents or businesses. The construction management plan, which must be prepared to the satisfaction of the City of Chino Director of Community Development prior to issuance of construction permits (grading and building) and implemented by the construction contractor(s), is required to contain measures to minimize adverse construction-related noise effects.

4.10.4 Methodology for Estimating Project-Related Noise Impacts

A. Construction Noise Analysis Methodology

Urban Crossroads collected reference noise level measurements at construction sites throughout southern California that were using the same types of construction equipment that would be used to construct the proposed Project and that were performing similar types of construction activities as would occur to construct the proposed Project (refer to EIR Section 3.0, *Project Description*, for a description of the construction equipment and construction activities that would be needed to construct the proposed Project). Table 4.10-3, *Construction Reference Noise Levels*, provides a summary of the reference noise level measurements. Because the reference noise measurements were collected at different distances to the primary noise source, all construction noise level measurements presented in Table 4.10-3 were normalized by Urban Crossroads to describe a common reference distance of 50 feet. (Urban Crossroads, 2018c, pp. 95, 97)

The construction noise analysis evaluates Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. This analysis of construction-related noise does not evaluate the noise exposure of construction workers within the Project site based on CEQA's requirements to evaluate impacts to the existing environment; CEQA does not require an evaluation of the Project's impacts upon itself. During construction activities, periodic exposure to high noise levels in short duration, such as would occur during the Project's construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment.

B. Transportation-Related Noise Analysis Methodology

Transportation-related noise impacts were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model FHWA-RD-77-108 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California, the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMELs to account for: 1) roadway classification (e.g., collector, secondary, major or arterial), 2) roadway travel width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), 3) total average daily traffic (ADT), 4) travel speed, 5) percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, 6) roadway grade, 7) angle of view (e.g., whether the roadway view is blocked), 8) site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and 9) percentage of total ADT that flows each hour throughout a 24-hour period. (Urban Crossroads, 2018c, pp. 41, 46)

Table 4.10-3 Construction Reference Noise Levels

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[7]
1	Truck Pass-Bys & Dozer Activity[1]	30'	63.6	59.2
2	Dozer Activity[1]	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities[2]	30'	71.9	67.5
4	Foundation Trenching[2]	30'	72.6	68.2
5	Rough Grading Activities[2]	30'	77.9	73.5
6	Framing[3]	30'	66.7	62.3
7	Water Truck Pass-By & Backup Alarm[4]	30'	76.3	71.9
8	Dozer Pass-By[4]	30'	84.0	79.6
9	Two Scrapers & Water Truck Pass-By[4]	30'	83.4	79.0
10	Two Scrapers Pass-By[4]	30'	83.7	79.3
11	Scraper, Water Truck, & Dozer Activity[4]	30'	79.7	75.3
12	Concrete Mixer Truck Movements[5]	50'	71.2	71.2
13	Concrete Paver Activities[5]	30'	70.0	65.6
14	Concrete Mixer Pour & Paving Activities[5]	30'	70.3	65.9
15	Concrete Mixer Backup Alarms & Air Brakes[5]	50'	71.6	71.6
16	Concrete Mixer Pour Activities[5]	50'	67.7	67.7
17	Forklift, Jackhammer, & Metal Truck Bed Loading	50'	67.9	67.9

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[6] As measured by Urban Crossroads, Inc. on 9/9/16 during the demolition of an existing paved parking lot at 41 Corporate Park in Irvine.
[7] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).
Source: (Urban Crossroads, 2018c, Table 10-1)

Table 4.10-4, *Roadway Parameters*, presents the FHWA Model roadway parameters used by Urban Crossroads for each of the 42 roadway segments in the study area. For the purpose of the off-site analysis, soft site conditions were used to analyze the traffic noise impacts on each roadway segment in the study area because landscaping (e.g., parkways, back yards, side yards) between the street surface and the noise receiver locations along all study area roadways. (Urban Crossroads, 2018c, pp. 41, 46)

Table 4.10-4 Roadway Parameters

ID	Roadway	Segment	Analysis Cond.	Adjacent Planned (Existing) Land Use[1]	Centerline to Adjacent Land Use Distance (Feet)[2]	Vehicle Speed (mph)
1	Central Av.	n/o Chino Hills Pkwy.	Existing, Opening Year, & Horizon Year Without and With Limonite Extension	Urban Reserve (Prison)	60'	45
2	Central Av.	s/o Chino Hills Pkwy.		Office Commercial	60'	45
3	Central Av.	s/o El Prado Rd.		Office Commercial	60'	45
4	Euclid Av.	n/o SR-60		Residential	84'	45
5	Euclid Av.	s/o SR-60		Commercial	84'	45
6	Euclid Av.	s/o Walnut St.		Residential	84'	45
7	Euclid Av.	s/o Riverside Dr.		Residential	84'	55
8	Euclid Av.	s/o Chino Av.		Residential	84'	55
9	Euclid Av.	s/o Schaefer Av.		Residential	84'	55
10	Euclid Av.	s/o Edison Av.		Mixed-Use (Residential)	84'	55
11	Euclid Av.	s/o Eucalyptus Av.		Residential	84'	55
12	Euclid Av.	s/o Merrill Av.		Urban Reserve (Prison)	84'	55
13	Euclid Av.	s/o Kimball Av.		Industrial (Residential)	84'	55
14	Euclid Av.	s/o Bickmore Av.		Commercial (Agricultural)	84'	55
15	Euclid Av.	s/o Pine Av.		Urban Reserve	84'	55
16	Flight Av.	n/o Kimball Av.		Industrial	30'	40
17	Hellman Av.	s/o Kimball Av.		Residential	49'	45
18	Edison Av.	w/o Euclid Av.		Business Park (Church)	60'	45
19	Eucalyptus Av.	w/o Euclid Av.		Residential	44'	40
20	Chino Hills Pkwy.	w/o SR-71		Residential	49'	40
21	Chino Hills Pkwy.	e/o SR-71		Commercial	49'	45
22	Chino Hills Pkwy.	e/o Ramona Av.		Commercial	49'	45
23	Chino Hills Pkwy.	e/o Monte Vista Av.		Industrial	60'	45
24	El Prado Rd.	e/o Central Av.		Industrial/Urban Reserve	44'	45
25	Kimball Av.	e/o El Prado Rd.		Industrial/Urban Reserve	44'	50
26	Kimball Av.	e/o Mountain Av.		Industrial/Urban Reserve	44'	50
27	Kimball Av.	e/o San Antonio Av.		Industrial	44'	50
28	Kimball Av.	e/o Fern Av.		Industrial	44'	50
29	Kimball Av.	e/o Euclid Av.		Commercial/Public	49'	50
30	Kimball Av.	w/o Rincon Meadows Av.		Residential	49'	50
31	Kimball Av.	e/o Rincon Meadows Av.		Residential	49'	50
32	Kimball Av.	e/o Mill Creek Av.		Residential	49'	50
33	Kimball Av.	e/o Main St.		Residential	49'	50
34	Kimball Av.	e/o Flight Av.		Residential	49'	50
35	Kimball Av.	e/o Meadow Valley Av.		Residential	49'	50
36	Pine Av.	e/o Euclid Av.		Urban Reserve (Residential)	60'	45
37	Limonite Av.	e/o Hellman Av.	Horizon Year With Limonite Extension	Industrial (Agricultural)	76'	45
38	Limonite Av.	e/o Archibald Av.		Industrial (Agricultural)	76'	45
39	Limonite Av.	e/o Harrison Av.		Residential	76'	45
40	Limonite Av.	e/o Sumner Av.		Residential	76'	45
41	Limonite Av.	e/o Scholar Wy.		Residential	76'	45
42	Limonite Av.	e/o Hamner Av.		Commercial	76'	45

[1] Sources: City of Chino General Plan Land Use Designations, Figure LU-2, The Ontario Plan Land Use Plan, Exhibit LU-01, and the City of Eastvale General Plan Land Use Map.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Elements.

Source: (Urban Crossroads, 2018c, Table 6-1)

To quantify transportation-related noise levels, the vehicular trips associated with future Project-related development were assigned to the 42 roadway segments in the study area, using the trip distribution and

vehicle mix information contained in the Project's traffic impact analysis prepared by Urban Crossroads (refer to *Technical Appendix I*) (Urban Crossroads, 2018c, p. 46).

C. *Vibration*

Vibration levels were predicted using reference vibration levels and logarithmic equations contained in the Federal Transit Administration's (FTA) 2006 publication: "Transit Noise and Vibration Impact Assessment." The vibration source levels for Project construction equipment are summarized in Table 4.10-5, *Vibration Source Levels for Construction Equipment.* Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. (Urban Crossroads, 2018c, p. 55)

Table 4.10-5 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

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.
Source: (Urban Crossroads, 2018c, Table 6-15)

4.10.5 Basis for Determining Significance

The proposed Project would result in a significant noise impact if the Project or any Project-related component would:

a. *Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*

b. *Expose persons to or generate excessive groundborne vibration or groundborne noise levels;*

c. *Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*

d. *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*

e. *For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or*

f. *For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse noise-related

effects that could result from development projects. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold. The specific, quantitative criteria described below are utilized to evaluate the significance of potential noise impacts under Thresholds "a," "b," "c," and "d" and are based on applicable City of Chino regulations and relevant federal and State performance standards.

In relation to Threshold "a," the City of Chino's noise ordinance (Chino Municipal Code Chapter 9.40) is the only relevant, established noise standards for the Project site. Pursuant to the Chino Municipal Code, the Project would result in a significant noise impact under Threshold "a" if any of the following were to occur:

- Construction activities occur outside of the hours permitted by the City of Chino Municipal Code (between 7:00 a.m. and 8:00 p.m. Monday through Saturday with no construction allowed on Sundays and federal holidays), unless a waiver is granted by the City of Chino; or
- Construction activities generate noise that exceeds 65 dBA L_{eq} when measured at a noise-sensitive receptor (e.g., residential property) *[Note: As described earlier in this Subsection, the Chino Municipal Code relies on percentile noise levels to describe noise level limits (e.g., L_{50}, which describes the mean noise levels occurring 50 percent of the time). The L_{eq} noise descriptor, which reports the average sound energy of a fluctuating noise source over a period of time, is used for purposes of the construction analysis because L_{eq} is generally 1-2 dBA higher than the associated L_{50} noise level and, therefore, use of L_{eq} would overestimate the Project's actual impact.]*; or
- Daytime operational activities generate noise that exceeds 55 dBA L_{50}, 60 dBA L_{25}, 65 dBA L_8, 70 dBA L_2, and/or 75 dBA L_{MAX} when measured at a noise-sensitive receptor; or
- Nighttime operational activities generate noise that exceeds 50 dBA L_{50}, 55 dBA L_{25}, 60 dBA L_8, 75 dBA L_2, and/or 70 dBA L_{MAX} when measured at a noise-sensitive receptor.

The Chino Municipal Code (Section 9.40.110) establishes vibration limits for operational activities but exempts construction activities from a specific, numerical vibration standard. To provide a conservative analysis, the Project's construction and operational activities will be evaluated against the City's operational vibration standard. For evaluation under Threshold "b," vibration levels are considered significant if Project-related activities would:

- Create or cause to be created any vibration activity that would exceed 0.05 in/sec RMS velocity at a residential land use.

While the Chino Municipal Code provides noise standards that are sufficient to assess the significance of noise impacts under Threshold "a," the Municipal Code does not define the levels at which noise increases are considered substantial. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of sensitive receptors in order to determine if a noise increase represents a substantial increase and thus a significant adverse environmental impact. For purposes of this EIR, the significance thresholds are adapted from the noise compatibility criteria by land use category provided in the General Plan Guidelines, a publication of the California Office of Planning and Research (OPR, 2003, p. 250). Based on the noise level increases that are normally perceptible to humans, and adapted from the standards listed in the Chino Municipal Code (Urban Crossroads, 2018c, pp. 30, 32), noise level increases associated with the Project's operation and construction will be considered significant under Thresholds "c" and "d," respectively, based on the following:

For evaluation under Threshold "c," the Project would result in a significant noise impact if the Project's stationary source (on-site) or mobile source (off-site traffic) activities result in:

- A 5 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise level is less than 60 dBA CNEL;
- A 3 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise level is between 60.1 and 65 dBA CNEL;
- A 1.5 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise levels exceeds 65.1 dBA CNEL;
- A 5 dBA or greater noise level increase at non-noise-sensitive receptors when the existing ambient noise level is less than 70 dBA CNEL *and* the additional noise causes ambient noise levels to exceed 70 dBA CNEL; or
- A 3 dBA or greater noise level increase at non-noise-sensitive receptors when the existing ambient noise level exceeds 70 dBA CNEL.

For evaluation under Threshold "d," the Project would result in a significant noise impact if the Project's construction activities result in:

- Noise that exceeds 65 dBA L_{eq} when measured at a noise-sensitive receptor.

4.10.6 Impact Analysis

Threshold a:	***Would the Project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***
Threshold c:	***Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***
Threshold d:	***Would the Project result in a substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?***

The analysis presented on the following pages summarizes the Project's potential construction noise levels and operational noise levels, including operational noise that would be generated on-site as well as off-site noise that would be generated by the Project's traffic. The detailed noise calculations for the analysis presented here are provided in Appendices 7.1, 9.1, and 9.2 of *Technical Appendix I*.

A. Construction Noise Impact Analysis

Construction activities on the Project site are proposed to primarily occur on weekdays during daylight hours; however, specific construction activities (i.e., concrete pouring for building foundation and tilt-up wall panels) could occur on weekdays during nighttime hours because cool temperatures are needed to pour and cure concrete and daytime air temperatures are often too warm. Construction activities on the Project site are expected to proceed in five stages: 1) demolition; 2) grading; 3) building construction; 4) paving; and 5) application of architectural coatings. These activities would create temporary periods of noise when heavy construction equipment is in operation and would cause a short-term increase in ambient noise levels. Examples of construction equipment that generate noise include, but are not limited to, off-road equipment

(e.g., graders, scrapers), power tools, concrete mixers, and portable generators. Off-site construction activities could include the installation of a sewer line within the planned alignment of Mayhew Avenue (between Bickmore Avenue and Pine Avenue) and roadway improvements to Kimball Avenue and Bickmore Avenue. (Urban Crossroads, 2018c, p. 95)

Construction noise levels were calculated for 10 representative noise sensitive receiver locations surrounding the Project site and the Project's off-site development area. Receiver locations include existing or future residences (planned or under construction) in the Project vicinity. The noise sensitive receiver locations are shown on Figure 4.10-2, *Construction Noise Receiver Locations*. These 10 locations are representative of all sensitive receivers located nearest the Project's construction area. It is not necessary to study every single receiver location surrounding Project's construction area because receivers located at a similar distance from Project-related construction activities with similar ground elevations, orientation, and intervening physical conditions as the 10 modeled receptor locations would experience the same or very similar noise effects as those disclosed herein. The Project's construction noise levels at the 10 modeled receiver locations are summarized in Table 4.10-6, *Project Construction Noise Levels*.

Table 4.10-6 Project Construction Noise Levels

Receiver Location[1]	Unmitigated Construction Noise Levels (dBA L_{eq})				Threshold Exceeded?[6]		
	Highest Daytime Activity Noise Levels[2]	Nighttime Concrete Pour Activity Noise Levels	Off-Site Improvement Activity Noise Levels	Threshold[5]	Highest Daytime Activity	Nighttime Concrete Pour Activity	Off-Site Improvement Activity
R1	72.5	56.2	44.7	65	**Yes**	No	No
R2	45.8	37.4	37.2	65	No	No	No
R3	68.2	55.0	37.8	65	**Yes**	No	No
R4	77.2	59.0	51.9	65	**Yes**	No	No
R5	67.7	55.6	64.8	65	**Yes**	No	No
R6	49.0	39.4	41.3	65	No	No	No
R7	52.2	38.2	40.5	65	No	No	No
R8	53.7	44.8	55.8	65	No	No	No
R9	46.1	37.9	65.3	65	No	No	**Yes**
R10	46.5	38.0	57.7	65	No	No	No

[1] Noise receiver locations are shown on Figure 4.10-2.
[2] Refer to Table 10-7 of *Technical Appendix I*.
[3] Refer to Table 10-8 of *Technical Appendix I*.
[4] Refer to Table 10-9 of *Technical Appendix I*.
[5] Refer to Table 10-10 of *Technical Appendix I*.
[6] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 10-10)

As shown in Table 4.10-6, the Project's peak construction activities would exceed 65 dBA L_{eq} at five (5) of the modeled receiver locations during daytime construction activities: R1, R3, R4, R5, and R9. The Project's peak daytime construction noise impacts at receiver locations R1, R3, R4, and R5 would be significant under Thresholds "a" and "d," and mitigation would be required. The Project would not exceed 65 dBA L_{eq} (or even 60 dBA L_{eq}) at any receiver location during potential nighttime construction activities; therefore, the Project's peak nighttime construction noise impacts would be less than significant under Thresholds "a" and "d."

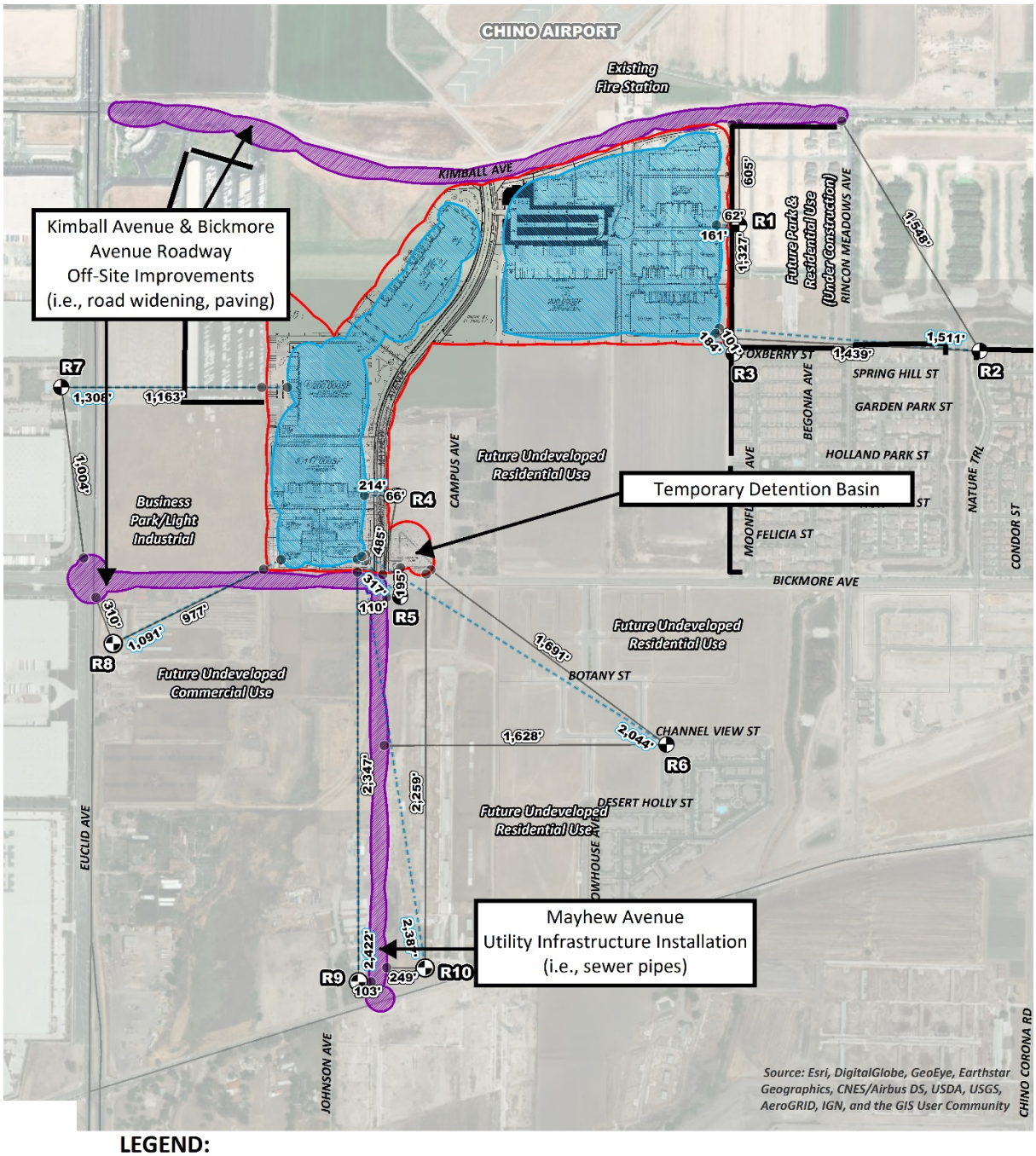


Figure 4.10-2

NOT TO SCALE

CONSTRUCTION NOISE RECEIVER LOCATIONS

B. Stationary Noise Impact Analysis

Stationary (on-site) noise sources associated with the Project's long-term operation are expected to include idling trucks, delivery truck and automobile parking, delivery truck backup alarms, roof-top air conditioning units, emergency generators, and cargo handling equipment. The Project also is expected to generate noise during the loading and unloading of dry goods on-site. The locations and types of stationary noise expected on the Project site during long-term operation are illustrated on Figure 4.10-3, *Operational Noise Source Locations and Receiver Locations*.

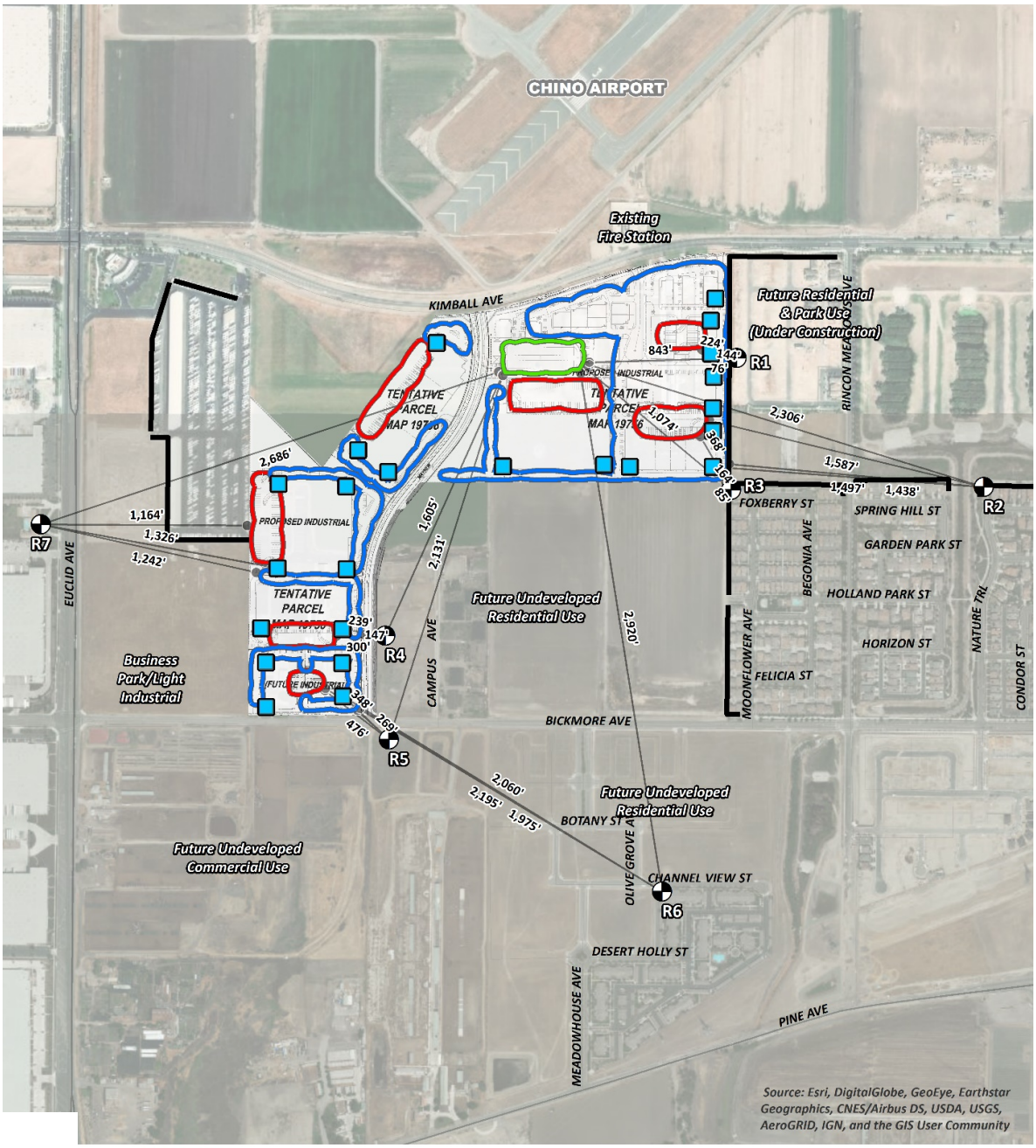
The Project's stationary, operational noise levels were calculated at seven (7) noise-sensitive receiver locations located in the immediate vicinity of the Project site that have the potential to be subjected to noise associated with typical on-site operations. The receiver locations for the stationary, operational noise analysis are illustrated on Figure 4.10-3. These seven locations are representative of all sensitive receivers located nearest the Project site. It is not necessary to study every single receiver location surrounding Project site because receivers located at similar distances from the Project site with similar ground elevations, orientation, and intervening physical conditions as the seven modeled receptor locations would experience the same or very similar noise effects as those disclosed herein. The Project's operational noise levels at the seven modeled receiver locations are summarized in Table 4.10-7, *Project Operational Noise Levels*.

Table 4.10-7 Project Operational Noise Levels

Receiver Location[1]	Noise Level at Receiver Locations (dBA)[2]					Threshold Exceeded?[3]	
	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)	Daytime	Nighttime
Residential Standards	**55**	**60**	**65**	**70**	**75**	**Daytime**	
	50	**55**	**60**	**65**	**70**	**Nighttime**	
R1	42.9	45.5	49.7	53.3	58.6	No	No
R2	25.5	28.4	32.9	36.8	41.8	No	No
R3	40.4	42.7	46.3	49.8	55.8	No	No
R4	45.5	48.2	52.4	56.1	61.1	No	No
R5	41.7	44.3	48.5	52.1	57.2	No	No
R6	28.3	31.1	35.3	39.0	44.0	No	No
R7	33.2	36.1	40.4	44.1	49.0	No	No

[1] Refer to Figure 4.10-3 for the receiver and noise source locations.
[2] Refer to Table 9-2 from *Technical Appendix I*.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.
Source: (Urban Crossroads, 2018c, Table 9-3)

As shown in Table 4.10-7, none of the sensitive receiver locations near the Project site would be exposed to noise levels that exceed the limits established by the Chino Municipal Code. Accordingly, the Project's operational noise would be less than significant under Threshold "a."



LEGEND:

- Receiver Locations
- Existing 6-Foot High Barrier
- Roof-Top Air Conditioning Unit
- Parking Lot Vehicle Movements
- Self-Storage Activity
- Distribution/Warehouse Activity
- Distance from receiver to center of noise source (in feet)

Source(s): Urban Crossroads (09-19-2018)

Figure 4.10-3

NOT TO SCALE

OPERATIONAL NOISE SOURCE LOCATIONS AND RECEIVER LOCATIONS

The Project's contribution to the existing noise environment is summarized in Table 4.10-8, *Daytime Noise Level Contributions*, and Table 4.10-9, *Nighttime Operation Noise Level Contributions*.

Table 4.10-8 Daytime Noise Level Contributions

Receiver Location[1]	Total Project Operational Noise Level (dBA L_{50})[2]	Measurement Location[3]	Reference Ambient Noise Levels (dBA L_{50})[4]	Combined Project and Ambient (dBA L_{50})[5]	Project Contribution (dBA L_{50})[6]	Threshold Exceeded?[7]
R1	42.9	L3	47.1	48.5	1.4	No
R2	25.5	L2	49.4	49.4	0.0	No
R3	40.4	L3	47.1	47.9	0.8	No
R4	45.5	L6	52.0	52.9	0.9	No
R5	41.7	L6	52.0	52.4	0.4	No
R6	28.3	L5	47.6	47.7	0.1	No
R7	33.2	L7	58.5	58.5	0.0	No

[1] Noise receiver locations are shown on Figure 4.10-3.
[2] Refer to Table 9-3 of *Technical Appendix I*.
[3] Reference noise level measurement locations as shown on Exhibit 5-A of *Technical Appendix I*.
[4] Observed daytime ambient noise levels as shown on Table 5-1 of *Technical Appendix I*.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increases expected with the addition of the proposed Project.
[7] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 9-4)

Table 4.10-9 Nighttime Operation Noise Level Contributions

Receiver Location[1]	Total Project Operational Noise Level (dBA L_{50})[2]	Measurement Location[3]	Reference Ambient Noise Levels (dBA L_{50})[4]	Combined Project and Ambient (dBA L_{50})[5]	Project Contribution (dBA L_{50})[6]	Threshold Exceeded?[7]
R1	42.9	L3	45.9	47.7	1.8	No
R2	25.5	L2	45.3	45.3	0.0	No
R3	40.4	L3	45.9	47.0	1.1	No
R4	45.5	L6	49.1	50.7	1.6	No
R5	41.7	L6	49.1	49.8	0.7	No
R6	28.3	L5	44.7	44.8	0.1	No
R7	33.2	L7	56.0	56.0	0.0	No

[1] Noise receiver locations are shown on Figure 4.10-3.
[2] Refer to Table 9-3 of *Technical Appendix I*.
[3] Reference noise level measurement locations as shown on Exhibit 5-A of *Technical Appendix I*.
[4] Observed daytime ambient noise levels as shown on Table 5-1 of *Technical Appendix I*.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increases expected with the addition of the proposed Project.
[7] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 9-5)

When evaluated against the context of existing ambient noise levels in the Project area, the Project's operational noise would not be perceptible at noise-sensitive-receiver locations during daytime or nighttime hours. As shown in Table 4.10-8 and Table 4.10-9, operational activities on the Project site would increase ambient noise levels at noise-sensitive-receiver locations by no more than 1.4 dBA L_{50} during daytime hours and by no more than 1.8 dBA L_{50} during nighttime hours, respectively. (As described earlier in this Subsection, noise level increases of 1 dBA can only be perceived by the human ear in a controlled, laboratory environment.) The Project's daytime and nighttime contribution to the local ambient noise environment would not exceed the applicable significance thresholds and, therefore, would not represent a substantial permanent increase in ambient noise levels in the Project site vicinity above levels existing without the Project. The Project would result in a less-than-significant impact under Threshold "c"

C. *Traffic-Related Noise Impact Analysis*

To evaluate off-site noise increases that could result from Project-related traffic, noise levels were modeled for the following scenarios:

- Existing (2016) plus Project Conditions
  - Existing plus Project (Phase 1)
  - Existing plus Project (Phase 1+2)
  - Existing plus Project (Project Buildout)
- Opening Year
  - Opening Year (2018)
  - Opening Year (2019)
  - Opening Year (2020)
- Horizon Year (2040) Conditions

The Existing plus Project (E+P) analysis determines noise impacts under the theoretical scenario where traffic from Project-related development is placed upon existing conditions. Because the Project contains three separate development phases, three different E+P analyses are performed: E+P (Phase 1), E+P (Phases 1+2), and E+P (Phases 1+2+3). The E+P scenario is presented to disclose direct impacts as required by CEQA. In the case of the proposed Project, the estimated time period between the commencement of the Project's traffic analysis (2016) and Project buildout (2018-2020) is two-to-four years. During this time period, traffic conditions are not static – other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Therefore, the E+P scenario is very unlikely to materialize in real-world conditions when the proposed Project is constructed and becomes operational.

The Opening Year (2018, 2019, and 2020) analyses include an evaluation of traffic noise conditions at the "opening year" of each of the Project's three phases. The Opening Year (2018) analysis reflects traffic noise conditions at the opening of the Project's first phase; the Opening Year (2019) analysis reflects traffic noise conditions at the opening of the Project's second phase; and the Opening Year (2020) analysis reflects traffic noise conditions at full buildout of the Project. The Opening Year analyses are utilized to determine the Project's potential to cumulatively contribute to near-term noise impacts upon consideration of existing traffic + ambient growth + Project traffic + traffic from cumulative development projects.

The Horizon Year (2040) Conditions analysis determines the potential for the Project to contribute to long-term noise impacts after the addition of growth expected from build out of local general plans and local cumulative development projects.

Refer to EIR Subsection 4.11, *Transportation and Traffic*, for information about the distribution pattern of Project-related traffic. The trip distribution for the proposed Project was developed based on anticipated passenger car and truck travel patterns to-and-from the Project site. The traffic distribution pattern for Project-related truck trips and passenger car trips are shown in EIR Subsection 4.11 and discussed in more detail in the Project's technical Traffic Impact Analysis included as *Technical Appendix J* to this EIR.

1. Existing plus Project Conditions

Table 4.10-10 through Table 4.10-12 summarize noise conditions along study area roadway segments under each of the three E+P analysis scenarios. As shown in Table 4.10-10, Table 4.10-11, and Table 4.10-12, the Project's transportation noise would not exceed the applicable significance threshold under any E+P analysis scenario. Therefore, the Project's contribution of off-site traffic noise would not result in a substantial, permanent increase in ambient noise levels under E+P conditions. Impacts would be less than significant under Threshold "c."

2. Opening Year Conditions

Table 4.10-13 through Table 4.10-15 summarize noise conditions along study area roadway segments under each of the three Opening Year analysis scenarios (2018, 2019, 2020). As shown in Table 4.10-13, Table 4.10-14, and Table 4.10-15, the Project's transportation noise would not exceed the applicable significance threshold under any Opening Year analysis scenario. Therefore, the Project's contribution of off-site traffic noise would not result in a substantial, permanent increase in ambient noise levels under Opening Year conditions. Impacts would be less than significant under Threshold "c."

3. Horizon Year Conditions

Table 4.10-16 and Table 4.10-17 summarize noise conditions along study area roadway segments under the Horizon Year (2040) scenario with and without the planned extension of Limonite Avenue over the Cucamonga Channel (to the east of the Project site). As shown in Table 4.10-16 and Table 4.10-17, the Project's transportation noise would not exceed the applicable significance threshold under either Horizon Year analysis scenario. Therefore, the Project's contribution of off-site traffic noise would not result in a substantial, permanent increase in ambient noise levels under Horizon Year conditions. Impacts would be less than significant under Threshold "c."

Threshold b: Would the Project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

A. Construction Analysis

Construction activities on the Project site would utilize construction equipment that has the potential to generate vibration. As shown in Table 4.10-18, *Project Construction Vibration Levels*, all sensitive receivers in the vicinity of the Project site would be exposed to peak vibration levels below applicable significance thresholds. Accordingly, short-term construction vibration from the Project would not expose people to or generate excessive groundborne vibration or groundborne noise levels and a less-than-significant impact would occur.

Table 4.10-10 Existing plus Project Transportation Noise Impacts (Phase 1)

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.1	75.1	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	74.8	74.9	0.1	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	75.4	75.5	0.1	No	No
4	Euclid Av.	n/o SR-60	Residential	78.0	78.0	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	78.1	78.4	0.3	No	No
6	Euclid Av.	s/o Walnut St.	Residential	77.5	77.8	0.3	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	79.1	79.4	0.3	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	79.4	79.7	0.3	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	79.2	79.5	0.3	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	78.7	79.0	0.3	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	78.9	79.2	0.3	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	78.8	79.1	0.3	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	77.5	77.6	0.1	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	76.8	77.1	0.3	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	79.8	79.9	0.1	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	66.4	66.8	0.4	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.7	72.7	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	72.9	72.9	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	67.0	67.0	0.0	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.4	76.4	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	75.6	75.7	0.1	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.3	75.4	0.1	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	73.8	73.9	0.1	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	75.6	75.8	0.2	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	75.3	75.5	0.2	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	74.8	75.1	0.3	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	74.8	75.0	0.2	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	75.0	75.2	0.2	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	74.7	75.5	0.8	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	74.9	75.0	0.1	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	74.8	74.9	0.1	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	74.3	74.3	0.0	Yes	No
33	Kimball Av.	e/o Main St.	Residential	72.9	73.0	0.1	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	73.8	73.8	0.0	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.7	0.0	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	74.4	74.5	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-15)

Table 4.10-11 Existing plus Project Transportation Noise Impacts (Phases 1+2)

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.1	75.1	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	74.8	74.9	0.1	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	75.4	75.6	0.2	No	No
4	Euclid Av.	n/o SR-60	Residential	78.0	78.0	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	78.1	78.6	0.5	No	No
6	Euclid Av.	s/o Walnut St.	Residential	77.5	78.0	0.5	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	79.1	79.6	0.5	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	79.4	79.9	0.5	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	79.2	79.7	0.5	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	78.7	79.3	0.6	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	78.9	79.5	0.6	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	78.8	79.4	0.6	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	77.5	77.7	0.2	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	76.8	77.4	0.6	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	79.8	80.0	0.2	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	66.4	67.2	0.8	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.7	72.7	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	72.9	72.9	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	67.0	67.0	0.0	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.4	76.4	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	75.6	75.8	0.2	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.3	75.5	0.2	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	73.8	74.0	0.2	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	75.6	76.0	0.4	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	75.3	75.8	0.5	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	74.8	75.4	0.6	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	74.8	75.3	0.5	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	75.0	75.5	0.5	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	74.7	76.2	1.5	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	74.9	75.1	0.2	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	74.8	74.9	0.1	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	74.3	74.4	0.1	Yes	No
33	Kimball Av.	e/o Main St.	Residential	72.9	73.1	0.2	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	73.8	73.8	0.0	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.7	0.0	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	74.4	74.5	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-16)

Table 4.10-12 Existing plus Project Transportation Noise Impacts (Phases 1+2+3)

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.1	75.1	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	74.8	75.0	0.2	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	75.4	75.8	0.4	No	No
4	Euclid Av.	n/o SR-60	Residential	78.0	78.0	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	78.1	78.9	0.8	No	No
6	Euclid Av.	s/o Walnut St.	Residential	77.5	78.3	0.8	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	79.1	79.9	0.8	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	79.4	80.2	0.8	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	79.2	80.0	0.8	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	78.7	79.7	1.0	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	78.9	79.8	0.9	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	78.8	79.7	0.9	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	77.5	77.9	0.4	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	76.8	77.7	0.9	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	79.8	80.2	0.4	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	66.4	67.6	1.2	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.7	72.7	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	72.9	72.9	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	67.0	67.0	0.0	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.4	76.4	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	75.6	75.8	0.2	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.3	75.6	0.3	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	73.8	74.1	0.3	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	75.6	76.2	0.6	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	75.3	76.1	0.8	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	74.8	75.7	0.9	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	74.8	75.6	0.8	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	75.0	75.8	0.8	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	74.7	76.9	2.2	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	74.9	75.2	0.3	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	74.8	75.0	0.2	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	74.3	74.5	0.2	Yes	No
33	Kimball Av.	e/o Main St.	Residential	72.9	73.2	0.3	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	73.8	73.8	0.0	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.7	0.0	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	74.4	74.6	0.2	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-17)

Table 4.10-13 Opening Year (2018) Transportation Noise Impacts

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.3	75.3	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	75.3	75.3	0.0	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	76.1	76.2	0.1	No	No
4	Euclid Av.	n/o SR-60	Residential	78.3	78.3	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	79.5	79.6	0.1	No	No
6	Euclid Av.	s/o Walnut St.	Residential	79.0	79.2	0.2	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	80.8	81.0	0.2	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	81.1	81.2	0.1	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	81.0	81.2	0.2	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	80.9	81.0	0.1	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	81.1	81.3	0.2	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	80.3	80.5	0.2	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	79.3	79.4	0.1	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	78.9	79.1	0.2	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	80.9	81.0	0.1	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	72.2	72.3	0.1	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.3	72.3	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	73.5	73.5	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	68.3	68.3	0.0	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.6	76.6	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	76.0	76.1	0.1	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.8	75.9	0.1	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	73.7	73.8	0.1	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	76.7	76.8	0.1	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	76.6	76.8	0.2	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	76.3	76.5	0.2	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	76.4	76.6	0.2	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	76.8	77.0	0.2	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	76.2	76.7	0.5	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	76.3	76.3	0.0	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	76.1	76.2	0.1	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	76.1	76.2	0.1	Yes	No
33	Kimball Av.	e/o Main St.	Residential	74.7	74.8	0.1	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	74.1	74.1	0.0	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.7	0.0	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	74.9	75.0	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-18)

Table 4.10-14 Opening Year (2019) Transportation Noise Impacts

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.4	75.4	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	75.4	75.5	0.1	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	76.2	76.4	0.2	No	No
4	Euclid Av.	n/o SR-60	Residential	78.4	78.4	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	79.5	79.9	0.4	No	No
6	Euclid Av.	s/o Walnut St.	Residential	79.1	79.5	0.4	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	80.9	81.2	0.3	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	81.1	81.5	0.4	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	81.1	81.4	0.3	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	80.9	81.3	0.4	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	81.2	81.5	0.3	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	80.4	80.8	0.4	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	79.3	79.5	0.2	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	78.9	79.3	0.4	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	81.0	81.2	0.2	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	72.2	72.4	0.2	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.3	72.4	0.1	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	73.6	73.6	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	68.4	68.4	0.0	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.7	76.7	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	76.1	76.2	0.1	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.9	76.0	0.1	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	73.7	73.9	0.2	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	76.7	77.0	0.3	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	76.6	77.0	0.4	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	76.4	76.8	0.4	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	76.5	76.8	0.3	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	76.9	77.2	0.3	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	76.2	77.3	1.1	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	76.3	76.4	0.1	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	76.2	76.3	0.1	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	76.2	76.3	0.1	Yes	No
33	Kimball Av.	e/o Main St.	Residential	74.8	74.9	0.1	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	74.1	74.2	0.1	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.8	0.1	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	75.0	75.1	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-19)

Table 4.10-15 Opening Year (2020) Transportation Noise Impacts

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	75.5	75.5	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	75.4	75.7	0.3	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	76.3	76.5	0.2	No	No
4	Euclid Av.	n/o SR-60	Residential	78.5	78.5	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	79.6	80.1	0.5	No	No
6	Euclid Av.	s/o Walnut St.	Residential	79.2	79.8	0.6	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	80.9	81.5	0.6	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	81.2	81.7	0.5	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	81.1	81.7	0.6	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	81.0	81.5	0.5	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	81.2	81.8	0.6	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	80.5	81.1	0.6	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	79.4	79.7	0.3	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	79.0	79.5	0.5	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	81.1	81.3	0.2	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	72.2	72.6	0.4	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	72.4	72.4	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	73.6	73.7	0.1	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	68.4	68.5	0.1	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.8	76.8	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	76.2	76.4	0.2	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	76.0	76.2	0.2	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	74.4	74.7	0.3	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	76.8	77.3	0.5	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	76.7	77.3	0.6	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	76.5	77.0	0.5	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	76.5	77.1	0.6	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	76.9	77.4	0.5	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	76.2	77.9	1.7	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	76.4	76.5	0.1	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	76.2	76.4	0.2	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	76.2	76.4	0.2	Yes	No
33	Kimball Av.	e/o Main St.	Residential	74.8	75.0	0.2	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	74.2	74.2	0.0	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.8	73.8	0.0	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	75.1	75.2	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-20)

Table 4.10-16 Horizon Year Transportation Noise Impacts – Without Limonite Extension

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	76.2	76.2	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	75.3	75.5	0.2	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	75.6	75.9	0.3	No	No
4	Euclid Av.	n/o SR-60	Residential	79.9	79.9	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	79.7	80.2	0.5	No	No
6	Euclid Av.	s/o Walnut St.	Residential	79.6	80.1	0.5	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	81.9	82.4	0.5	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	82.2	82.6	0.4	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	82.2	82.6	0.4	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	81.2	81.7	0.5	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	81.4	81.9	0.5	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	81.6	82.1	0.5	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	80.2	80.5	0.3	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	80.0	80.4	0.4	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	82.1	82.3	0.2	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	64.8	66.5	1.7	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	73.6	73.7	0.1	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	75.1	75.1	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	67.6	67.7	0.1	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.6	76.6	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	75.7	75.9	0.2	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.7	75.9	0.2	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	74.2	74.5	0.3	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	74.2	75.0	0.8	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	75.7	76.4	0.7	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	75.3	76.0	0.7	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	75.2	76.0	0.8	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	75.4	76.1	0.7	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	75.5	77.4	1.9	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	75.7	75.9	0.2	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	76.3	76.5	0.2	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	76.6	76.8	0.2	Yes	No
33	Kimball Av.	e/o Main St.	Residential	78.2	78.3	0.1	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	73.8	73.9	0.1	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	73.7	73.8	0.1	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	76.6	76.7	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-21)

Table 4.10-17 Horizon Year Transportation Noise Impacts – With Limonite Extension

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Central Av.	n/o Chino Hills Pkwy.	Urban Reserve (Prison)	76.2	76.2	0.0	Yes	No
2	Central Av.	s/o Chino Hills Pkwy.	Office Commercial	75.3	75.5	0.2	No	No
3	Central Av.	s/o El Prado Rd.	Office Commercial	75.6	75.9	0.3	No	No
4	Euclid Av.	n/o SR-60	Residential	79.9	79.9	0.0	Yes	No
5	Euclid Av.	s/o SR-60	Commercial	79.7	80.2	0.5	No	No
6	Euclid Av.	s/o Walnut St.	Residential	79.6	80.0	0.4	Yes	No
7	Euclid Av.	s/o Riverside Dr.	Residential	81.9	82.3	0.4	Yes	No
8	Euclid Av.	s/o Chino Av.	Residential	82.2	82.6	0.4	Yes	No
9	Euclid Av.	s/o Schaefer Av.	Residential	82.2	82.6	0.4	Yes	No
10	Euclid Av.	s/o Edison Av.	Mixed-Use (Res.)	81.2	81.7	0.5	Yes	No
11	Euclid Av.	s/o Eucalyptus Av.	Residential	81.4	81.9	0.5	Yes	No
12	Euclid Av.	s/o Merrill Av.	Urban Reserve (Prison)	81.6	82.1	0.5	Yes	No
13	Euclid Av.	s/o Kimball Av.	Industrial (Res.)	80.2	80.4	0.2	Yes	No
14	Euclid Av.	s/o Bickmore Av.	Commercial (Agr.)	80.0	80.3	0.3	No	No
15	Euclid Av.	s/o Pine Av.	Urban Reserve	82.1	82.2	0.1	Yes	No
16	Flight Av.	n/o Kimball Av.	Industrial	70.6	71.1	0.5	No	No
17	Hellman Av.	s/o Kimball Av.	Residential	74.9	74.9	0.0	Yes	No
18	Edison Av.	w/o Euclid Av.	Business Park (Church)	75.1	75.1	0.0	Yes	No
19	Eucalyptus Av.	w/o Euclid Av.	Residential	67.6	67.7	0.1	Yes	No
20	Chino Hills Pkwy.	w/o SR-71	Residential	76.6	76.6	0.0	Yes	No
21	Chino Hills Pkwy.	e/o SR-71	Commercial	75.7	75.9	0.2	No	No
22	Chino Hills Pkwy.	e/o Ramona Av.	Commercial	75.7	75.9	0.2	No	No
23	Chino Hills Pkwy.	e/o Monte Vista Av.	Industrial	74.2	74.5	0.3	No	No
24	El Prado Rd.	e/o Central Av.	Industrial/Urban Rsrv.	74.2	75.0	0.8	Yes	No
25	Kimball Av.	e/o El Prado Rd.	Industrial/Urban Rsrv.	75.7	76.4	0.7	Yes	No
26	Kimball Av.	e/o Mountain Av.	Industrial/Urban Rsrv.	75.3	76.0	0.7	Yes	No
27	Kimball Av.	e/o San Antonio Av.	Industrial	75.2	76.0	0.8	No	No
28	Kimball Av.	e/o Fern Av.	Industrial	75.4	76.1	0.7	No	No
29	Kimball Av.	e/o Euclid Av.	Commercial/Public	75.5	77.2	1.7	No	No
30	Kimball Av.	w/o Rincon Meadows Av.	Residential	75.7	76.1	0.4	Yes	No
31	Kimball Av.	e/o Rincon Meadows Av.	Residential	76.5	76.8	0.3	Yes	No
32	Kimball Av.	e/o Mill Creek Av.	Residential	77.3	77.6	0.3	Yes	No
33	Kimball Av.	e/o Main St.	Residential	78.7	78.9	0.2	Yes	No
34	Kimball Av.	e/o Flight Av.	Residential	76.0	76.3	0.3	Yes	No
35	Kimball Av.	e/o Meadow Valley Av.	Residential	76.0	76.2	0.2	Yes	No
36	Pine Av.	e/o Euclid Av.	Urban Reserve (Res.)	76.6	76.7	0.1	Yes	No
37	Limonite Av.	e/o Hellman Av.	Industrial (Agr.)	72.9	73.1	0.2	Yes	No
38	Limonite Av.	e/o Archibald Av.	Industrial (Agr.)	75.1	75.2	0.1	Yes	No
39	Limonite Av.	e/o Harrison Av.	Residential	75.4	75.5	0.1	Yes	No
40	Limonite Av.	e/o Sumner Av.	Residential	75.3	75.5	0.2	Yes	No
41	Limonite Av.	e/o Scholar Wy.	Residential	75.3	75.5	0.2	Yes	No
42	Limonite Av.	e/o Hamner Av.	Commercial	75.7	75.8	0.1	Yes	No

[1] Information obtained from City of Chino General Plan, Figure LU-2; The Ontario Plan Land Use Plan, Exhibit LU-01; and the City of Eastvale General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent use.
[3] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 7-22)

Table 4.10-18 Project Construction Vibration Levels

Receiver Location[1]	Distance to Closest Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Velocity Levels (in/sec)[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
R1	62'	0.001	0.009	0.019	0.023	0.023	0.016	No
R2	1,439'	0.000	0.000	0.000	0.000	0.000	0.000	No
R3	101'	0.000	0.004	0.009	0.011	0.011	0.008	No
R4	66'	0.001	0.008	0.018	0.021	0.021	0.015	No
R5	195'	0.000	0.002	0.003	0.004	0.004	0.003	No
R6	1,691'	0.000	0.000	0.000	0.000	0.000	0.000	No
R7	1,004'	0.000	0.000	0.000	0.000	0.000	0.000	No
R8	310'	0.000	0.001	0.002	0.002	0.002	0.001	No
R9	103'	0.000	0.004	0.009	0.011	0.011	0.008	No
R10	249'	0.000	0.001	0.002	0.003	0.003	0.002	No

[1] Noise receiver locations are shown on Figure 4.10-2.
[2] Based on reference information provided in Table 4.10-5.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans *Transportation and Construction Vibration Guidance Manual* (September 2013).
[4] Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?
Source: (Urban Crossroads, 2018c, Table 10-12)

B. Operational Analysis

Under long-term conditions, the operational activities of the proposed Project would not include or require equipment, facilities, or activities that would result in perceptible ground-borne vibration. Trucks would travel to and from the Project site on surrounding roadways; however, vibration and groundborne noise levels for heavy trucks operating at the posted speed limits on smooth, paved surfaces – as is expected on the Project site and surrounding roadways – are typically below the 0.05 in/sec RMS significance threshold presented in Subsection 4.10.5. (Urban Crossroads, 2018c, p. 94) Accordingly, the Project would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels during long-term operation. Impacts are less than significant and no mitigation is required.

Threshold e: ***For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

The Project site is located approximately 0.1-mile south of the nearest runway at the Chino Airport; however, the site is not located within an area that is exposed to excessive airport-related noise. The northern portion of the site is located within the 55 dBA CNEL contour and the southern portion of the site is located beyond the 55 dBA CNEL contour (i.e., would be exposed to noise levels below 55 dBA CNEL). The land uses proposed by the Project are compatible with noise levels 55 dBA and below; therefore, the Project would not expose people working on the Project site to excessive noise levels. (Urban Crossroads, 2018c, pp. 27-29) Impacts would be less than significant.

Threshold f:	***For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?***

The Project site is not located near any private airfields or airstrips. Therefore, the Project has no potential to result in a safety hazard for people living or residing in the Project area. No impact would occur.

4.10.7 Cumulative Impact Analysis

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the vicinity of the Project site and resulting from full General Plan buildout in the City of Chino and surrounding areas.

A. Construction-Related Noise

Construction activities associated with the Project, especially activities involving heavy construction equipment, would create intermittent periods of noise when construction equipment is in operation and cause a short-term increase in ambient noise levels. As previously shown in Table 4.10-6, the Project's peak construction activities would expose receiver locations R1, R3, R4, R5, and R9 to noise levels in excess of 65 dBA L_{eq} during daytime hours. Project construction noise levels combined with ambient noise and vehicular noise from potential cumulative development projects would have a cumulative noise effect on noise receiver locations R1, R3, R4, R5, and R9. In the event that construction activities occur on any properties surrounding the Project site simultaneously with Project-related construction activities and that also contribute construction noise to receivers R1, R3, R4, R5, and/or R9, a cumulative impact would occur and the Project's construction-related noise contribution within the Project study area would be cumulatively considerable. Accordingly, the Project's short-term construction-related noise impacts would result in a cumulatively considerable short-term impact. Because construction noise would be temporary in nature, Project construction activities would result in a less than cumulatively considerable substantial permanent (long-term) increase in ambient noise levels in the Project study area above levels existing without the Project.

B. Stationary Noise

The analysis presented for Threshold "c" addresses the Project's contribution of noise to existing cumulative noise sources (i.e., ambient noise) in the Project area. As previously shown in Table 4.10-8 and Table 4.10-9, the Project's noise contribution would not be perceptible to noise-sensitive receptors in the Project area during daytime or nighttime hours. The Project's permanent stationary noise impacts would not be cumulatively-considerable.

C. Traffic Noise

The analysis presented for Threshold "d" evaluates the Project's traffic noise contribution to ambient noise levels along study area roadways with consideration of near-term (Years 2018, 2019, and 2020) and long-term (Year 2040) cumulative development. As summarized in Table 4.10-13 through Table 4.10-17, the Project's traffic noise contribution at noise-sensitive and non-noise sensitive receptors in the Project study area would not exceed applicable significance thresholds and, therefore, would not be cumulatively considerable under near- or long-term cumulative conditions.

D. Groundborne Vibration and Noise

During construction, the Project's peak vibration impacts would occur during the grading phase when large pieces of equipment, like bulldozers, are operating on-site. (During the non-grading phases of Project construction, when smaller pieces of equipment are used on-site, the Project's vibration would be minimal.) Vibration effects diminish rapidly from the source; therefore, the only reasonable sources of cumulative vibration in the vicinity of the Project site could occur on properties abutting the site. Although properties that abut the Project site on the west and east are currently under construction, or expected to begin construction soon, the peak vibration-producing construction activities on these neighboring properties are expected to be concluded prior to the initiation of construction activities on the Project site. Because the Project's peak construction activities would not overlap with other nearby construction projects, there is no potential for the Project to contribute to the exposure of persons to substantial temporary groundborne vibration or noise.

E. Airport Noise

The Project would not involve the construction, operation, or use of any public airports or public use airports. There are no conditions associated with implementation of the Project that would contribute airport noise or exposure of additional people to unacceptable levels of airport noise. Accordingly, the Project would have no potential to cumulatively contribute to impacts associated with noise from a public airport, public use airport, or private airstrip.

4.10.8 Significance of Impacts Before Mitigation

Thresholds a and d: Significant Direct Impact and Cumulatively-Considerable Impact: Noise generated by short-term construction activities would result in a significant, temporary, direct impact to noise-sensitive receivers in proximity to the Project site. In the event that construction activities occur on properties neighboring the Project site simultaneously, a cumulative impact could occur to one or more of the noise-sensitive receivers that would be affected by the Project.

Threshold b: Less-than-Significant Impact: The Project's construction and operational activities would not result in a perceptible groundborne vibration or noise.

Threshold c: Less-than-Significant Impact: Noise generated during operation of the Project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the Project site.

Threshold e: Less-than-Significant Impact: The Project site is not located within an area exposed to high levels of noise from the Chino Airport. As such, the Project would not expose people to excessive noise levels associated with a public airport or public use airport.

Threshold f: No Impact: The Project site is not located near any private airfields or airstrips.

4.10.9 MITIGATION

The following mitigation measures would reduce noise from Project construction.

MM 4.10-1 Prior to issuance of any grading and building permits, the City of Chino Planning Division and City of Chino Engineering Division shall review and approve a construction management plan in accordance with City of Chino Municipal Code Section 20.23.210. The construction management plan shall include the noise abatement measures listed below. Project contractors shall be required to comply with these abatement measures and maintain written records of such compliance that can be inspected by the City of Chino upon request.

a) An eight (8)-foot-tall construction noise barrier shall be constructed along portions of the Project's south-facing and east-facing property boundary and along a portion of the Project's off-site development area (near the future intersection of Mayhew Avenue and Pine Avenue) that abut property with occupied residences. The location and maximum extent of the construction noise barrier is illustrated on EIR Figure 4.10-4 and Exhibit ES-A from the report titled "Altitude Business Centre Noise Impact Analysis," prepared by Urban Crossroads and dated May 30, 2018. The construction noise barrier shall meet the following minimum standards:

   i.) The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to a construction site perimeter fence or equivalent temporary fence posts or barrier materials;

   ii.) The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired; and

   iii.) The noise control barrier and associated elements shall be completely removed upon the conclusion of the construction activity.

b) The construction contractor shall prohibit the use of construction equipment with a sound power level greater than 100 dBA within 150-feet of occupied residences along the Project site's east-facing boundary. The location and maximum extent of the construction noise buffer area is illustrated on EIR Figure 4.10-4 and Exhibit ES-A from the report titled "Altitude Business Centre Noise Impact Analysis," prepared by Urban Crossroads and dated May 30, 2018. If all equipment used during Project construction has a sound power level rating of 100 dBA or less, then the buffer is not required.

c) The construction contractor shall install sound dampening mats or blankets capable of a minimum 5 dBA noise reduction to the engine compartments of heavy mobile equipment operating within the portion of the Project's off-site development area that abuts the future intersection of Mayhew Avenue and Pine Avenue. The sound dampening mats, which shall only be required in the event that the existing residences that abut the location of the future Mayhew Avenue/Pine Avenue intersection are occupied at the time construction occurs, can be made from commercially-available sound dampening materials, including but not limited to, polyurethane foam and vinyl sheeting.

Figure 4.10-4

0 200 400 800 Feet

CONSTRUCTION NOISE MITIGATION

d) Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer's standards.

e) Construction contractors shall place all stationary construction equipment so that all emitted noise is generated toward the center of the site and away from the noise sensitive receivers nearest the Project site.

f) Construction contractors shall locate equipment staging areas on the Project site in locations that will create the greatest feasible distance between construction related noise sources and noise sensitive receivers nearest the Project site.

g) Construction contractors shall ensure that delivery trucks use designated truck route(s).

4.10.10 Significance of Impacts After Mitigation

Thresholds a) and d): Less-than-Significant Impact with Mitigation Incorporated: Implementation of Mitigation Measure MM 4.10-1 would require the Project to implement numerous measures to reduce noise during construction. MM 4.10-1 would successfully reduce the Project's construction noise to less-than-significant levels at all noise-sensitive receptors in the vicinity of the Project site as summarized below in Table 4.10-19, *Project Construction Noise Levels – With Mitigation*. With implementation of the required mitigation, the Project's construction noise would not generate noise levels in excess of City of Chino standards and would not result in a substantial temporary increase in ambient noise levels.

Table 4.10-19 Project Construction Noise Levels – With Mitigation

Receiver Location[1]	Construction Activity Exceeding Threshold	Construction Noise Levels (dBA L_{eq})[2]					
		Highest Unmitigated Activity[2]	150' Buffer Attenuation	Temporary Noise Barrier Attenuation	Mitigated Peak Activity	Threshold[3]	Threshold Exceeded?[4]
R1	Daytime	72.5	-7.7	0.0	64.8	65	No
R3	Daytime	68.2	-3.4	0.0	64.7	65	No
R4	Daytime	77.2	-7.1	-5.1	64.9	65	No
R5	Daytime	67.7	0.0	-5.1	62.6	65	No
R9	Off-Site Improvements	65.3	0.0	-4.9[5]	60.4	65	No

[1] Noise receiver locations are shown on Figure 4.10-2.
[2] Refer to Table 10-10 of *Technical Appendix I.*
[3,4] Refer to the applicable noise level thresholds listed in EIR Subsection 4.10.5.
Source: (Urban Crossroads, 2018c, Table 10-11)

4.11 TRANSPORTATION AND TRAFFIC

This Subsection is based on a traffic impact analysis (TIA) report prepared by Urban Crossroads, titled "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis, City of Chino" and dated March 4, 2019, which is included as *Technical Appendix J* to this EIR (Urban Crossroads, 2019b). The TIA was prepared in accordance with the City of Chino's traffic study requirements and also, where relevant, addresses requirements of the County of San Bernardino Congestion Management Program and the California Department of Transportation's traffic study guidelines.

4.11.1 STUDY AREA DESCRIPTION

The geographic area that was evaluated for Project-related effects to the transportation and circulation network (hereafter referred to as the "Project Study Area or Study Area") is defined as follows:

A. Intersections

Pursuant to its traffic study guidelines, the City of Chino requires a performance analysis of intersections that would receive 50 or more peak hour trips from a development project. A "peak hour trip" is defined as a trip that occurs between the hours of 7:00 AM and 9:00 AM (AM peak hour) or between the hours of 4:00 PM and 6:00 PM (PM peak hour). The "50 peak hour trip" criteria utilized by the City of Chino is consistent with the methodology utilized by many other jurisdictions, including the Counties of San Bernardino and Riverside and the City of Ontario, and generally represents a bright-line threshold at which a single development project would have the potential to substantially affect the performance of a typical intersection. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a valid and proven way to establish a study area. (Urban Crossroads, 2019b, p. 7)

Sixty-one (61) intersections are located in the Project Study Area. These intersections are identified on Figure 4.11-1, *Study Area Intersection Locations*, and are listed in Table 4.11-1, *Study Area Intersections*. The Study Area includes intersections under the jurisdictions of the Cities of Chino, Ontario, and Eastvale and the California Department of Transportation (Caltrans). The Project is not calculated to contribute any trips to the SR-71 Freeway/Pine Avenue interchange located in the City of Chino Hills (or to the adjacent freeway segments). As such, this interchange is not included in the Project Study Area. (Urban Crossroads, 2019b, p. 7)

B. Freeways

All freeway mainline segments and ramps are under the jurisdiction of the Caltrans. Caltrans typically requests that CEQA lead agencies include an analysis of potential impacts to freeway mainline segments when a proposed project is calculated to contribute 50 or more two-way peak hour trips to a state highway facility that is experiencing noticeable delay and approaching unstable traffic flow. Because impacts to freeway segments dissipate with distance from the point of entry to the State Highway System (i.e., at ramps receiving a project's traffic), Caltrans has indicated that when a project's traffic volumes dissipate to fewer than 50 peak hour trips on a freeway mainline segment, they become unrecognizable from other traffic on the State Highway System. Thus, Caltrans does not require a project's entire vehicular travel path on State highway facilities to be studied.

Notwithstanding, the Project Study Area includes all freeway mainline segments and freeway ramps that are calculated to receive at least 25 peak hour trips from the Project, which results in a more conservative (i.e., larger) study area. (Urban Crossroads, 2019b, p. 48) The sixteen (16) freeway mainline segments included

in the Project Study Area are listed in Table 4.11-2, *Project Study Area Freeway Mainline Segments*, and the fifteen (15) freeway merge/diverge ramp junctions included in the Study Area are listed in Table 4.11-3, *Study Area Freeway Merge / Diverge Ramp Junctions*.

4.11.2 EXISTING CONDITIONS

The Project site is located south of Kimball Avenue, north of Bickmore Avenue, approximately 1,000 feet east of Euclid Avenue, and approximately 600 feet west of Rincon Meadows Avenue. The Project site is located approximately 5.2 miles west of I-15, approximately 1.8 miles east of SR-71, and approximately 4.3 miles south of SR-60 (Google Earth, 2017).

A. Existing Intersection Conditions

Weekday AM and PM peak hour traffic count data was collected at Study Area intersections in May 2016. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1 of *Technical Appendix J*. There were no atypical traffic conditions (e.g. construction activity or detour routes) and nearby schools were in session and operating on normal schedules on the dates that traffic counts were collected. (Urban Crossroads, 2019b, p. 76)

The traffic count data includes a tabulation of passenger cars, 2-axle trucks, 3-axle trucks, and 4-or-more axle trucks. Larger vehicles take up more space on the roadway and take longer to accelerate and decelerate than smaller, passenger vehicles; therefore, converting larger vehicle into passenger car equivalents (PCEs) allows for the real-world effect that larger vehicles have on roadways to be accurately reflected in the TIA and for traffic to be represented as a standardized unit. For purposes of this analysis, a PCE factor of 1.5 is applied to 2-axle truck trips, 2.0~~2.5~~ is applied to 3-axle truck trips, and 3.0 is applied to 4-or-more-axle truck trips. (Urban Crossroads, 2019b, p. 76) These PCE factors follow the recommendations of the *San Bernardino County Congestion Management Plan (CMP*). Except where specifically noted, all of the vehicle trips/traffic volumes in this Subsection are presented as PCE. A detailed description of the methodology used to classify peak hour and daily traffic trips is provided in *Technical Appendix J*.

Existing (2016) peak hour traffic operations calculations for the Study Area intersections are based on the analysis methodologies presented in Subsection 4.11.4. The level of service (LOS) for Study Area intersections during peak hours are summarized in Table 4.11-4, *Existing Intersection Levels of Service*. As shown in Table 4.11-4, all intersections in the Project Study Area operate at acceptable LOS during peak hours under existing conditions with the exception of:

- Central Avenue / El Prado Road (Intersection #7) – LOS "F" in the PM peak hour; and
- Hellman Avenue / Kimball Avenue (Intersection #54) – LOS "F" in the AM and PM peak hours.

B. Existing Freeway Conditions

Freeway mainline segment and interchange traffic volume data was obtained from Caltrans' Performance System (PeMS) website in May 2016. Data was collected for a period of three consecutive days and the highest traffic volume observed within this three-day period is utilized as the baseline for the weekday, peak hour conditions. in accordance with the Transportation Research Board's *Highway Capacity Manual (HCM)*, which is industry-standard methodology for freeway facilities modeling, actual vehicles, as opposed to PCE volumes, were used to calculate freeway density and the corresponding LOS/ramp queuing summaries (Urban Crossroads, 2019b, p. 76).

1. Existing Freeway Mainline Conditions

The peak hour LOS for each freeway mainline segment in the Project Study Area is summarized in Table 4.11-5, *Existing Freeway Mainline Levels of Service*. Peak hour operations along freeway mainline segments in the Project Study Area were calculated using the analysis methodologies presented in Subsection 4.11.4. As summarized in Table 4.11-5, all freeway mainline segments located in the Project Study Area operate at acceptable LOS during the peak hours under existing conditions with the exception of:

- SR-71 Freeway Southbound, South of Euclid Avenue (SR-83) – LOS E in the AM peak hour;
- SR-71 Freeway Northbound, North of Central Avenue – LOS E in the AM peak hour; and
- I-15 Freeway Southbound, South of Limonite Avenue – LOS E in the AM peak hour.

2. Existing Freeway Ramp Conditions

The existing peak hour queuing and merge/diverge LOS at freeway ramps in the Project Study Area are summarized in Table 4.11-6, *Existing Freeway Ramp Queuing Summary*, and Table 4.11-7, *Existing Freeway Ramp Merge / Diverge Levels of Service*, respectively. The peak hour queuing and merge/diverge LOS were calculated using the analysis methodologies presented in Subsection 4.11.4. As shown in Table 4.11-6 all freeway ramps experience acceptable vehicle queuing under existing conditions. As summarized in Table 4.11-7, all ramp merge/diverge areas operate at acceptable LOS under existing conditions with the exception of:

- SR-60 Freeway Westbound, Off-Ramp at Euclid Avenue (SR-83) – LOS E in the PM peak hour.

C. Existing Mass Transit

The Project Study Area is served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County. No transit lines serve the area in the immediate vicinity of the Project site. The nearest bus stop to the Project site (Route #83) is located at the Chino Avenue / Euclid Avenue intersection in the City of Ontario, approximately 3.0 miles north of the Project site (Urban Crossroads, 2019b, p. 76)

D. Existing Pedestrian and Bicycle Facilities

Field observations collected by Urban Crossroads indicate nominal pedestrian and bicycle activity within the Project Study Area (Urban Crossroads, 2019b, p. 63). Under existing conditions, there are no sidewalks abutting the Project site; however, in the vicinity of the site, there are noncontiguous segments of sidewalks along Bickmore Avenue, Kimball Avenue, and Euclid Avenue. There are no bike lanes abutting the Project site; the nearest bike lane is located along Flight Avenue, approximately 1.2 miles east of the Project site (Urban Crossroads, 2019b, Exhibit 3-17; Google Earth, 2017).

E. Existing Airport Facilities

The Project site is located approximately 0.1-mile south of the nearest runway at the Chino Airport and is located within the Airport's Airport Influence Area (AIA). At present, there is no valid Airport Land Use Compatibility Plan (ALUCP) applicable to the City of Chino that addresses the Chino Airport, as the adopted 1991 Plan does not reflect the current Airport Master Plan for the Chino Airport. Regardless, based on the 1991 ALUCP, the City of Chino General Plan establishes safety zones for areas within the Chino Airport AIA. As previously shown on Figure 2-4, *Chino Airport Safety Zones*, the northwestern corner of the Project site located within Airport Safety Zone I, the southwestern portion of the Project site located within Airport

Safety Zone II, and the remainder of the property located within Airport Safety Zone III. Within Safety Zone I, the General Plan recommends no residential and industrial development and is designated in the General Plan Land Use Element for public uses. Within Safety Zone II the General Plan discourages residential development and recommends that non-residential uses in enclosed structures be limited to no more than 25 persons per acre. Within Safety Zone III, the General Plan recommends no restrictions on residential or other land uses. (Chino, 2010a, Figure LU-4; ALUC, 1991, Figure III-7; Chino, 2003, Exhibit 5.6-1)

The Project site also is located approximately 6.6 miles southwest of the nearest runway at the Ontario International Airport. The Project site is not located within the AIA for the Ontario Airport and, as such, would not be exposed to airport safety hazards associated with operations at the Ontario Airport (Ontario, 2011, Map 2-1; Google Earth, 2017).

4.11.3 Applicable Plans, Regulations, and Policies

A. Local Plans, Policies, and Regulations

1. SCAG Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* with goals to: 1) preserve the existing transportation system; 2) expand the regional transit system; 3) expand passenger rail; 4) improve highway and arterial capacity; 5) managing demands on the transportation system; 6) optimizing the performance of the transportation system; 7) promoting forms of active transportation; 8) strengthening the regional transportation network for goods movement; 9) leveraging technology; 10) improving airport access; and 11) focusing new growth around transit (SCAG, 2016, pp. 6-8).

2. San Bernardino County Congestion Management Program

The *San Bernardino County Congestion Management Program (CMP)* was prepared by the San Bernardino Associated Governments (SANBAG). The intent of the *CMP* is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *San Bernardino CMP* was first adopted in November 1992 and has since been updated 12 times, with the most recent comprehensive update in June 2016. The *San Bernardino CMP* roadway network includes the following intersections in the Project Study Area (Urban Crossroads, 2019b, pp. 6-7):

- Ramona Avenue / Chino Hills Parkway (Intersection #3)
- Central Avenue / Chino Hills Parkway (Intersection #6)
- Euclid Avenue (SR-83) / SR-60 Westbound Ramps (Intersection #14)
- Euclid Avenue (SR-83) / SR-60 Eastbound Ramps (Intersection #15)
- Euclid Avenue (SR-83) / Walnut Street (Intersection #16)
- Euclid Avenue (SR-83) / Riverside Drive (Intersection #17)
- Euclid Avenue (SR-83) / Edison Avenue (Intersection #20)

In addition, three (3) *San Bernardino CMP* roadway network freeways are located within the Project Study Area: SR-60, SR-71, and SR-83 (SBAG, 2016, Figure 2-1).

3. Riverside County Congestion Management Program

The *Riverside County Congestion Management Program (CMP)* was prepared by the Riverside County Transportation Commission (RCTC). The intent of the *CMP* is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *Riverside County CMP* was first adopted in December 1992 and has been updated 11 times, with the most recent comprehensive update in December 2011. The *CMP* states that deficiencies along the *CMP* system must be identified when they occur so that improvement measures can be identified. Understanding the reason for these deficiencies and identifying ways to reduce the impact of future growth and development along a critical *CMP* corridor is intended to conserve scarce funding resources and help target those resources appropriately. (RCTC, 2011, p. ES-1) No *Riverside County CMP* arterial roadways or intersections are located within the Project Study Area. However, there is one (1) *CMP* roadway network freeway located within the Project Study Area: I-15 (RCTC, 2011, Exhibit 2-1).

4. San Bernardino County Measure "I"

Measure "I," a one-half of one percent sales tax on retail transactions, was approved by San Bernardino County voters in 1989 and extended by County voters in 2004 to remain effective through the year 2040. The revenue generated by Measure "I" is to be used to fund transportation projects including, but not limited to, roadway improvements, commuter rail, public transit, and other identified improvements. Measure "I" also required that a local traffic impact fee be created to ensure that development projects are paying a fair share for transportation projects from which they would benefit (see discussion of "City of Chino Development Impact Fee," below). Revenues collected through local traffic impact fee programs are used in tandem with regional Measure "I" revenues to fund projects identified in the SANBAG Development Mitigation Nexus Study (included as Appendix G to the *San Bernardino County CMP*). (Urban Crossroads, 2019b, pp. 23-24)

5. City of Chino Development Impact Fee (DIF) Program

The City Chino created its Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding local improvements necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The identification of specific roadway and intersection improvement projects and the timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. (Urban Crossroads, 2019b, p. 13)

6. General Plan Circulation Elements

The General Plans for the Cities of Chino, Ontario, Eastvale, Chino Hills, and Jurupa Valley each contain a Circulation Element that is intended to guide the development of the local circulation system in a manner that is compatible with the respective General Plan Land Use Element. To help meet projected traffic demands and achieve balanced growth, each city has adopted specific goals and policies, which serve as the basis for their Circulation Element. Refer to *Technical Appendix J* for a detailed summary of the General Plan Circulation Elements for the Cities of Chino, Ontario, Eastvale, Chino Hills, and Jurupa Valley.

4.11.4 Traffic Impact Analysis Methodology

The traffic impact analysis provided in *Technical Appendix J* and summarized in this Subsection evaluates the Project's potential traffic impacts using the methodology described on the following pages.

A. Level of Service

The performance of roadway facilities is described using the term "level of service" (LOS). LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. In 2013, the California Legislature passed Senate Bill (SB) 743, which is intended to provide local governments with flexibility to balance the competition between the need to use the LOS metric for local traffic planning and the need to provide infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers. As a component of the State's revisions to the CEQA Guidelines in December 2018, lead agencies will be required to adopt VMT thresholds of significance by July 1, 2020 to replace LOS-based thresholds (CEQA Guidelines § 15064.3(c)). At the time the this EIR was prepared, the City of Chino in its capacity as Lead Agency, as well as surrounding local agencies in which the Project's traffic would circulate, use LOS as the significance criteria for evaluating a Project's traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately applied in the analysis presented in this EIR.

Six (6) LOS designations are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, at an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow. Table 4.11-8, *Signalized Intersection LOS Thresholds*, and Table 4.11-9, *Unsignalized Intersection LOS Thresholds* summarize typical operational conditions at signalized and unsignalized intersections for each LOS classification, respectively. (Urban Crossroads, 2019b, pp. 39-41)

B. Intersection Capacity Analysis

The intersection LOS analysis is based on the traffic volumes observed during weekday peak hour conditions. The following weekday peak hours were selected for analysis because these hours are typically experience the most traffic during a 24-hour period: AM peak hour, between 7:00 AM and 9:00 AM, and PM peak hour, between 4:00 PM and 6:00 PM. (Urban Crossroads, 2019b, p. 76)

At signalized intersections, peak hour performance is calculated using the methodology described in the *HCM*. Intersection performance is based on the average control delay at each leg of the intersection. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. At signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.11-8. (Urban Crossroads, 2019b, p. 39) The traffic modeling and signal timing optimization software package Synchro (Version 9) was used to analyze signalized intersections capacity as specified in the *HCM* (Urban Crossroads, 2019b, p. 40).

At unsignalized intersections, operations were evaluated using the methodology described in the *HCM*. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole. The LOS rating is based on

the weighted average control delay expressed in seconds per vehicle, as shown in Table 4.11-9. (Urban Crossroads, 2019b, p. 41)

For a more detailed discussion on intersection capacity analysis methodology, refer to Subsection 2.2 of *Technical Appendix J*.

C. Freeway Analysis

1. Freeway Mainline Segment Analysis

For purposes of analysis, the freeway system in the Project Study Area has been divided into segments defined by the freeway-to-arterial interchange locations. Freeway mainline performance is based upon peak hour directional volumes, and the freeway segment analysis is based on the methodology described in the *HCM* and performed using HCS2010 software. The performance measure used by Caltrans to calculate LOS along freeway mainlines is vehicle density. Density is expressed in terms of passenger cars per mile per lane. Table 4.11-10, *Freeway Mainline LOS Thresholds* summarizes the freeway segment LOS thresholds for each density range. (Urban Crossroads, 2019b, p. 44) For a more detailed discussion of freeway mainline segment analysis methodology, refer to Subsection 2.5 of *Technical Appendix J*.

2. Freeway Ramp Queuing Analysis

The traffic modeling software package Synchro is used to evaluate the performance of freeway ramps, in terms of vehicle queuing. Storage (turn-pocket) length recommendations at the ramps are based upon the 95th percentile queue, which represents the of queue during 95th percentile traffic volumes. The queue length reported is for the lane with the highest queue in the lane group. (Urban Crossroads, 2019b, pp. 43-44) For more information on the freeway ramp queuing analysis methodology, refer to Subsection 2.4 of *Technical Appendix J*.

3. Freeway Ramp Junction Merge / Diverge Analysis

The freeway ramp junction merge / diverge analysis is based on the methodology recommended in the *HCM* and performed using HCS2010 software. Although the *HCM* indicates the influence area for a freeway ramp merge / diverge junction is 1,500 feet, the Project's analysis was performed at all ramp locations with respect to the nearest on- or off-ramp at each interchange to be consistent with Caltrans guidance. The results – reported in passenger car per mile per lane – are calculated based on the existing number of travel lanes, number of lanes at the on- and off-ramps both at the analysis junction and at upstream and downstream locations (if applicable), and acceleration/deceleration lengths at each freeway ramp merge / diverge junction. (Urban Crossroads, 2019b, p. 45) Table 4.11-11, *Freeway Ramp Junction Merge / Diverge LOS Thresholds* summarizes the freeway ramp junction merge / diverge LOS thresholds utilized in the analysis. For more information on the freeway ramp junction merge / diverge analysis methodology, refer to Subsection 2.6 of *Technical Appendix J*.

D. Cumulative Projects

CEQA Guidelines § 15130 requires that an EIR disclose the impact from the Project along with the incremental impacts from closely-related past, present, and reasonably foreseeable future projects (i.e., cumulative impact analysis). As previously described in EIR Subsection 4.0, *Environmental Analysis*, the Project's cumulative traffic impacts analysis utilizes a summary of projections approach plus a list of projects approach in order to provide a conservative analysis of cumulative impacts. Descriptive information

about each project considered in the cumulative impact analysis can be found in in EIR Subsection 4.0 and Subsection 4.5 of *Technical Appendix J*. (Urban Crossroads, 2019b, pp. 135-142)

E. Future Year Background Traffic

1. Opening Year (2018-2020) Background Traffic

Opening Year (2018) background traffic forecasts are based upon a background (or ambient) growth rate of 2% per year above Existing (2016) conditions. This ambient growth factor is intended to approximate area-wide traffic growth in addition to the traffic growth expected from the known cumulative development projects that were manually added to the traffic impact analysis (see Subsection 4.11.4D, above). (Urban Crossroads, 2019b, p. 134) According to regional population projections included in SCAG's *2016 RTP/SCS*, the City of Chino's population is projected to increase 51.6% between 2012 and 2040, which corresponds to an approximately 1.5% annual population growth rate. Over this same time period, employment within Chino is projected to increase by 18.78 percent, which corresponds to an approximately 0.62 percent annual employment growth rate. Not every new person, household, and/or job in the City of Chino is expected to translate on a one-to-one basis with a new vehicle trip in the region; therefore, the 2% annual growth rate used for the Project's traffic analysis establishes a conservative estimate local growth rate. Based on the foregoing information, the two percent ambient growth rate utilized in the Project's traffic analysis is appropriate and would tend to overstate, as opposed to understate, potential impacts to traffic and circulation. (Urban Crossroads, 2019b, p. 134) For more information on the derivation of opening year background traffic forecasts, refer to Subsection 4.5 of *Technical Appendix J*.

2. Horizon Year (2040) Background Traffic

Horizon Year (2040) background traffic conditions were derived from the version of San Bernardino County Transportation Analysis Model (SBTAM) that was in effect at the time the NOP for this EIR was published (May 20, 2017). The SBTAM model reflects long-range land use and circulation network data from cities and public agencies within San Bernardino County and is consistent with SCAG's traffic model for the southern California region. The SBTAM model was supplemented and modified using industry-accepted procedures for model forecast refinement and smoothing rather than relying solely on SBTAM model defaults. The modifications to the SBTAM model were made to provide a conservative analysis of the Project's potential long-range traffic impacts under Horizon Year (2040) conditions that would overstate – as opposed to understate – the Project's potential traffic impacts as compared to the results had the SBTAM model defaults been used. Refer to Subsection 4.7 of *Technical Appendix J* for a detailed description of the refinements made to the SBTAM model for purposes of the Project's traffic impact analysis. (Urban Crossroads, 2019b, p. 135)

F. Future Year Roadway Conditions

1. Project-Related Roadway Improvements

The roadway improvements proposed by the Project were described in detail in EIR Section 3.0, *Project Description*. The construction of these roadway improvements is assumed throughout the analysis presented in *Technical Appendix J* and summarized in this Subsection.

2. Opening Year (2018, 2019, and 2020) Roadway Conditions

The traffic analysis presented in *Technical Appendix J* and summarized in this Subsection assumes that the traffic facilities listed below would be in place for the Project's Opening Year (2018, 2019, and 2020), in addition to the facilities in place under existing conditions (as summarized in Table 4.11-4) (Urban

Crossroads, 2019b, pp. 197, 224, and 247). The Pine Avenue extension, west of El Prado Road, is not expected to be completed prior to buildout of the Project; therefore, the extension was not considered in the Opening Year analyses (Urban Crossroads, 2019b, p. 102).

- Driveways and those facilities assumed to be constructed by nearby cumulative development projects to provide access to the respective sites;
- *By Opening Year 2018*: Mayhew Avenue to be constructed from Kimball Avenue to Bickmore Avenue; and Kimball Avenue to be constructed west of Mayhew Avenue;
- *By Opening Year 2019*: Driveways needed to serve the Project's Phase 2 development along Mayhew Avenue to be constructed, and the intersection of Street B and Kimball Avenue to be constructed in conjunction with Street B to accommodate site access for Phase 2 development; and
- *By Opening Year 2020*: Half-section improvements to be constructed to Kimball Avenue to the east of Mayhew Avenue; driveways along Kimball Avenue to the east of Mayhew Avenue to be constructed as needed to facilitate site access for Phase 3 of the Project; and Bickmore Avenue to be constructed from the western Project boundary to Mayhew Avenue at its ultimate half-section width as a local collector with transit and paseo.

3. Horizon Year (2040) Roadway Conditions

The traffic analysis presented in *Technical Appendix J* and summarized in this Subsection assumes that the Cities of Chino, Ontario, Eastvale, Chino Hills, and Jurupa Valley roadway networks, as described in the respective City's General Plan Circulation Elements, would be fully built-out (Urban Crossroads, 2019b, pp. 51, 63).

Notwithstanding the information above, buildout of the City of Eastvale Circulation Element would require the construction of a bridge spanning the Cucamonga Creek Channel in order to extend Limonite Avenue between Hellman Avenue and Archibald Avenue. Because there is no guarantee that funding for construction of the bridge and roadway will be secured by the Horizon Year (2040), the Horizon Year analysis evaluates the scenarios with and without the Limonite Avenue extension (Urban Crossroads, 2019b, p. 102).

G. Fair Share Calculation

In instances where a "fair-share" monetary contribution toward the construction of roadway improvements is recommended to correct the circulation deficiency, the Project's fair-share contribution is determined by the equation presented below (Urban Crossroads, 2019b, pp. 48-49). This calculation establishes a proportional nexus between the Project's impact and the recommended monetary contribution.

Project Fair Share % = Project Traffic / (2040 with Project Total Traffic - Existing Traffic)

Refer to Subsection 2.9 of *Technical Appendix J* for more information on the methodology used to calculate fair share contribution toward future roadway improvements.

4.11.5 Basis for Determining Significance

The Project would result in a significant impact to the transportation / traffic system if the Project or any Project-related component would:

a. *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit;*

b. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;*

c. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;*

d. *Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);*

e. *Result in inadequate emergency access; or*

f. *Conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address development projects' typical adverse effects related to transportation and traffic. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold.

The specific criteria described below are utilized to evaluate the significance of potential traffic impacts under Thresholds "a" and "b", and are based on applicable performance standards.

A. Significance Criteria

1. Intersections

The Project would result in a substantial adverse effect to the performance of the circulation system if any of the following situations occur (Urban Crossroads, 2019b, pp. 46-47):

City of Chino, Chino Hills, Eastvale, Jurupa Valley, San Bernardino County CMP (arterial), and Riverside County CMP (arterial) Facilities

- A direct impact would occur if the Project would cause an intersection to degrade from LOS D or better to LOS E or F.
- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 50 or more peak hour trips to the affected intersection.

City of Ontario Facilities

- A direct impact would occur if the Project would cause an intersection to degrade from LOS E or better to LOS F.

- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 50 or more peak hour trips to the affected intersection.

Caltrans and San Bernardino County CMP (freeway) and Riverside County CMP (freeway) Facilities

- A direct impact would occur if the Project would cause a roadway facility (e.g., intersection, freeway mainline) to degrade from LOS D or better to LOS E or F.
- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 25 or more peak hour trips to the affected roadway facility. *(Note: This EIR applies a significance threshold of 25 or more peak hour trips to determine cumulative impacts to Caltrans, San Bernardino County CMP freeway, and Riverside County CMP freeway facilities. Caltrans, the San Bernardino County CMP, and Riverside County CMP typically do not require an impact analysis (and therefore would not identify impacts) for facilities that receive less than 50 peak hour trips from an individual development project. Therefore, the analysis of the Project's potential effects to Caltrans, San Bernardino County CMP, and Riverside County CMP freeway facilities would tend to overstate the Project's potential cumulative impacts.)*

2. Freeway Mainline Segments and Ramp Junctions

For purposes of the analysis in this EIR Subsection, if a freeway mainline segment or ramp junction is projected to operate at an acceptable level of service (i.e., LOS D or better) without the Project and the Project would cause the facility to operate at an unacceptable level of service (i.e., LOS E or F), the Project's impact is considered direct and significant. If the facility would operate at a deficient LOS without the Project and the Project would contribute 25 or more peak hour trips to the affected segment and/or ramp, the addition of Project traffic would be considered cumulatively considerable (Urban Crossroads, 2019b, p. 48)

3. Freeway Ramp Queuing

Stacking distance on freeway ramps is acceptable if the required 95th percentile stacking distance is less than or equal to the stacking distance provided. Therefore, a significant impact would occur if the 95th percentile stacking distance need was greater than the stacking distance provided. (Urban Crossroads, 2019b, pp. 37-38)

4.11.6 Impact Analysis

Threshold a)	***Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?***

The analysis under this Threshold focuses on potential impacts to local circulation. Refer to Threshold "b" for an analysis of potential impacts to the *San Bernardino County CMP* and *Riverside County CMP* regional roadway networks.

❑ Project Vehicle Trip Generation

Vehicle trip generation represents the amount of traffic that is both attracted to and produced by a development project. Determining traffic generation for a specific project is, therefore, based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses proposed by a given project.

The Project's vehicle trips were calculated using trip generation rate and vehicle mix (i.e., percentage of passenger cars trips vs. truck trips) recommendations from the Institute of Transportation Engineer (ITE) *Trip Generation Manual (9th Edition, 2012)*. Four (4) land uses were assumed in the Project's analysis: general light industrial (ITE Code 110), warehouse (ITE Code 150), mini-warehouse (ITE Code 151), and business park (ITE Code 770). The total building area analyzed for each land use was based on the Project's land use mix summarized in EIR Section 3.0, *Project Description* (refer to Table 3-1). (Urban Crossroads, 2019b, p. 101) The Trip Generation Manual does not provide guidance on truck fleet mix (i.e., percentage of 2-axle, 3-axle, and 4-or-more axle trucks); therefore, data regarding truck vehicle mix is based on data from the City of Fontana Trip Generation Study (Urban Crossroads, 2019b, p. 101). Based on the data referenced above, the Project is calculated to generate 7,496 actual daily vehicle trips, including 6,179 daily passenger car trips and 1,317 truck trips. (Urban Crossroads, 2019b, Table 4-3)

As noted earlier in this Subsection, PCE trips are a better metric than actual vehicle trips to reflect the real-world effect of larger vehicles (i.e., trucks) on the circulation system. Additionally, the City of Chino requires the use of PCE trips for traffic impact analyses for non-residential projects. Table 4.11-12, *Project Trip Generation Summary (Passenger Car Equivalent)*, summarizes the Project's trip generation with PCE factors applied. After applying the applicable PCE factors, the Project is calculated to generate 9,144 daily PCE trips, including 960 PCE trips in the AM peak hour and 975 PCE trips in the PM peak hour (Urban Crossroads, 2019b, p. 101). The Project's PCE trips, as presented in Table 4.11-12, are utilized throughout the analysis in *Technical Appendix J* and this EIR Subsection to evaluate the Project's effect to the transportation and circulation network unless specifically noted.

For more information on the trip generation methodology, refer to Subsection 4.1 of *Technical Appendix J*.

❑ Project Vehicle Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by a development project's traffic. The trip distribution for the proposed Project was developed based on anticipated passenger car and truck travel patterns to-and-from the Project site. The traffic distribution pattern for the Project's truck trips is illustrated on Figure 4.11-2 and Figure 4.11-3. The traffic distribution pattern for the Project's passenger car trips is illustrated on Figure 4.11-4 through Figure 4.11-6, respectively.

Based on the Project's traffic generation and trip distribution patterns, the Project's average daily traffic (ADT) contribution along Study Area roadways and peak hour traffic contributions at Study Area intersections are shown on Figure 4.11-7 through Figure 4.11-16. The Project's traffic generation and trip distribution patterns also were used to calculate the Project's annual VMT – 31,768,868 for automobiles and 24,033,191 for trucks – which is disclosed here for informational purposes but not factored into the determination of the significance of the Project's potential impacts to transportation facilities (Urban Crossroads, 2018e, p. 30).

❑ Analysis Scenarios

The Project's potential impacts to the local transportation and circulation network are assessed for each of the scenarios listed below.

- Short-term Construction Conditions
- Existing (2016) plus Project Conditions
  - Existing plus Project (Phase 1)
  - Existing plus Project (Phase 1+2)
  - Existing plus Project (Project Buildout)
- Opening Year
  - Opening Year (2018)
  - Opening Year (2019)
  - Opening Year (2020)
- Horizon Year (2040) Conditions
  - Horizon Year (2040) without Limonite Avenue Extension
  - Horizon Year (2040) with Limonite Avenue Extension

The Short-term Construction conditions analysis determines the potential for the Project's construction-related traffic to result in an adverse effect to the local roadway system.

The Existing (2016) plus Project (E+P) analysis evaluates the potential for the Project's traffic to directly impact the roadway system under the theoretical scenario where the Project is added to existing conditions. Because the Project contains three separate development phases, three different E+P analyses are performed: E+P (Phase 1), E+P (Phases 1+2), and E+P (Phases 1+2+3). The E+P scenario is presented to disclose direct impacts as required by CEQA. In the case of the proposed Project, the estimated time period between the commencement of the Project's traffic analysis (2016) and Project buildout (2018-2020) is two-to-four years. During this time period, traffic conditions are not static – other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Therefore, the E+P scenario is very unlikely to materialize in real-world conditions when the proposed Project is constructed and becomes operational.

The Opening Year (2018, 2019, and 2020) analyses include an evaluation of traffic conditions at the "opening year" of each of the Project's three phases. The Opening Year (2018) analysis reflects traffic conditions at the opening of the Project's first phase; the Opening Year (2019) analysis reflects traffic conditions at the opening of the Project's second phase; and the Opening Year (2020) analysis reflects traffic conditions at full buildout of the Project. The Opening Year analyses are utilized to determine the Project's potential to cumulatively contribute to near-term circulation system deficiencies upon consideration of existing traffic + ambient growth + Project traffic + traffic from cumulative development projects.

The Horizon Year (2040) analysis is utilized to determine if planned improvements funded through local and regional transportation mitigation fee programs, such as the City of Chino Development Impact Fee program or other approved funding mechanisms, can accommodate the Study Area's expected long-term growth at the target LOS identified in the Circulation Elements of relevant General Plans.

Refer to *Technical Appendix J* for a detailed discussion of the methodologies and assumptions for each analysis scenario, and a list of cumulative development projects considered in the analysis.

A. Impact Analysis for Short-Term Construction Traffic Conditions

During the Project's construction phase, traffic to-and-from the subject property would be generated by activities such as construction employee trips, construction materials deliveries, and the use/delivery of heavy equipment.

Vehicular traffic associated with construction employees would be substantially less than daily and peak hour traffic volumes generated during Project operational activities – and is expected to be less than 50 peak hour trips – because construction activities typically begin and end outside of the peak hours. Accordingly, a majority of the construction employees would not be driving to / from the Project site during hours of peak congestion and traffic from construction workers is not expected to result in a substantial adverse effect to Project Study Area intersections. Construction materials deliveries to the Project site also would also have a nominal effect to Project Study Area intersections. Construction materials would be delivered to the site throughout the construction phase – mostly outside of peak hours – based on need and would not occur on an everyday basis. Heavy equipment would be utilized on the Project site during the construction phase. As most heavy equipment is not authorized to be driven on public roadways, most equipment would be delivered and removed from the site via flatbed trucks (sometimes with multiple pieces of equipment delivered to the site on a single trip). As with the delivery of construction materials, the delivery of heavy equipment to the Project site would not occur on a daily basis but would occur periodically throughout the construction phase based on need. As described in EIR Section 3.0, *Project Description*, only up to 18 pieces of construction equipment are expected on the Project site during any given phase of construction; therefore, deliveries of construction equipment to the Project site is not expected to generate substantial traffic.

Based on the foregoing, traffic generated by the Project's construction phase would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts during the Project's construction phase would be less than significant.

B. Impact Analysis for Existing plus Project Traffic Conditions

1. Existing plus Project – Phase 1

Table 4.11-13, *Existing plus Project Intersection Analysis – Phase 1*, summarizes the peak hour LOS at Project Study Area intersections under E+P (Phase 1) conditions. As shown in Table 4.11-13, all Project Study Area intersections would operate at acceptable LOS under E+P (Phase 1) traffic conditions with the exception of the following:

- Central Avenue / El Prado Road (Intersection #7) – LOS "F" in the PM peak hour; and
- Hellman Avenue / Kimball Avenue (Intersection #54) – LOS "F" in the AM and PM peak hours.

Intersections #7 and #54 operate at unacceptable LOS under existing conditions without Project traffic; therefore, the Project would not cause these intersections to operate at deficient LOS under E+P (Phase 1) traffic conditions. As such, the Project's direct impacts to Intersections #7 and #54 would be less than significant under E+P (Phase 1) traffic conditions. Additionally, the Project would contribute less than 50 peak hour trips to Intersections #7 and #54 under E+P (Phase 1) traffic conditions; therefore, the Project would not substantially contribute to the existing performance deficiencies at these intersections and the Project's impacts would not be cumulatively considerable.

2. *Existing plus Project – Phases 1+2*

Table 4.11-14, *Existing plus Project Intersection Analysis – Phase 1+2*, summarizes the peak hour LOS at Project Study Area intersections under E+P (Phase 1+2) conditions. As shown in Table 4.11-14, all Project Study Area intersections would operate at acceptable LOS under E+P (Phases 1+2) traffic conditions with the exception of the following:

- Intersection #7 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- Euclid Avenue (SR-83) / Kimball Avenue (Intersection #23) – LOS "F" in the AM and PM peak hours; and
- Intersection #54 – LOS "F" in the AM and PM peak hours.

The Project would cause the LOS at Intersection #7 to degrade to a deficient level in the AM peak hour under E+P (Phases 1+2) traffic conditions, which represents a significant, direct impact. Intersection #7 operates at LOS "F" during the PM peak hour under existing conditions without Project traffic; therefore, the Project would not cause this intersection to operate at unacceptable LOS during the PM peak hour under E+P (Phases 1+2) traffic conditions. However, the Project would contribute more than 50 peak hour trips to Intersection #7 during the PM peak hour under E+P (Phases 1+2) traffic conditions; therefore, the Project's contribution to the PM peak hour LOS deficiency at Intersection #7 under this analysis scenario is determined to be cumulatively considerable.

The Project would cause the LOS at Intersection #23 to degrade to unacceptable LOS under E+P (Phases 1+2) traffic conditions, which represents a significant, direct impact.

Intersection #54 operates at unacceptable LOS under existing conditions without Project traffic; therefore, the Project would not cause this intersection to operate at deficient LOS under E+P (Phases 1+2) traffic conditions. As such, the Project's direct impacts to Intersection #54 would be less than significant under E+P (Phases 1+2) traffic conditions. Additionally, the Project would contribute less than 50 peak hour trips to Intersection #54 under E+P (Phases 1+2) traffic conditions; therefore, the Project would not substantially contribute to the existing performance deficiencies at this intersection and impacts would not be cumulatively considerable.

3. *Existing Plus Project – Phases 1+2+3*

Table 4.11-15, *Existing plus Project Intersection Analysis – Phase 1+2+3*, summarizes the peak hour LOS at Project Study Area intersections under E+P (Phases 1+2+3) conditions. As shown in Table 4.11-15, all Project Study Area intersections would operate at acceptable LOS under E+P (Phases 1+2+3) traffic conditions with the exception of the following:

- Intersection #7 – LOS "F" in the AM and PM peak hours;
- Intersection #23 – LOS "F" in the AM and PM peak hours; and
- Intersection #54 – LOS "F" in the AM and PM peak hours.

The significance of Project-related impacts at Intersections #7, #23, and #54 under E+P (Phases 1+2+3) conditions would be identical to the impacts that were disclosed for E+P (Phases 1+2) conditions.

C. Opening Year (2018) Impact Analysis

Table 4.11-16, *Opening Year (2018) Intersection Analysis*, summarizes the LOS at Study Area intersections during the AM and PM peak hours under Opening Year (2018) conditions. As shown in Table 4.11-16, all Project Study Area intersections would operate at acceptable LOS under Opening Year (2018) conditions with the exception of the 12 intersections listed below:

- Intersection #7 – LOS "F" in the AM and PM peak hours;
- *El Prado Road / Kimball Avenue (Intersection #10) – LOS "F" in the PM peak hour;*
- Euclid Avenue (SR-83) / SR-60 WB Ramps (Intersection #14) – LOS "E" in the AM and PM peak hours;
- *Euclid Avenue (SR-83) / SR-60 EB Ramps (Intersection #15) – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*
- *Euclid Avenue (SR-83) / Riverside Drive (Intersection #17) – LOS "F" in the PM peak hour;*
- *Euclid Avenue (SR-83) / Schaefer Avenue (Intersection #19) – LOS "E" in the PM peak hour;*
- *Euclid Avenue (SR-83) / Edison Avenue (Intersection #20) – LOS "F" in the AM peak hour and LOS "E" in the PM peak hour;*
- *Euclid Avenue (SR-83) / Merrill Avenue (Intersection #22) – LOS "F" in the AM peak hour;*
- *Intersection #23 – LOS "F" in the AM and PM peak hours;*
- *Euclid Avenue (SR-83) / Bickmore Avenue (Intersection #24) – LOS "E" in the AM peak hour;*
- Euclid Avenue (SR-83) / Pine Avenue (Intersection #25) – LOS "E" in the AM peak hour; and
- Intersection #52 – LOS "F" in the AM and PM peak hours.

Of the 12 intersections listed above, the Project would add substantial traffic, defined as 50 or more peak hour trips, to peak hour deficiencies only at the eight intersections marked in *italics* – except Intersection #15 which only receives 50 or more peak hour trips from the Project during the PM peak hour. The Project's contribution to the LOS deficiencies at these eight italicized intersections, with the exception of AM peak hour deficiency at Intersection #15, is determined to be cumulatively considerable under Opening Year (2018) traffic conditions.

At the remaining (i.e., non-italicized) intersections listed above plus Intersection #15 in the AM peak hour, the Project's traffic represents a small share of peak hour traffic (less than 50 peak hour trips) and the Project's contribution to the peak hour LOS deficiencies would not be cumulatively considerable.

D. Opening Year (2019) Impact Analysis

Table 4.11-17, *Opening Year (2019) Intersection Analysis*, summarizes the LOS at Study Area intersections during the AM and PM peak hours under Opening Year (2019) conditions. As shown on Table 4.11-17, all Project Study Area intersections would operate at acceptable LOS under Opening Year (2019) conditions, with the exception of the 14 intersections listed below:

- *Central Avenue / Chino Hills Parkway (Intersection #6) – LOS "E" in the PM peak hour;*
- *Intersection #7 – LOS "F" in the AM and PM peak hours;*
- *Intersection #10 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*
- *Intersection #14 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*

- *Intersection #15 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*
- *Intersection #17 – LOS "F" in the PM peak hour;*
- *Intersection #19 – LOS "E" in the PM peak hour;*
- *Intersection #20 – LOS "F" in the AM and PM peak hours;*
- *Intersection #22 – LOS "F" in the AM and PM peak hours;*
- *Intersection #23 – LOS "F" in the AM and PM peak hours;*
- *Intersection #24 – LOS "E" in the AM peak hour;*
- *Intersection #25 – LOS "E" in the AM and PM peak hours;*
- *Street B / Kimball Avenue (Intersection #44) – LOS "F" in the AM peak hour*; and
- Intersection #52 – LOS "F" in the AM and PM peak hours.

Of the 14 intersections listed above, the Project would add substantial traffic, defined as 50 or more peak hour trips, to peak hour deficiencies at the 13 intersections marked in *italics*. The Project's contribution to the LOS deficiencies at these 13 italicized intersections under Opening Year (2019) traffic conditions is determined to be cumulatively considerable.

The Project's traffic represents a relatively small share (i.e., less than 50 peak hour trips) of peak hour traffic at Intersection #52 during the affected peak hours under Opening Year (2019) traffic conditions. Accordingly, the Project's contribution to the Opening Year (2019) peak hour deficiency at this Intersection would not be cumulatively considerable.

E. Opening Year (2020) Impact Analysis

Table 4.11-18, *Opening Year (2020) Intersection Analysis*, summarizes the LOS at Study Area intersections during the AM and PM peak hours under Opening Year (2020) conditions. As shown on Table 4.11-18, all Project Study Area intersections would operate at acceptable LOS under Opening Year (2020) conditions, with the exception of the 16 intersections listed below:

- *Intersection #6 – LOS "E" in the PM peak hour;*
- *Intersection #7 – LOS "F" in the AM and PM peak hours;*
- *Intersection #10 – LOS "F" in the AM and PM peak hours;*
- *Intersection #14 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*
- *Intersection #15 – LOS "F" in the AM and PM peak hours;*
- *Intersection #17 – LOS "F" in the PM peak hour;*
- *Intersection #19 – LOS "E" in the AM and PM peak hours;*
- *Intersection #20 – LOS "F" in the AM and PM peak hours;*
- *Intersection #22 – LOS "F" in the AM and PM peak hours;*
- *Intersection #23 – LOS "F" in the AM and PM peak hours;*
- *Intersection #24 – LOS "E" in the AM peak hour and PM peak hour;*
- *Intersection #25 – LOS "E" in the AM and PM peak hours*;
- SR-71 SB Ramps / Euclid Avenue (SR-83) (Intersection #27) – LOS "E" in the AM peak hour;
- *Mayhew Avenue / Kimball Avenue (Intersection #30) – LOS "E" in the PM peak hour;*
- *Intersection #44 – LOS "F" in the AM peak hour; and*
- *Intersection #52 – LOS "F" in the AM and PM peak hours*.

Of the 16 intersections listed above, the Project would add substantial traffic, defined as 50 or more peak hour trips, to peak hour deficiencies at the 15 intersections marked in *italics*. The Project's contribution to the LOS deficiencies at these 15 italicized intersections under Opening Year (2020) traffic conditions is determined to be cumulatively considerable.

The Project's traffic represents a relatively small share (i.e., less than 50 peak hour trips) of peak hour traffic at Intersection #27 under Opening Year (2020) traffic conditions; therefore, the Project's contribution to the future year LOS deficiency at this Intersection would not be cumulatively considerable.

F. Horizon Year (2040) Impact Analysis

1. Without Limonite Avenue Extension

Table 4.11-19, *Horizon Year (2040) Intersection Analysis with and without Limonite Extension*, summarizes the LOS of Study Area intersections during the AM and PM peak hours under Horizon (2040) traffic conditions. As shown on Table 4.11-19, under Horizon Year (2040) conditions and *without* the Limonite Avenue extension, the following intersections would operate at unacceptable LOS:

- *SR-71 NB Ramps / Chino Hills Parkway (Intersection #2) – LOS "F" in the AM peak hour and LOS "E" in the PM peak hour;*
- *Ramona Avenue / Chino Hills Parkway (Intersection #3) – LOS "E" in the AM and PM peak hours;*
- *Monte Vista Avenue West / Chino Hills Parkway (Intersection #4) – LOS "F" in the AM and PM peak hours;*
- *Intersection #6 – LOS "F" in the PM peak hour;*
- *Intersection #7 – LOS "F" in the AM and PM peak hours;*
- *Intersection #10 – LOS "F" in the AM and PM peak hours;*
- *Intersection #14 – LOS "F" in the AM and PM peak hours;*
- *Intersection #15 – LOS "F" in the AM and PM peak hours;*
- *Intersection #17 – LOS "F" in the AM and PM peak hours;*
- *Euclid Avenue (SR-83) / Riverside Drive (Intersection #18) – LOS "F" in the AM and PM peak hours;*
- *Intersection #19 – LOS "F" in the AM and PM peak hours;*
- *Intersection #20 – LOS "F" in the AM and PM peak hours;*
- *Intersection #22 – LOS "F" in the AM and PM peak hours;*
- *Intersection #23 – LOS "F" in the AM and PM peak hours;*
- *Intersection #24 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;*
- *Intersection #25 – LOS "F" in the AM and PM peak hours;*
- Intersection #27 – LOS "E" in the AM peak hour;
- *Intersection #30 – LOS "E" in the PM peak hour;*
- *Intersection #44 – LOS "F" in the AM peak hour;*
- *Intersection #52 – LOS "F" in the AM and PM peak hours;*
- Hellman Avenue / Kimball Avenue (Intersection #54) – LOS "F" in the AM and PM peak hours;
- Archibald Avenue / Limonite Avenue (Intersection #55) – LOS "F" in the AM and PM peak hours;
- Harrison Avenue / Limonite Avenue (Intersection #56) – LOS "F" in the PM peak hour;

- Sumner Avenue / Limonite Avenue (Intersection #57) – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- Scholar Way / Limonite Avenue (Intersection #58) – LOS "E" in the PM peak hour;
- Hamner Avenue / Limonite Avenue (Intersection #59) – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- I-15 SB Ramps / Limonite Avenue (Intersection #60) – LOS "F" in the AM peak hour and LOS "E" in the PM peak hour; and
- I-15 NB Ramps / Limonite Avenue (Intersection #61) – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour.

Of the 28 intersections listed above, the Project would add substantial traffic, defined as 50 or more peak hour trips, at the 19 intersections marked in *italics*. The Project's contribution to the LOS deficiencies at these 19 italicized intersections under Horizon Year (2040) traffic conditions ***without*** Limonite Avenue extension is determined to be cumulatively considerable.

At the nine remaining intersection listed above that are projected to operate at deficient LOS under the Horizon Year (2040) traffic conditions ***without*** Limonite Avenue extension scenario, the Project's traffic represents a relatively small share of peak hour traffic (i.e., less than 50 peak hour trips) during the affected peak hours. Accordingly, the Project's contribution to the peak hour deficiencies at these Intersections under the Horizon Year (2040) ***without*** Limonite Avenue extension scenario would not be cumulatively considerable.

2. With Limonite Avenue Extension

Table 4.11-19 summarizes the LOS of Study Area intersections during the AM and PM peak hours under Horizon Year (2040) traffic conditions. As shown in Table 4.11-19, 28 intersections in the Study Area would operate at deficient levels under Horizon Year (2040) traffic conditions ***with*** the Limonite Avenue extension (the same 28 intersections that were previously disclosed to operate at deficient LOS in Year 2040 ***without*** the Limonite Avenue extension.

Of the 29 deficient intersections, the Project would send 50 or more trips during the affected peak hours – and thus result in cumulatively considerable contributions to the LOS deficiencies – at 27 intersections: the 19 intersections listed in the preceding section that would receive Project-related cumulatively considerable impacts in Year 2040 ***without*** the extension of Limonite Avenue, plus the following eight (8) intersections:

- Meadow Valley Avenue / Kimball Avenue (Intersection #53) – LOS "F" in the AM and PM peak hours.
- Intersection #54 – LOS "F" in the AM and PM peak hours;
- Intersection #55 – LOS "F" in the AM and PM peak hours;
- Intersection #56 – LOS "F" in the PM peak hour;
- Intersection #57 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- Intersection #58 – LOS "E" in the PM peak hour;
- Intersection #59 – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour; and
- Intersection #60 – LOS "F" in the AM peak hour and LOS "E" in the PM peak hour.

The two remaining intersections that would operate at unacceptable LOS under Horizon Year (2040) *with* Limonite Avenue traffic conditions – Intersection #27 and Intersection #61 – would receive less than 50 peak hour trips from the Project during the affected peak hours. Therefore, the Project's contribution to the future year LOS deficiency at these Intersections would not be cumulatively considerable.

Threshold b)	***Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

The Project's potential effects to all Study Area intersections, including *CMP* intersections, were disclosed under Threshold "a." In summary, there are no *Riverside County CMP* intersections located within the Project Study Area; therefore, the Project would not result in any significant direct or cumulatively considerable impacts at any *Riverside County CMP* intersections. The Project would not result in any direct impacts to any *San Bernardino County CMP* intersections but would result in cumulatively considerable impacts at the following *San Bernardino County CMP* intersections:

- Intersection #3 – During Horizon Year (2040) traffic conditions with and without Limonite Avenue extension;
- Intersection #6 – During Opening Year (2020), and Horizon Year (2040) traffic conditions with and without Limonite Avenue extension;
- Intersection #14 – During Opening Year (2019, 2020), and Horizon Year (2040) traffic conditions with and without Limonite Avenue extension;
- Intersection #15 – During Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions with and without Limonite Avenue extension;
- Intersection #17 – During Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions with and without Limonite Avenue extension; and
- Intersection #20 – During Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions with and without Limonite Avenue extension.

The remainder of the analysis under this Threshold will focus on the Project's potential effects to regional freeway facilities that are part of the *San Bernardino County CMP* and/or *Riverside County CMP* freeway network, including SR-60, SR-71, SR-83, and I-15 mainline segments and on/off-ramps.

A. Short-Term Construction CMP Impact Analysis

❑ Freeway Mainline Segments

As previously disclosed in Table 4.11-5, three (3) freeway mainline segments in the Project Study Area operate at deficient LOS during peak hours under existing conditions (i.e., without Project-related construction or operational traffic): the SR-71 Southbound segment south of Euclid Avenue (SR-83), the SR-71 Northbound segment north of Central Avenue, and the I-15 Southbound segment south of Limonite Avenue. Project construction traffic is not expected to exacerbate any existing peak hour freeway mainline segment deficiencies listed above or cause any new peak hour deficiencies because Project construction peak hour traffic would be minimal (as described in detail under Threshold "a") and impacts to freeway mainline segments during construction would be less than significant.

❑ Freeway Ramps

As shown in Table 4.11-6 and Table 4.11-7, all freeway ramps and ramp merge/diverge areas in the Project study area operate at acceptable conditions during AM and PM peak hours under existing conditions. Because Project construction peak hour traffic would be minimal (as described in detail under Threshold "a"), Project construction traffic is not expected to cause any freeway ramp or ramp merge/diverge area to degrade to deficient LOS and impacts would be less than significant.

B. Existing plus Project CMP Impact Analysis

❑ Freeway Mainline Segments

Table 4.11-20, *Existing plus Project Freeway Mainline Analysis*, summarizes the LOS along freeway mainline segments within the Project Study Area under E+P conditions. As shown in Table 4.11-20, all Study Area freeway mainline segments would operate at acceptable LOS under E+P conditions with the exception of the following two segments, which would operate at deficient LOS under E+P Phase 1, Phases 1+2, and Phases 1+2+3 conditions. Both of the affected freeway mainline segments are part of the *San Bernardino County CMP* roadway network.

- SR-71 Southbound, South of Euclid Avenue (SR-83) – LOS "E" in the AM peak hour; and
- SR-71 Northbound, North of Central Avenue – LOS "E" in the AM peak hour.

As previously disclosed under Subsection 4.11.2, the above-listed freeway mainline segments operate at unacceptable LOS under existing conditions. Therefore, the Project would not cause any of the above-listed peak hour deficiencies along SR-71 and direct impacts under all E+P traffic scenarios would be less than significant.

The Project would not contribute more than 25 peak hour trips to the segment of SR-71 Northbound, north of Central Avenue, during the AM peak hour under any E+P traffic scenario. Therefore, the Project would not substantially contribute to the AM peak hour deficiency at the SR-71 Northbound segment, north of Central Avenue under any E+P traffic scenarios. The Project's impacts would not be cumulatively considerable.

The Project would contribute fewer than 25 AM peak hour trips to the segment of SR-71 Southbound, south of Euclid Avenue, under E+P Phase 1 and Phases 1+2 traffic conditions; therefore, under these traffic scenarios the Project would not contribute to the AM peak hour deficiency and the Project's impact would not be cumulatively considerable. Notwithstanding, under E+P Phases 1+2+3 traffic conditions, the Project would send 25 peak hour trips to the segment of SR-71 Southbound, south of Euclid Avenue, in the AM peak hour (when this mainline segment is expected to operate at deficient LOS). The Project's contribution to the AM peak hour LOS deficiency to the SR-71 Southbound segment, south of Euclid Avenue, would be cumulatively considerable under E+P Phases 1+2+3 traffic conditions.

The freeway mainline segments located in the Project Study Area, listed in Table 4.11-20, include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project traffic does not stop at the limits of the Project Study Area. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* and *Riverside County CMP* segments of I-15, SR-60, SR-71, and SR-91 located outside of the Project's study area, as well as freeway segments located outside of San

Bernardino County, such as I-5, I-15, I-215, I-110, I-405, and I-710, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 25 peak hour trips to any congested freeway segment beyond the Project Study Area, the Project's effect to *San Bernardino County CMP* and *Riverside County CMP* freeway facilities – and all other freeway facilities – located outside of the Study Area would not be cumulatively considerable under E+P traffic conditions.

❑ Freeway Ramps

As summarized in Table 4.11-21 all freeway ramps in the Project Study Area would experience acceptable ramp queuing under all E+P traffic conditions (Phase 1, Phases 1+2, and Phases 1+2+3). Accordingly, the Project's effect on queuing at freeway ramps in the Study Area would be less than significant.

As summarized in Table 4.11-22, all freeway ramp merge/diverge areas in the Project study area would achieve acceptable performance with the exception of the following:

- SR-60 Westbound Off-Ramp at Euclid Avenue (SR-83) – LOS "E" in the PM peak hour under Phase 1, Phases 1+2, and Phases 1+2+3 conditions; and
- SR-71 Northbound On-Ramp at Central Avenue – LOS "E" in the AM peak hour under Phases 1+2+3 conditions.

As previously disclosed in 4.11.2, the SR-60 Westbound Off-Ramp at Euclid Avenue features deficient merge/diverge performance under existing conditions (i.e. without Project traffic). The Project would contribute fewer than 25 trips at the SR-60 Westbound Off-Ramp at Euclid Avenue under all E+P traffic scenarios. Therefore, the Project would not substantially contribute to the deficient PM peak hour merge/diverge performance at this ramp junction. The Project's impacts would not be cumulatively considerable.

The Project would cause the merge/diverge performance at the SR-71 Northbound On-Ramp at Central Avenue to degrade to a deficient LOS under the E+P Phases 1+2+3 condition. This impact is determined to be a significant direct impact of the Project.

C. Opening Year (2018-2020) CMP Impact Analysis

❑ Freeway Mainline Segments

Table 4.11-23 through Table 4.11-25 summarize the LOS along freeway mainline segments within the Project Study Area under Opening Year (2018-2020) conditions. In the Opening Year (2018-2020) scenarios, all Study Area freeway mainline segments would operate at acceptable LOS, with the exception of the two segments listed below. Both of the affected freeway mainline segments are part of the *San Bernardino County CMP* roadway network.

- SR-71 Southbound, South of Euclid Avenue (SR-83) in the AM peak hour (2018, 2019, and 2020); and
- SR-71 Northbound, North of Central Avenue in the AM peak hour (2018, 2019, and 2020) and PM peak hour (2019 and 2020 only).

The Project would contribute fewer than 25 peak hour trips to the segment of SR-71 Northbound, north of Central Avenue, during the AM peak hour under all Opening Year traffic scenarios. Therefore, the Project would not substantially contribute to the AM peak hour deficiency at the SR-71 Northbound segment, north of Central Avenue, during 2018, 2019, or 2020 traffic conditions. The Project's impacts to this freeway mainline segment during the AM peak hour would not be cumulatively considerable under any Opening Year (2018-2020) traffic scenario. Notwithstanding, the Project would contribute more than 25 peak hour trips to the projected PM peak hour LOS deficiencies along the SR-71 Northbound segment, north of Central Avenue, under 2019 and 2020 traffic conditions. The Project's impact to the SR-71 Northbound segment, north of Central Avenue, in the PM peak hour would be cumulatively considerable under 2019 and 2020 traffic conditions.

The Project would contribute fewer than 25 AM peak hour trips to the segment of SR-71 Southbound, south of Euclid Avenue, under 2018 and 2019 traffic conditions; therefore, under these traffic scenarios the Project would not contribute to the AM peak hour deficiency and the Project's impact would not be cumulatively considerable. Notwithstanding, under 2020 traffic conditions, the Project would send 25 peak hour trips to the segment of SR-71 Southbound, south of Euclid Avenue, in the AM peak hour (when this mainline segment is expected to operate at deficient LOS). The Project's contribution to the AM peak hour LOS deficiency to the SR-71 Southbound segment, south of Euclid Avenue, would be cumulatively considerable under 2020 traffic conditions.

The freeway mainline segments located in the Project Study Area include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project traffic does not stop at the limits of the Project Study Area. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* and *Riverside County CMP* segments of I-15, SR-60, SR-71, and SR-91 located outside of the Project's study area, as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, and I-710, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 25 peak hour trips to any congested freeway segment beyond the Project Study Area, the Project's effect to *San Bernardino County CMP* and *Riverside County CMP* freeway facilities – and all other freeway facilities – located outside of the Study Area would not be cumulatively considerable under Opening Year (2018-2020) traffic conditions.

❑ Freeway Ramps

As summarized in Table 4.11-26 through Table 4.11-28 all freeway ramps in the Project Study Area would experience acceptable ramp queuing under all Opening Year traffic conditions (2018, 2019, and 2020). Accordingly, the Project's effect on queuing at freeway ramps in the Study Area would be less than significant.

As summarized in Table 4.11-26 through Table 4.11-28, all freeway ramp merge/diverge areas in the Project study area would achieve acceptable performance during Opening Year (2018-2020) traffic scenarios with the exception of the following:

- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Upstream) in the AM peak hour (2018, 2019, and 2020);

- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Downstream) in the AM peak hour (2018, 2019, and 2020);
- SR-71 Northbound, On-Ramp at Central Avenue in the AM peak hour (2018, 2019, and 2020);
- SR-71 Northbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour (2020 only) and PM peak hour (2018, 2019, and 2020);
- SR-60 Westbound, Off-Ramp at Euclid Avenue (SR-83) in the AM and PM peak hours (2018, 2019, and 2020); and
- SR-60 Eastbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour (2018, 2019, 2020).

Of the freeway ramps listed above that would experience deficient LOS during any of the Opening Year (2018-2020) traffic scenarios, the Project would contribute more than 25 peak hour trips to the three (3) deficient ramps listed below and would, therefore, result in a cumulatively considerable impact.

- SR-71 Northbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour (2020 only) and PM peak hour (2020 only);
- SR-60 Westbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour only (2019 and 2020);
- SR-60 Eastbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour (2019 and 2020 only).

At all other deficient Study Area freeway ramps, the Project would contribute fewer than 25 peak hour trips during the affected peak hour and, therefore, the Project's impact would not be cumulatively considerable.

D. Impact Analysis for Horizon Year (2040) Traffic Conditions

❑ Freeway Mainline Segments

Table 4.11-32, *Horizon Year (2040) Freeway Mainline Analysis*, summarizes the LOS along Project Study Area freeway mainline segments under Horizon Year (2040). As shown in Table 4.11-32, the following 10 Study Area freeway mainline segments would operate at unacceptable peak hour LOS under Horizon Year (2040) traffic conditions:

- SR-71 Southbound, South of Euclid Avenue (SR-83) – LOS "F" in the AM and PM peak hours;
- SR-71 Northbound, North of Chino Hills Parkway – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- SR-71 Northbound, North of Central Avenue – LOS "F" in the AM and PM peak hours;
- SR-71 Northbound, South of Euclid Avenue (SR-83) – LOS "F" in the AM and PM peak hours;
- SR-60 Westbound, West of Euclid Avenue (SR-83) – LOS "E" in the PM peak hour;
- SR-60 Westbound, East of Euclid Avenue (SR-83) – LOS "E" in the PM peak hour;
- SR-60 Eastbound, West of Euclid Avenue (SR-83) – LOS "E" in the AM and PM peak hours;
- SR-60 Eastbound, East of Euclid Avenue (SR-83) – LOS "E" in the AM and PM peak hours;
- I-15 Southbound, North of Limonite Avenue – LOS "E" in the AM peak hour; and
- I-15 Southbound, South of Limonite Avenue – LOS "F" in the AM peak hour.

Of the freeway mainline segments listed above that would experience deficient LOS during Horizon Year (2040) traffic conditions, the Project would contribute more than 25 peak hour trips only to the seven (7) deficient segments listed below and would, therefore, result in a cumulatively considerable impact.

- SR-71 Southbound, South of Euclid Avenue (SR-83) in the AM and PM peak hours;
- SR-71 Northbound, North of Chino Hills Parkway in the PM peak hour only;
- SR-71 Northbound, North of Central Avenue in the PM peak hour only;
- SR-71 Northbound, South of Euclid Avenue (SR-83) in the AM and PM peak hours;
- SR-60 Westbound, West of Euclid Avenue (SR-83) in the PM peak hour only;
- SR-60 Eastbound, West of Euclid Avenue (SR-83) in the AM peak hour only; and
- SR-60 Eastbound, East of Euclid Avenue (SR-83) in the PM peak hour only.

At all other deficient Study Area freeway segments, the Project would contribute fewer than 25 peak hour trips during the affected peak hour and, therefore, the Project's impact would not be cumulatively considerable.

The freeway mainline segments located in the Project Study Area include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project traffic does not stop at the limits of the Project Study Area. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* and *Riverside County CMP* segments of I-15, SR-60, SR-71, and SR-91 located outside of the Project's study area, as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, and I-710, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 25 peak hour trips to any congested freeway segment beyond the Project Study Area, the Project's effect to *San Bernardino County CMP* and *Riverside County CMP* freeway facilities – and all other freeway facilities – located outside of the Study Area would not be cumulatively considerable under Horizon Year (2040) traffic conditions.

❑ Freeway Ramps

Table 4.11-33, *Horizon Year (2040) Freeway Ramp Queuing Analysis*, summarizes peak hour queuing performance at Study Area freeway segment off-ramps. Under Horizon Year (2040) traffic conditions, the left turn movement at the SR-71 Northbound off-ramp at Chino Hills Parkway would have unacceptable storage length to accommodate calculated vehicle queues during peak hours. The Project would not send any peak hour trips to the SR-71 Northbound off-ramp at Chino Hills Parkway under Horizon Year (2040) traffic conditions; therefore, the Project's contribution to the expected deficiency would not be cumulatively considerable.

The following 13 freeway ramp merge/diverge areas are projected to operate at unacceptable LOS under Horizon Year traffic conditions (see Table 4.11-34, *Horizon Year (2040) Freeway Ramp Merge / Diverge Analysis*):

- SR-71 Southbound, Off-Ramp at Chino Hills Parkway – LOS "E" in the AM peak hour;
- SR-71 Southbound, Off-Ramp at Central Avenue – LOS "E" in the AM and PM peak hours;
- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Upstream) – LOS "F" in the AM and PM peak hours;

- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Downstream) – LOS "F" in the AM and PM peak hours;
- SR-71 Northbound, On-Ramp at Chino Hills Parkway – LOS "E" in the AM peak hour and LOS "F" in the PM peak hour;
- SR-71 Northbound, On-Ramp at Central Avenue – LOS "F" in the AM and PM peak hours;
- SR-71 Northbound, Off-Ramp at Euclid Avenue (SR-83) – LOS "F" in the AM and PM peak hours;
- SR-60 Westbound, Off-Ramp at Euclid Avenue (SR-83) – LOS "E" in the AM and PM peak hours;
- SR-60 Eastbound, Off-Ramp at Euclid Avenue (SR-83) – LOS "E" in the AM and PM peak hours;
- SR-60 Eastbound, On-Ramp at Euclid Avenue (SR-83) – LOS "E" in the AM peak hour;
- I-15 Southbound, Off-Ramp at Limonite Avenue – LOS "E" in the AM peak hour;
- I-15 Southbound, On-Ramp at Limonite Avenue – LOS "F" in the AM peak hour; and
- I-15 Northbound, Off-Ramp at Limonite Avenue – LOS "E" in the AM and PM peak hours.

Of the freeway ramp merge/diverge areas listed above that would experience deficient LOS during Horizon Year (2040) traffic conditions, the Project would contribute more than 25 peak hour trips only to the nine (9) merge/diverge areas listed below and would, therefore, result in a cumulatively considerable impact.

- SR-71 Southbound, Off-Ramp at Chino Hills Parkway in the AM peak hour only;
- SR-71 Southbound, Off-Ramp at Central Avenue in the AM peak hour only;
- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Upstream) in the AM and PM peak hours;
- SR-71 Southbound, Loop On-Ramp at Euclid Avenue (SR-83) (Downstream) in the AM and PM peak hours;
- SR-71 Northbound, On-Ramp at Chino Hills Parkway in the PM peak hour only;
- SR-71 Northbound, On-Ramp at Central Avenue in the PM peak hour only;
- SR-71 Northbound, Off-Ramp at Euclid Avenue (SR-83) in the AM and PM peak hours;
- SR-60 Westbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour only; and
- SR-60 Eastbound, Off-Ramp at Euclid Avenue (SR-83) in the AM peak hour only.

At all other deficient Study Area freeway ramp merge/diverge areas, the Project would contribute fewer than 25 peak hour trips during the affected peak hour and, therefore, the Project's impact would not be cumulatively considerable.

Threshold c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Project does not contain an air travel component (e.g., runways, helipads); thus, air traffic levels in the vicinity of the Chino Airport would not be changed as a result of the Project. As previously described in EIR Section 3.0, *Project Description*, the Project would develop the subject property with 25 business park, light industrial, mini-warehouse, and warehouse buildings and related improvements, including parking areas, detention basins, and landscaping. The buildings proposed by the Project would not exceed 50 feet in height, and would not include any building feature/element that would obstruct the flight path or interfere with flight operations at the Chino Airport. Accordingly, the Project would not have the potential to affect air traffic

patterns, including an increase in traffic levels or a change in flight path location that results in substantial safety risks. No impact would occur.

Threshold d) Would the project substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

The types of traffic generated by the Project (i.e., passenger cars and trucks) would be compatible with the existing traffic on Project Study Area roadways. In addition, all proposed improvements within the public right-of-way would be installed in conformance with City design standards. The City of Chino Public Works Department reviewed the Project's application materials and determined that no hazardous transportation design features would be introduced by the Project. Accordingly, the proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use. The Project would result in a less-than-significant impact.

Threshold e) Would the Project result in inadequate emergency access?

The City of Chino reviewed the Project's design and confirmed that adequate access to-and-from the Project site would be provided for emergency vehicles and also that development of the Project would not interfere with the circulation of emergency vehicles to/from the Chino Valley Fire Station No. 3 (which abuts the Project site on the north side of Kimball Avenue). The City of Chino also will require the Project to provide adequate paved access to-and-from the site as a condition of Project approval. Furthermore, the City of Chino will review all future Project construction drawings to ensure that adequate emergency access is maintained along abutting public streets during temporary construction activities. With required adherence to City requirements for emergency vehicle access, no impact would occur.

Threshold f) Would the Project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) supporting alternative transportation?

The Project is not expected to attract large volumes of pedestrian, bicycle, or transit traffic. Regardless, the Project includes a 23-foot shared sidewalk/ bike path and an equestrian trail along Mayhew Avenue; and shared Class 1 bike lanes and pedestrian paths along Kimball Avenue and Bickmore Avenue (Urban Crossroads, 2019b, p. 36). The roadway, bikeway, pedestrian, and equestrian improvements proposed by the Project are consistent with the City of Chino General Plan and The Preserve Specific Plan, and are described in detail in Section 3.0, *Project Description*, of this EIR.

There are no transit lines that serve the Project area under existing conditions (Urban Crossroads, 2019b, Exhibit 3-18). Accordingly, the Project has no potential to conflict with local public transit service.

As demonstrated by the foregoing analysis, the Project would not conflict with adopted policies, plans or programs related to alternative transportation, or otherwise substantially decrease the performance or safety of such facilities, and a less-than-significant impact would occur.

4.11.7 Cumulative Impact Analysis

The analysis under Threshold "a" disclosed the Project's potential to affect the transportation network on a cumulative basis. As disclosed in the response to Threshold "a," the Project would result in cumulatively

considerable impacts at numerous study area intersections under E+P, Opening Year (2018, 2019, and 2020), and Horizon Year (2040) with and without the Limonite Avenue extension traffic conditions.

The analysis under Threshold "b" disclosed the Project's potential to affect the *CMP* roadway network, including freeway facilities, on a cumulative basis. As disclosed in the response to Threshold "b," the Project would in cumulatively considerable impacts at *CMP* intersections, freeway mainline segments and freeway ramps under E+P, Opening Year (2018, 2019, and 2020), and Horizon Year (2040) with and without the Limonite Avenue extension traffic conditions.

The Project would not contribute to a significant cumulative impact under the topics discussed under Thresholds "c," "d," and "e" because the Project would not change air traffic patterns; cause or exacerbate existing transportation design safety concerns; or adversely affect emergency access.

As presented under Threshold "f," the proposed Project would not conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities and thus has no potential to contribute to a cumulative impact. The Project would have a less-than-significant cumulatively considerable impact to adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, as well as a less-than-significant cumulatively considerable impact to the performance of such facilities.

4.11.8 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively Considerable Impact. The addition of Project-related traffic would contribute to LOS deficiencies at numerous Study Area intersections during Existing plus Project, Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions.

Threshold b: Significant Direct and Cumulatively Considerable Impact. The Project would cause the merge/diverge performance at the SR-71 Northbound On-Ramp at Central Avenue to operate at a deficient LOS under the E+P Phases 1+2+3 condition. Also, the addition of Project-related traffic would contribute to LOS deficiencies at seven *CMP* intersections within the Project Study Area, and numerous *CMP* freeway facilities under E+P, Opening Year (2018, 2019, and 2020), and Horizon Year (2040) traffic conditions.

Threshold c: Less-than-Significant Impact. There is no potential for the Project to change air traffic patterns or create substantial air traffic safety risks.

Threshold d: Less-than-Significant Impact. No significant transportation safety hazards would be introduced as a result of the proposed Project.

Threshold e: Less-than-Significant Impact. Adequate emergency access would be provided to the Project site during construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties.

Threshold f: Less-than-Significant Impact. Future Project-related development would be required to comply with applicable City of Chino General Plan goals and policies related to pedestrian and bicycle facilities and would not adversely impact the expansion of non-vehicular/alternative transportation in the City of Chino.

4.11.9 MITIGATION

The following mitigation measures would minimize the Project's direct impact to the local roadway and circulation network:

MM 4.11-1 Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall assure the improvement of the Central Avenue / El Prado Road intersection as follows:

a) Modify the traffic signal to implement overlap phasing on the northbound right turn lane.

MM 4.11-2 Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall assure the improvement of the Euclid Avenue (SR-83) / Kimball Avenue intersection as follows:

a) Install a southbound right turn lane with overlap phasing; and
b) Install a second eastbound left turn lane.

MM 4.11-3 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall assure the improvement of the Euclid Avenue (SR-83) / Kimball Avenue intersection as follows:

a) All improvements identified in MM 4.11-2; and
b) Install a second southbound left turn lane.

The following mitigation measures would minimize the Project's cumulative impacts to the local roadway and circulation network.

MM 4.11-4 Prior to the issuance of building permits, the Project Applicant/Developer shall comply with the applicable requirements of City of Chino Sub-Area II (The Preserve) Development Impact Fee Preserve (DIF) program, which requires fee payment to the City of Chino (less any fee credits), a portion of which is used by the City to fund the installation of road and intersection improvements to reduce traffic congestion.

MM 4.11-5 Prior to the issuance of the first occupancy permit for Phase 1 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 6-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.

a) El Prado Road / Kimball Avenue;
b) Euclid Avenue (SR-83) / Riverside Drive;
c) Euclid Avenue (SR-83) / Schaefer Avenue;
d) Euclid Avenue (SR-83) / Edison Avenue;

e) Euclid Avenue (SR-83) / Merrill Avenue; and
f) Euclid Avenue (SR-83 / Bickmore Avenue.

MM 4.11-6 Prior to the issuance of the first occupancy permit for Phase 1 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust for conveyance to Caltrans and the City of Ontario, for improvements to the intersections listed below. The required improvements are listed in Table 6-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Ontario and/or Caltrans have not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.

a) Euclid Avenue (SR-83) / SR-60 Eastbound Ramps.

MM 4.11-7 Prior to the issuance of the first occupancy permit for Phase 2 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 7-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.

a) Central Avenue / Chino Hills Parkway; and
b) Street B / Kimball Avenue.

MM 4.11-8 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 8-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.

a) Mayhew Avenue / Kimball Avenue; and
b) Flight Avenue / Kimball Avenue.

MM 4.11-9 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-7 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer.

a) SR-71 Northbound Ramps / Chino Hills Parkway;
b) Ramona Avenue / Chino Hills Parkway;
c) Monte Vista Avenue West / Chino Hills Parkway;
d) Euclid Avenue (SR-83) / Chino Avenue
e) Euclid Avenue (SR-83) / Schaefer Avenue;
f) Euclid Avenue (SR-83) / Edison Avenue;
g) Euclid Avenue (SR-83) / Merrill Avenue; and
h) Euclid Avenue (SR-83) / Bickmore Avenue.

MM 4.11-10 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Table 1-8 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Chino has not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. This mitigation measure shall only apply if, at the time of occupancy permit issuance, Limonite Avenue has been extended over the Cucamonga Creek Channel to connect Hellman Avenue and Archibald Avenue.

a) Meadow Valley Avenue / Kimball Avenue.

MM 4.11-11 Prior to the issuance of the first occupancy permit for Phase 3 of Project development, the Project Applicant/Developer shall make a fair-share payment to the City of Chino, to be held in trust for conveyance to the City of Eastvale, for improvements to the intersections listed below. The required improvements are listed in Table 9-5 of the "Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis," prepared by Urban Crossroads (dated March 4, 2019) and the Project's fair-share obligations are listed in Tables 1-7 and 1-8 of the same report. The City of Chino shall only use the funds for improving the intersections listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of Eastvale have not completed the improvements or established a fair-share funding program for the specified improvements to the respective intersections, then the City of Chino shall return the funds to the Project Applicant/Developer. This

mitigation measure shall only apply if, at the time of occupancy permit issuance, Limonite Avenue has been extended over the Cucamonga Creek Channel to connect Hellman Avenue and Archibald Avenue.

a) Hellman Avenue / Kimball Avenue;
b) Harrison Avenue / Limonite Avenue;
c) Sumner Avenue / Limonite Avenue;
d) Scholar Way / Limonite Avenue; and
e) Hamner Avenue / Limonite Avenue.

The following mitigation measure would minimize the Project's cumulative impacts to freeway mainline segments, ramp merge/diverge junctions, and off-ramps:

MM 4.11-12 In the event that Caltrans prepares a valid study, as defined below, that identifies fair share contribution funding sources attributable to and paid from private and public development to supplement other regional and State funding sources necessary undertake improvements to SR-60 and SR-71 in the Project study area, then the Project Applicant/Developer shall use reasonable efforts to pay the applicable fair share amount to Caltrans.

The study shall include fair share contributions related to private and or public development based on nexus requirements contained in the Mitigation Fee Act (Govt. Code § 66000 et seq.) and 14 Cal. Code of Regs. § 15126.4(a)(4) and, to this end, the study shall recognize that development projects within the City of Chino have no fair-share payment obligation for impacts to SR-60 and SR-71 that are not attributable to development located within the City of Chino. The fee study shall also be compliant with Government Code § 66001(g) and any other applicable provisions of law. The study shall set forth a timeline and other relevant criteria for implementation of the recommendations contained within the study to the extent the other agencies agree to participate in the fee study program.

In the event the study has been prepared, the Project Applicant/Developer shall use reasonable efforts to pay the fair-share fee to Caltrans. If Caltrans chooses to accept the Project Applicant's/Developer's fair-share payment, Caltrans shall apply the payment to the fee program adopted by Caltrans or agreed upon by the Project Applicant/Developer and Caltrans as a result of the fair-share fee study. Caltrans shall only accept the fair-share payment if the fair-share fee study has been completed. If, within five years from the date that the first building permit is issued for the Project, Caltrans has not completed the fair share fee study, then the Project Applicant/Developer shall have no further obligation to comply with this mitigation measure.

4.11.10 Significance of Impacts After Mitigation

Threshold a: Significant and Unavoidable Cumulative Impact.

Direct Impacts

Mitigation Measures (MM) MM 4.11-1 and MM 4.11-2 would require the Project to construct improvements at Intersections #7 and #23 to address direct Project impacts under E+P (Phases 1+2 and Phases 1+2+3) traffic conditions. As summarized in Table 4.11-35, installation of the improvements required by MM 4.11-

1 and MM 4.11-2 would restore Intersections #7 and #23 to acceptable LOS. Therefore, after mitigation, the Project's impacts to Intersections #7 and #23 would be less than significant.

Cumulative Impacts

MM 4.11-4 requires the Project to contribute to the City of Chino's Development Impact Fee (DIF) program and MM 4.11-5 through MM 4.11-9 require the Project to participate in fair-share funding programs. Funds collected via MM 4.11-4 through MM 4.11-9 would be used to fund needed improvements to the local roadway system. Under CEQA, a monetary contribution to a mitigation fund is adequate mitigation if the funds are part of a reasonable plan that the relevant agency is committed to implementing.

As shown in Table 4.11-36 through Table 4.11-39, all study area intersections would operate at acceptable LOS under all Opening Year (2018-2020) and Horizon Year (2040, with and without the Limonite Avenue extension) with recommended improvements. However, to achieve acceptable LOS conditions, all intersections with the exception of Intersections #14 and #23, require improvements that are either: 1) are not under the sole jurisdictional authority of the City of Chino (meaning the City of Chino cannot assure that the recommended improvements would be implemented); and/or 2) are not included in any existing mitigation funding program to ensure a date-certain installation. Because the City of Chino cannot assure that all the recommended improvements would be implemented and/or in place at the time of need, the Project's cumulative impacts at the following intersections are recognized as significant and unavoidable. No other feasible mitigation measures for these cumulatively considerable impacts are available that would have a proportional nexus to the Project's impact.

- Intersection #10 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #15 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #17 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #19 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #20 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #22 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #24 during Opening Year (2018-2020) and Horizon Year (2040) conditions;
- Intersection #6 during Opening Year (2019-2020) and Horizon Year (2040) conditions;
- Intersection #44 during Opening Year (2019-2020) and Horizon Year (2040) conditions;
- Intersection #30 during Opening Year (2020) and Horizon Year (2040) conditions;
- Intersection #2 during Horizon Year (2040) conditions;
- Intersection #3 during Horizon Year (2040) conditions;
- Intersection #4 during Horizon Year (2040) conditions;
- Intersection #18 during Horizon Year (2040) conditions;
- Intersection #54 during Horizon Year (2040) conditions (with Limonite Avenue extension only);
- Intersection #56 during Horizon Year (2040) conditions (with Limonite Avenue extension only);
- Intersection #57 during Horizon Year (2040) conditions (with Limonite Avenue extension only);
- Intersection #58 during Horizon Year (2040) conditions (with Limonite Avenue extension only); and
- Intersection #59 during Horizon Year (2040) conditions (with Limonite Avenue extension only).

Threshold b: Significant and Unavoidable Direct and Cumulative Impact. All freeway facilities in the Project Study Area, including SR-60 and SR-71 (and associated ramp merge / diverge areas and ramps), are

under the jurisdiction of Caltrans. As such, the City of Chino cannot assure the construction of improvements to freeway facilities that may be needed to improve traffic flow. Furthermore, Caltrans does not have any improvement or funding mechanism in place to allow development projects to construct improvements or contribute a fair-share payment to fund future improvements and off-set cumulatively considerable traffic impacts. Accordingly, the Project's previously identified significant impacts to Study Area freeway facilities under E+P (Phases 1+2+3), Opening Year (2018-2020), and Horizon Year (2040) traffic conditions would be unavoidable.

Table 4.11-1 Study Area Intersections

ID	Intersection Location	Jurisdiction	CMP?
1	SR-71 SB Ramps / Chino Hills Pkwy.	Caltrans	No
2	SR-71 NB Ramps / Chino Hills Pkwy.	Caltrans	No
3	Ramona Av. / Chino Hills Pkwy.	Chino	Yes
4	Monte Vista Av. West / Chino Hills Pkwy.	Chino	No
5	Monte Vista Av. East / Chino Hills Pkwy.	Chino	No
6	Central Av. / Chino Hills Pkwy.	Chino	Yes
7	Central Av. / El Prado Rd.	Chino	No
8	Central Av. / SR-71 NB Ramps	Caltrans	No
9	Central Av. / SR-71 SB Ramps	Caltrans	No
10	El Prado Rd. / Kimball Av.	Chino	No
11	Mountain Av. / Kimball Av.	Chino	No
12	San Antonio Av. / Kimball Av.	Chino	No
13	Fern Av. / Kimball Av.	Chino	No
14	Euclid Av. (SR-83) / SR-60 WB Ramps	Caltrans	Yes
15	Euclid Av. (SR-83) / SR-60 EB Ramps	Caltrans	Yes
16	Euclid Av. (SR-83) / Walnut St.	Ontario	Yes
17	Euclid Av. (SR-83) / Riverside Dr.	Chino/Ontario	Yes
18	Euclid Av. (SR-83) / Chino Av.	Chino/Ontario	No
19	Euclid Av. (SR-83) / Schaefer Av.	Chino/Ontario	No
20	Euclid Av. (SR-83) / Edison Av.	Chino/Ontario	Yes
21	Euclid Av. (SR-83) / Eucalyptus Av.	Chino/Ontario	No
22	Euclid Av. (SR-83) / Merrill Av.	Chino/Ontario	No
23	Euclid Av. (SR-83) / Kimball Av.	Chino	No
24	Euclid Av. (SR-83) / Bickmore Av.	Chino	No
25	Euclid Av. (SR-83) / Pine Av.	Chino	No
26	SR-71 NB Ramps / Euclid Av. (SR-83)	Caltrans	No
27	SR-71 SB Ramps / Euclid Av. (SR-83)	Caltrans	No
28	Dwy. 1 / Bickmore Av.	Chino	No
29	Dwy. 2 / Bickmore Av.	Chino	No
30	Mayhew Av. / Kimball Av.	Chino	No
31	Mayhew Av. / Dwy. 3	Chino	No
32	Mayhew Av. / Dwy. 4	Chino	No
33	Mayhew Av. / Dwy. 5	Chino	No

Table 4.11-1 Study Area Intersections

ID	Intersection Location	Jurisdiction	CMP?
34	Mayhew Av. / Dwy. 6	Chino	No
35	Mayhew Av. / Dwy. 7	Chino	No
36	Mayhew Av. / Dwy. 8	Chino	No
37	Mayhew Av. / Dwy. 9	Chino	No
38	Mayhew Av. / Dwy. 10	Chino	No
39	Mayhew Av. / Dwy. 11	Chino	No
40	Mayhew Av. / Dwy. 12	Chino	No
41	Mayhew Av. / Dwy. 13	Chino	No
42	Mayhew Av. / Bickmore Av.	Chino	No
43	Dwy. 14 / Kimball Av.	Chino	No
44	Street B / Kimball Av.	Chino	No
45	Street B / Dwy. 15	Chino	No
46	Street B / Dwy. 16	Chino	No
47	Street B/Dwy.17 / Dwy. 18	Chino	No
48	Dwy. 19 / Kimball Av.	Chino	No
49	Rincon Meadows Av. / Kimball Av.	Chino	No
50	Mill Creek Av. / Kimball Av.	Chino	No
51	Main St. / Kimball Av.	Chino	No
52	Flight Av. / Kimball Av.	Chino	No
53	Meadow Valley Av. / Kimball Av.	Chino	No
54	Hellman Av. / Kimball Av.	Chino/Eastvale	No
55	Archibald Av. / Limonite Av.	Eastvale	No
56	Harrison Av. / Limonite Av.	Eastvale	No
57	Sumner Av. / Limonite Av.	Eastvale	No
58	Scholar Wy. / Limonite Av.	Eastvale	No
59	Hamner Av. / Limonite Av.	Eastvale	No
60	I-15 SB Ramps / Limonite Av.	Caltrans	No
61	I-15 NB Ramps / Limonite Av.	Caltrans	No

Source: (Urban Crossroads, 2019b, Table 1-1)

Table 4.11-2 Project Study Area Freeway Mainline Segments

ID	Freeway Mainline Segments
1	SR-71 Freeway – Southbound, North of Chino Hills Pkwy.
2	SR-71 Freeway – Southbound, South of Chino Hills Pkwy.
3	SR-71 Freeway – Southbound, North of Central Av.
4	SR-71 Freeway – Southbound, South of Euclid Av. (SR-83)
5	SR-71 Freeway – Northbound, North of Chino Hills Pkwy.
6	SR-71 Freeway – Northbound, South of Chino Hills Pkwy.
7	SR-71 Freeway – Northbound, North of Central Av.
8	SR-71 Freeway – Northbound, South of Euclid Av. (SR-83)
9	SR-60 Freeway – Westbound, West of Euclid Av. (SR-83)
10	SR-60 Freeway – Westbound, East of Euclid Av. (SR-83)
11	SR-60 Freeway – Eastbound, West of Euclid Av. (SR-83)
12	SR-60 Freeway – Eastbound, East of Euclid Av. (SR-83)
13	I-15 Freeway – Southbound, North of Limonite Av.
14	I-15 Freeway – Southbound, South of Limonite Av.
15	I-15 Freeway – Northbound, North of Limonite Av.
16	I-15 Freeway – Northbound, South of Limonite Av.

Source: (Urban Crossroads, 2019b, Table 1-2)

Table 4.11-3 Study Area Freeway Merge / Diverge Ramp Junctions

ID	Freeway Merge/Diverge Ramp Junctions
1	SR-71 Freeway – Southbound, Off-Ramp at Chino Hills Pkwy. (Diverge)
2	SR-71 Freeway – Southbound, Off-Ramp at Central Av. (Diverge)
3	SR-71 Freeway – Southbound, Loop On-Ramp at Euclid Av. (SR-83) (Upstream) (Merge)
4	SR-71 Freeway – Southbound, Loop On-Ramp at Euclid Av. (SR-83) (Downstream) (Merge)
5	SR-71 Freeway – Northbound, On-Ramp at Chino Hills Pkwy. (Merge)
6	SR-71 Freeway – Northbound, On-Ramp at Central Av. (Merge)
7	SR-71 Freeway – Northbound, Off-Ramp at Euclid Av. (SR-83) (Diverge)
8	SR-60 Freeway – Westbound, On-Ramp at Euclid Av. (SR-83) (Merge)
9	SR-60 Freeway – Westbound, Off-Ramp at Euclid Av. (SR-83) (Diverge)
10	SR-60 Freeway – Eastbound, Off-Ramp at Euclid Av. (SR-83) (Diverge)
11	SR-60 Freeway – Eastbound, On-Ramp at Euclid Av. (SR-83) (Merge)
12	I-15 Freeway – Southbound, Off-Ramp at Limonite Av. (Diverge)
13	I-15 Freeway – Southbound, On-Ramp at Limonite Av. (Merge)
14	I-15 Freeway – Northbound, On-Ramp at Limonite Av. (Merge)
15	I-15 Freeway – Northbound, Off-Ramp at Limonite Av. (Diverge)

Source: (Urban Crossroads, 2019b, Table 1-3)

Table 4.11-4 Existing Intersection Levels of Service

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service		Acceptable LOS
			Northbound			Southbound			Eastbound			Westbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	0	0	0	1	1	1>>	0	4	1	1	2	0	11.8	14.7	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	1	2	0	0	0	0	2	2	0	0	2	1	24.5	21.9	C	C	D
3	Ramona Av. / Chino Hills Pkwy.	TS	1	2	0	1	2	d	1	3	0	1	2	1	40.5	41.8	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	0	1	0	0	0	0	0	2	1	1	2	0	24.3	22.5	C	C	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	0	0	0	2	0	1>	1	2	0	0	2	0	18.5	16.1	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	1	2	1	1	2	1	1	1	1	1	1	1	24.9	36.9	C	D	D
7	Central Av. / El Prado Rd.	TS	1	2	1	1	3	0	1	1	0	1	1	1>	50.3	**88.1**	D	F	D
8	Central Av. / SR-71 NB Ramps	TS	0	3	1>>	0	3	1>>	0	0	0	1	1	0	7.3	7.1	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	0	3	1>>	0	3	1>>	1	1	0	0	0	0	14.3	25.8	B	C	D
10	El Prado Rd. / Kimball Av.	TS	1	1	1	1	2	0	1	1	0	0	1	1>	22.3	47.3	C	D	D
11	Mountain Av. / Kimball Av.	TS	1	0	1	0	0	0	0	2	0	1	2	0	10.0	10.3	A	B	D
12	San Antonio Av. / Kimball Av.	TS	1	1	0	1	1	0	1	2	0	1	2	0	8.3	9.3	A	A	D
13	Fern Av. / Kimball Av.	TS	1	1	0	1	1	0	1	2	0	1	2	0	9.5	9.6	A	A	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	1	2	0	0	2	1	0	0	0	1	1	1	27.9	22.3	C	C	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	0	2	1	1	2	0	1	1	0	0	0	0	24.6	28.2	C	C	D
16	Euclid Av. (SR-83) / Walnut St.	TS	1	3	d	2	3	1	1	2	0	1	2	0	34.1	28.1	C	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	1	2	1	1	2	1>	1	2	0	1	2	d	33.7	49.7	C	D	D
18	Euclid Av. (SR-83) / Chino Av.	TS	1	2	1	1	2	1	1	1	1	0	1	0	17.2	8.9	B	A	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	1	2	1	1	2	1	1	1	1	1	1	0	36.8	49.8	D	D	D
20	Euclid Av. (SR-83) / Edison Av.	TS	1	2	1	1	2	1	1	1	1	1	1	0	31.0	31.2	C	C	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	1	2	1	1	2	1	1	1	1	1	1	0	22.2	8.0	C	A	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	1	2	1	1	2	0	0	1	0	0	1	0	28.3	23.0	C	C	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	1	2	1	1	2	0	1	2	0	1	2	0	48.2	49.3	D	D	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	1	2	0	1	2	1	1	1	1	1	1	0	45.6	16.6	D	B	D
25	Euclid Av. (SR-83) / Pine Av.	TS	1	2	1>	1	2	0	1	1	1>>	2	1	0	47.9	37.3	D	D	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	2	0	1>>	0	0	0	0	2	1>>	1	2	0	16.3	13.0	B	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	1	0	1	1	1	1	0	2	0	1	2	1>>	40.9	34.1	D	C	D
28	Dwy. 1 / Bickmore Av.	Future Intersection																	C
29	Dwy. 2 / Bickmore Av.	Future Intersection																	C
30	Mayhew Av. / Kimball Av.	Future Intersection																	D
31	Mayhew Av. / Dwy. 3	Future Intersection																	C
32	Mayhew Av. / Dwy. 4	Future Intersection																	C
33	Mayhew Av. / Dwy. 5	Future Intersection																	C
34	Mayhew Av. / Dwy. 6	Future Intersection																	C
35	Mayhew Av. / Dwy. 7	Future Intersection																	C
36	Mayhew Av. / Dwy. 8	Future Intersection																	C
37	Mayhew Av. / Dwy. 9	Future Intersection																	C
38	Mayhew Av. / Dwy. 10	Future Intersection																	C
39	Mayhew Av. / Dwy. 11	Future Intersection																	C
40	Mayhew Av. / Dwy. 12	Future Intersection																	C
41	Mayhew Av. / Dwy. 13	Future Intersection																	C
42	Mayhew Av. / Bickmore Av.	Future Intersection																	D

Table 4.11-4 Existing Intersection Levels of Service

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service		Acceptable LOS
			Northbound			Southbound			Eastbound			Westbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	
43	Dwy. 14 / Kimball Av.		Future Intersection																C
44	Street B / Kimball Av.	CSS	0	0	0	0	1	0	1	1	0	0	1	1	20.1	0.0	C	A	C
45	Street B / Dwy. 15		Future Intersection																C
46	Street B / Dwy. 16		Future Intersection																C
47	Street B/Dwy. 17 / Dwy. 18		Future Intersection																C
48	Dwy. 19 / Kimball Av.		Future Intersection																C
49	Rincon Meadows Av. / Kimball Av.	CSS	1	0	1	0	0	0	0	2	0	1	1	0	18.5	20.4	C	C	D
50	Mill Creek Av. / Kimball Av.	TS	1	0	1	0	0	0	0	2	0	1	1	0	15.7	11.7	B	B	D
51	Main St. / Kimball Av.	TS	1	0	1	0	0	0	0	2	0	1	1	0	15.2	11.6	B	B	D
52	Flight Av. / Kimball Av.	CSS	0	1	0	0	1	0	1	2	0	1	1	0	22.9	22.1	C	C	D
53	Meadow Valley Av. / Kimball Av.	CSS	0	1	0	0	0	0	0	2	0	1	1	0	15.8	16.0	C	C	D
54	Hellman Av. / Kimball Av.	AWS	1	0	0	0	0	0	0	0	1	0	0	0	**>100.0**	**65.7**	F	F	D
55	Archibald Av. / Limonite Av.	TS	0	1	1>	1	1	0	0	0	0	1	0	1>	33.5	46.9	C	D	D
56	Harrison Av. / Limonite Av.	TS	1	1	1	1	1	0	1	3	d	1	2	1	20.2	18.6	C	B	D
57	Sumner Av. / Limonite Av.	TS	1	2	0	1	2	0	2	3	0	2	3	1	17.4	16.2	B	B	D
58	Scholar Wy. / Limonite Av.	TS	1	1	1	1	2	1	1	2	1	1	2	1	16.5	15.2	B	B	D
59	Hamner Av. / Limonite Av.	TS	2	3	1	2	2	1	2	3	1	2	2	1	32.6	33.6	C	C	D
60	I-15 SB Ramps / Limonite Av.	TS	0	0	0	1	1	1	0	2	1	2	2	0	29.1	29.7	C	C	D
61	I-15 NB Ramps / Limonite Av.	TS	1	1	1	0	0	0	2	2	0	0	2	1	24.7	25.0	C	C	D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal

Source: (Urban Crossroads, 2019b, Table 3-1)

Table 4.11-5 Existing Freeway Mainline Levels of Service

Freeway	Direction	Mainline Segment	Lanes[1]	Volume		Truck %	Truck %	Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	3,731	3,334	4%	3%	19.8	17.5	C	B
		South of Chino Hills Pkwy.	3	2,894	2,110	2%	3%	15.1	11.1	B	B
		North of Central Av.	3	3,487	3,410	3%	3%	18.3	17.9	C	B
		South of Euclid Av. (SR-83)	2	4,002	3,215	3%	2%	**37.9**	26.6	**E**	D
	NB	North of Chino Hills Pkwy.	3	4,120	4,059	4%	4%	22.1	21.8	C	C
		South of Chino Hills Pkwy.	3	3,156	3,104	4%	4%	16.7	16.4	B	B
		North of Central Av.	3	5,722	5,122	12%	9%	**37.6**	30.5	**E**	D
		South of Euclid Av. (SR-83)	3	4,136	4,276	15%	12%	23.7	24.2	C	C
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	6,394	6,601	3%	2%	26.6	27.6	D	D
		East of Euclid Av. (SR-83)	4	6,492	6,747	3%	3%	27.2	28.7	D	D
	EB	West of Euclid Av. (SR-83)	4	6,488	5,925	6%	4%	27.7	24.2	D	C
		East of Euclid Av. (SR-83)	4	6,596	6,017	6%	4%	28.3	24.7	D	C
I-15 Freeway	SB	North of Limonite Av.	3	5,244	5,234	7%	7%	31.1	31.0	D	D
		South of Limonite Av.	3	5,757	5,249	6%	7%	**36.1**	31.2	**E**	D
	NB	North of Limonite Av.	3	5,464	4,771	1%	2%	31.7	26.2	D	D
		South of Limonite Av.	3	4,908	5,104	1%	2%	27.1	28.8	D	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 3-3)

Table 4.11-6 Existing Freeway Ramp Queuing Summary

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	155	181	Yes	Yes
	SBL/T	1,210	151	178	Yes	Yes
	SBR	510	171	485 [2]	Yes	Yes
SR-71 NB Ramps / Chino Hills Pkwy.						
	NBL	100	202 [2]	165 [2]	Yes[3]	Yes[3]
	NBT/R	530	160 [2]	91	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	162	167	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	261	389	Yes	Yes
	SBL/R	740	235	662 [2]	Yes	Yes
Euclid Avenue/ SR-60 WB Ramps	WBL	400	372 [2]	320 [2]	Yes	Yes
	WBL/T/R	1,430	373 [2]	303 [2]	Yes	Yes
	WBR	400	196	201	Yes	Yes
Euclid Avenue/ SR-60 EB Ramps	EBL	900	301 [2]	334 [2]	Yes	Yes
	EBL/R	1,270	316 [2]	301 [2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	41	78	Yes	Yes
	NBR	420	117	1,000 [2]	Yes	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SBL	1,100	173	403	Yes	Yes
	SBL/T	1,560	171	402	Yes	Yes
	SBR	255	0	40	Yes	Yes
I-15 SB Ramps / Limonite Avenue	SBL	400	178	190	Yes	Yes
	SBL/T/R	400	95	249	Yes	Yes
	SBR	1,200	74	227	Yes	Yes
I-15 NB Ramps / Limonite Avenue	NBL	450	225 [2]	347	Yes	Yes
	NBL/T/R	1,235	89	245	Yes	Yes
	NBR	400	65	231	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the SR-71, SR-60, or I-15 Freeway mainline.

Source: (Urban Crossroads, 2019b, Table 3-2)

Table 4.11-7 Existing Freeway Ramp Merge / Diverge Levels of Service

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	27.9	C	26.7	C
		Off-Ramp at Central Av.	3	26.2	C	27.8	C
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	32.4	D	29.1	D
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	32.4	D	29.1	D
	NB	On-Ramp at Chino Hills Pkwy.	3	26.7	C	26.3	C
		On-Ramp at Central Av.	3	35.0	D	30.6	D
		Off-Ramp at Euclid Av. (SR-83)	3	31.9	D	33.4	D
SR-60 Freeway	WB	On-Ramp at Euclid Av. (SR-83)	4	25.9	C	26.7	C
		Off-Ramp at Euclid Av. (SR-83)	4	33.8	D	**35.2**	**E**
	EB	Off-Ramp at Euclid Av. (SR-83)	4	32.6	D	30.4	D
		On-Ramp at Euclid Av. (SR-83)	4	28.7	D	26.7	C
I-15 Freeway	SB	Off-Ramp at Limonite Av.	3	34.3	D	34.7	D
		On-Ramp at Limonite Av.	3	34.4	D	31.1	D
	NB	On-Ramp at Limonite Av.	3	32.1	D	27.4	C
		Off-Ramp at Limonite Av.	3	32.0	D	34.0	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 3-4)

Table 4.11-8 Signalized Intersection LOS Thresholds

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: (Urban Crossroads, 2019b, Table 2-1)

Table 4.11-9 Unsignalized Intersection LOS Thresholds

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: (Urban Crossroads, 2019b, Table 2-2)

Table 4.11-10 Freeway Mainline LOS Thresholds

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly and flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM

Source: (Urban Crossroads, 2019b, Table 2-4)

Table 4.11-11 Freeway Ramp Junction Merge / Diverge LOS Thresholds

Level of Service	Density Range (pc/mi/ln)[1]
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM

Source: (Urban Crossroads, 2019b, Table 2-5)

Table 4.11-12 Project Trip Generation Summary (Passenger Car Equivalent)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1									
Building 4 (Warehouse)	185.000	TSF							
Passenger Cars:			35	9	44	12	35	47	524
Truck Trips:									
2-axle:			*2*	*1*	*3*	*1*	*2*	*3*	*34*
3-axle:			*4*	*1*	*5*	*1*	*4*	*5*	*61*
4+-axle:			*16*	*4*	*21*	*5*	*16*	*22*	*244*
- Net Truck Trips (PCE)[2]			*23*	*6*	*29*	*8*	*23*	*30*	*339*
BUILDING 4 TOTAL NET TRIPS (PCE)[3]			***58***	***15***	***73***	***19***	***58***	***78***	***863***
Building 5 (Warehouse)	200.000	TSF							
Passenger Cars:			38	10	48	13	38	51	567
Truck Trips:									
2-axle:			*2*	*1*	*3*	*1*	*2*	*3*	*37*
3-axle:			*4*	*1*	*6*	*1*	*4*	*6*	*66*
4+-axle:			*18*	*4*	*22*	*6*	*18*	*24*	*263*
- Net Truck Trips (PCE)[2]			*25*	*6*	*31*	*8*	*25*	*33*	*366*
BUILDING 5 TOTAL NET TRIPS (PCE)[3]			***63***	***16***	***79***	***21***	***63***	***84***	***933***
Building 6 (Warehouse)	130.000	TSF							
Passenger Cars:			25	6	31	8	25	33	368
Truck Trips:									
2-axle:			*2*	*0*	*2*	*1*	*2*	*2*	*24*
3-axle:			*3*	*1*	*4*	*1*	*3*	*4*	*43*
4+-axle:			*12*	*3*	*14*	*4*	*12*	*15*	*171*
- Net Truck Trips (PCE)[2]			*16*	*4*	*20*	*5*	*16*	*21*	*238*
BUILDING 6 TOTAL NET TRIPS (PCE)[3]			***41***	***10***	***51***	***14***	***41***	***55***	***606***
Total (Phase 1)			***162***	***40***	***202***	***54***	***162***	***216***	***2,402***
Phase 2									
Building 1 (General Light Industrial)	91.500	TSF							
Passenger Cars:			58	8	66	9	61	70	501
Truck Trips:									
2-axle:			*9*	*1*	*10*	*1*	*9*	*11*	*77*
3-axle:			*6*	*1*	*7*	*1*	*6*	*7*	*50*
4+-axle:			*21*	*3*	*24*	*3*	*22*	*25*	*182*
- Net Truck Trips (PCE)[2]			*36*	*5*	*41*	*5*	*38*	*43*	*308*
BUILDING 1 TOTAL NET TRIPS (PCE)[3]			***94***	***13***	***107***	***14***	***99***	***113***	***809***
Building 2 (General Light Industrial)	102.500	TSF							
Passenger Cars:			65	9	74	10	68	78	562
Truck Trips:									
2-axle:			*10*	*1*	*11*	*1*	*10*	*12*	*86*
3-axle:			*6*	*1*	*7*	*1*	*7*	*8*	*56*
4+-axle:			*24*	*3*	*27*	*4*	*25*	*28*	*204*
- Net Truck Trips (PCE)[2]			*40*	*5*	*46*	*6*	*42*	*48*	*345*
BUILDING 2 TOTAL NET TRIPS (PCE)[3]			***105***	***14***	***120***	***16***	***111***	***126***	***907***
Building 3 (Warehouse)	200.000	TSF							
Passenger Cars:			38	10	48	13	38	51	567
Truck Trips:									
2-axle:			*2*	*1*	*3*	*1*	*2*	*3*	*37*
3-axle:			*4*	*1*	*6*	*1*	*4*	*6*	*66*
4+-axle:			*18*	*4*	*22*	*6*	*18*	*24*	*263*
- Net Truck Trips (PCE)[2]			*25*	*6*	*31*	*8*	*25*	*33*	*366*
BUILDING 3 TOTAL NET TRIPS (PCE)[3]			***63***	***16***	***79***	***21***	***63***	***84***	***933***
Total (Phase 2)			***262***	***43***	***305***	***51***	***272***	***323***	***2,649***
Total (Phase 1+2)			***424***	***83***	***508***	***104***	***434***	***539***	***5,051***

Table 4.11-12 Project Trip Generation Summary (Passenger Car Equivalent)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 3 (Buildout)									
Building N + O (General Light Industrial)	61.000	TSF							
Passenger Cars:			39	5	44	6	41	47	334
Truck Trips:									
2-axle:			*6*	*1*	*7*	*1*	*6*	*7*	*51*
3-axle:			*4*	*1*	*4*	*1*	*4*	*5*	*33*
4+-axle:			*14*	*2*	*16*	*2*	*15*	*17*	*121*
- Net Truck Trips (PCE)[2]			*24*	*3*	*27*	*4*	*25*	*29*	*205*
BUILDING N + O TOTAL NET TRIPS (PCE)[3]			***63***	***9***	***71***	***9***	***66***	***75***	***540***
Building M (Self Storage)	110.000	TSF							
Passenger Cars:			7	6	13	12	12	24	234
Truck Trips:									
2-axle:			*0*	*0*	*1*	*1*	*1*	*2*	*15*
3-axle:			*1*	*0*	*1*	*1*	*1*	*2*	*17*
4+-axle:			*2*	*2*	*4*	*4*	*4*	*7*	*68*
- Net Truck Trips[2]			*3*	*2*	*6*	*5*	*5*	*10*	*100*
BUILDING m TOTAL NET TRIPS (PCE)[3]			***11***	***8***	***19***	***17***	***17***	***35***	***334***
Buildings 7A + 7B + 8 + 9 (Business Park)	93.000	TSF							
Passenger Cars:			96	17	113	27	75	102	1,007
Truck Trips:									
2-axle:			*4*	*1*	*4*	*1*	*3*	*4*	*37*
3-axle:			*3*	*1*	*3*	*1*	*2*	*3*	*31*
4+-axle:			*8*	*1*	*9*	*2*	*6*	*8*	*82*
- Net Truck Trips[2]			*14*	*3*	*17*	*4*	*11*	*15*	*150*
BUILDING 7A + 7B + 8 + 9 TOTAL NET TRIPS (PCE)[3]			***111***	***20***	***130***	***31***	***86***	***117***	***1,157***
Buildings A-L (Business Park)	140.000	TSF							
Passenger Cars:			145	26	171	40	113	153	1,515
Truck Trips:									
2-axle:			*8*	*1*	*9*	*2*	*6*	*8*	*84*
3-axle:			*9*	*2*	*10*	*2*	*7*	*9*	*93*
4+-axle:			*35*	*6*	*42*	*10*	*28*	*38*	*371*
- Net Truck Trips[2]			*52*	*9*	*62*	*15*	*41*	*56*	*548*
BUILDINGS A-l TOTAL NET TRIPS (PCE)[3]			***197***	***35***	***232***	***55***	***154***	***209***	***2,063***
Total (Phase 3)			***381***	***71***	***452***	***112***	***324***	***436***	***4,093***
Total (Project Buildout)			***806***	***154***	***960***	***217***	***758***	***975***	***9,144***

[1] TSF = thousand square feet

[2] Warehouse Vehicle Mix Source: City of Fontana Truck Trip Generation Study for LU 150, August 2003. PCE rates are per SANBAG.

[3] TOTAL NET TRIPS (PCE) = Passenger Cars + Net Truck Trips (PCE).

Source: (Urban Crossroads, 2019b, Table 4-2)

Table 4.11-13 Existing plus Project Intersection Analysis – Phase 1

#	Intersection	Traffic Control[2]	Existing (2016)				E+P (Phase 1)				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	11.8	14.7	B	B	11.9	15.9	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	24.5	21.9	C	C	28.5	22.8	C	C	D
3	Ramona Av. / Chino Hills Pkwy.	TS	40.5	41.8	D	D	40.6	42.2	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	24.3	22.5	C	C	20.9	22.7	C	C	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	18.5	16.1	B	B	18.5	16.2	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	24.9	36.9	C	D	25.2	38.3	C	D	D
7	Central Av. / El Prado Rd.	TS	50.3	**88.1**	D	**F**	54.3	**92.2**	D	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	7.3	7.1	A	A	7.7	8.0	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	14.3	25.8	B	C	14.3	34.9	B	C	D
10	El Prado Rd. / Kimball Av.	TS	22.3	47.3	C	D	24.3	49.5	C	D	D
11	Mountain Av. / Kimball Av.	TS	10.0	10.3	A	B	10.1	10.3	B	B	D
12	San Antonio Av. / Kimball Av.	TS	8.3	9.3	A	A	8.3	9.3	A	A	D
13	Fern Av. / Kimball Av.	TS	9.5	9.6	A	A	9.5	9.7	A	A	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	27.9	22.3	C	C	28.8	23.2	C	C	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	24.6	28.2	C	C	25.2	29.9	C	C	D
16	Euclid Av. (SR-83) / Walnut St.	TS	34.1	28.1	C	C	34.1	28.1	C	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	33.7	49.7	C	D	33.7	50.1	C	D	D
18	Euclid Av. (SR-83) / Chino Av.	TS	17.2	8.9	B	A	24.1	9.0	C	A	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	36.8	49.8	D	D	37.1	50.0	D	D	D
20	Euclid Av. (SR-83) / Edison Av.	TS	31.0	31.2	C	C	31.6	31.9	C	C	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	22.2	8.0	C	A	22.7	8.0	C	A	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	28.3	23.0	C	C	28.3	23.0	C	C	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	48.2	49.3	D	D	52.4	53.0	D	D	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	45.6	16.6	D	B	46.0	18.1	D	B	D
25	Euclid Av. (SR-83) / Pine Av.	TS	47.9	37.3	D	D	48.0	38.6	D	D	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	16.3	13.0	B	B	18.8	13.0	B	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	40.9	34.1	D	C	43.6	34.2	D	C	D
28	Dwy. 1 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
29	Dwy. 2 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				10.6	18.2	B	B	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				8.9	8.6	A	A	C
32	Mayhew Av. / Dwy. 4		Intersection Does Not Exist				Intersection Does Not Exist				C
33	Mayhew Av. / Dwy. 5		Intersection Does Not Exist				Intersection Does Not Exist				C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.5	9.6	A	A	C
35	Mayhew Av. / Dwy. 7		Intersection Does Not Exist				Intersection Does Not Exist				C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.6	9.7	A	A	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.2	9.3	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.1	9.2	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				8.9	9.0	A	A	C
40	Mayhew Av. / Dwy. 12		Intersection Does Not Exist				Intersection Does Not Exist				C
41	Mayhew Av. / Dwy. 13		Intersection Does Not Exist				Intersection Does Not Exist				C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				14.1	10.6	B	B	D

Table 4.11-13 Existing plus Project Intersection Analysis – Phase 1

#	Intersection	Traffic Control[2]	Existing (2016) Delay[1] (secs.) AM	Existing (2016) Delay[1] (secs.) PM	Existing (2016) Level of Service AM	Existing (2016) Level of Service PM	E+P (Phase 1) Delay[1] (secs.) AM	E+P (Phase 1) Delay[1] (secs.) PM	E+P (Phase 1) Level of Service AM	E+P (Phase 1) Level of Service PM	Acceptable LOS
43	Dwy. 14 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
44	Street B / Kimball Av.	CSS	20.1	0.0	C	A	20.4	0.0	C	A	C
45	Street B / Dwy. 15		Intersection Does Not Exist				Intersection Does Not Exist				C
46	Street B / Dwy. 16		Intersection Does Not Exist				Intersection Does Not Exist				C
47	Street B/Dwy. 17 / Dwy. 18		Intersection Does Not Exist				Intersection Does Not Exist				C
48	Dwy. 19 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
49	Rincon Meadows Av. / Kimball Av.	CSS	18.5	20.4	C	C	18.8	20.7	C	C	D
50	Mill Creek Av. / Kimball Av.	TS	15.7	11.7	B	B	16.4	11.9	B	B	D
51	Main St. / Kimball Av.	TS	15.2	11.6	B	B	15.6	11.8	B	B	D
52	Flight Av. / Kimball Av.	CSS	22.9	22.1	C	C	23.4	22.7	C	C	D
53	Meadow Valley Av. / Kimball Av.	CSS	15.8	16.0	C	C	16.0	16.1	C	C	D
54	Hellman Av. / Kimball Av.	AWS	**>100.0**	**65.7**	**F**	**F**	**96.9**	**55.2**	**F**	**F**	D
55	Archibald Av. / Limonite Av.	TS	33.5	46.9	C	D	Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	20.2	18.6	C	B	Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	17.4	16.2	B	B	Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	16.5	15.2	B	B	Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	32.6	33.6	C	C	Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	29.1	29.7	C	C	Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	24.7	25.0	C	C	Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

Source: (Urban Crossroads, 2019b, Table 5-1)

Table 4.11-14 Existing plus Project Intersection Analysis – Phase 1+2

#	Intersection	Traffic Control[2]	Existing (2016) Delay[1] (secs.) AM	Existing (2016) Delay[1] (secs.) PM	Existing (2016) Level of Service AM	Existing (2016) Level of Service PM	E+P (Phase 2) Delay[1] (secs.) AM	E+P (Phase 2) Delay[1] (secs.) PM	E+P (Phase 2) Level of Service AM	E+P (Phase 2) Level of Service PM	Acceptable LOS
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	11.8	14.7	B	B	12.0	15.9	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	24.5	21.9	C	C	29.0	24.7	C	C	D
3	Ramona Av. / Chino Hills Pkwy.	TS	40.5	41.8	D	D	40.9	42.8	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	24.3	22.5	C	C	21.5	23.0	C	C	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	18.5	16.1	B	B	18.9	16.2	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	24.9	36.9	C	D	25.6	41.2	C	D	D
7	Central Av. / El Prado Rd.	TS	50.3	**88.1**	D	**F**	**62.4**	**96.6**	**E**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	7.3	7.1	A	A	7.6	8.0	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	14.3	25.8	B	C	15.0	34.9	B	C	D
10	El Prado Rd. / Kimball Av.	TS	22.3	47.3	C	D	28.1	50.4	C	D	D
11	Mountain Av. / Kimball Av.	TS	10.0	10.3	A	B	10.3	10.3	B	B	D
12	San Antonio Av. / Kimball Av.	TS	8.3	9.3	A	A	8.4	9.3	A	A	D
13	Fern Av. / Kimball Av.	TS	9.5	9.6	A	A	9.6	9.7	A	A	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	27.9	22.3	C	C	30.6	24.6	C	C	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	24.6	28.2	C	C	26.3	33.1	C	C	D
16	Euclid Av. (SR-83) / Walnut St.	TS	34.1	28.1	C	C	34.2	28.0	C	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	33.7	49.7	C	D	33.7	50.7	C	D	D
18	Euclid Av. (SR-83) / Chino Av.	TS	17.2	8.9	B	A	24.8	8.9	C	A	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	36.8	49.8	D	D	37.6	50.4	D	D	D
20	Euclid Av. (SR-83) / Edison Av.	TS	31.0	31.2	C	C	33.2	33.2	C	C	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	22.2	8.0	C	A	23.5	8.2	C	A	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	28.3	23.0	C	C	28.5	23.2	C	C	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	48.2	49.3	D	D	**71.5**	**64.8**	**E**	**E**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	45.6	16.6	D	B	46.5	26.6	D	C	D
25	Euclid Av. (SR-83) / Pine Av.	TS	47.9	37.3	D	D	48.0	41.1	D	D	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	16.3	13.0	B	B	19.5	13.2	B	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	40.9	34.1	D	C	46.8	34.3	D	C	D
28	Dwy. 1 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
29	Dwy. 2 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				11.9	25.5	B	C	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				9.4	8.7	A	A	C
32	Mayhew Av. / Dwy. 4		Intersection Does Not Exist				Intersection Does Not Exist				C
33	Mayhew Av. / Dwy. 5	CSS	Intersection Does Not Exist				8.8	9.5	A	A	C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.6	9.9	A	A	C
35	Mayhew Av. / Dwy. 7	CSS	Intersection Does Not Exist				8.9	9.5	A	A	C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.9	10.1	A	B	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.4	9.5	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.3	9.5	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				9.0	9.3	A	A	C
40	Mayhew Av. / Dwy. 12		Intersection Does Not Exist				Intersection Does Not Exist				C
41	Mayhew Av. / Dwy. 13		Intersection Does Not Exist				Intersection Does Not Exist				C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				14.3	10.8	B	B	D

Table 4.11-14 Existing plus Project Intersection Analysis – Phase 1+2

#	Intersection	Traffic Control[2]	Existing (2016) Delay[1] (secs.) AM	Existing (2016) Delay[1] (secs.) PM	Existing (2016) Level of Service AM	Existing (2016) Level of Service PM	E+P (Phase 2) Delay[1] (secs.) AM	E+P (Phase 2) Delay[1] (secs.) PM	E+P (Phase 2) Level of Service AM	E+P (Phase 2) Level of Service PM	Acceptable LOS
43	Dwy. 14 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
44	Street B / Kimball Av.	CSS/**TS**	20.1	0.0	C	A	24.3	9.8	C	A	C
45	Street B / Dwy. 15		Intersection Does Not Exist				Intersection Does Not Exist				C
46	Street B / Dwy. 16		Intersection Does Not Exist				Intersection Does Not Exist				C
47	Street B/Dwy. 17 / Dwy. 18		Intersection Does Not Exist				8.4	8.9	A	A	C
48	Dwy. 19 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
49	Rincon Meadows Av. / Kimball Av.	CSS	18.5	20.4	C	C	19.4	21.5	C	C	D
50	Mill Creek Av. / Kimball Av.	TS	15.7	11.7	B	B	17.7	12.1	B	B	D
51	Main St. / Kimball Av.	TS	15.2	11.6	B	B	16.2	12.0	B	B	D
52	Flight Av. / Kimball Av.	CSS	22.9	22.1	C	C	24.5	24.0	C	C	D
53	Meadow Valley Av. / Kimball Av.	CSS	15.8	16.0	C	C	16.2	16.3	C	C	D
54	Hellman Av. / Kimball Av.	AWS	**>100.0**	**65.7**	**F**	**F**	**>100.0**	**58.0**	**F**	**F**	D
55	Archibald Av. / Limonite Av.	TS	33.5	46.9	C	D	Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	20.2	18.6	C	B	Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	17.4	16.2	B	B	Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	16.5	15.2	B	B	Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	32.6	33.6	C	C	Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	29.1	29.7	C	C	Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	24.7	25.0	C	C	Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

2 CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

Source: (Urban Crossroads, 2019b, Table 5-2)

Table 4.11-15 Existing plus Project Intersection Analysis – Phase 1+2+3

#	Intersection	Traffic Control[2]	Existing (2016)				E+P (Project Buildout)				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	11.8	14.7	B	B	12.1	15.9	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	24.5	21.9	C	C	32.7	27.1	C	C	D
3	Ramona Av. / Chino Hills Pkwy.	TS	40.5	41.8	D	D	41.5	43.8	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	24.3	22.5	C	C	22.7	23.4	C	C	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	18.5	16.1	B	B	19.2	16.3	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	24.9	36.9	C	D	27.3	45.7	C	D	D
7	Central Av. / El Prado Rd.	TS	50.3	**88.1**	D	**F**	**76.9**	**103.3**	**E**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	7.3	7.1	A	A	7.6	8.0	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	14.3	25.8	B	C	15.8	35.1	B	D	D
10	El Prado Rd. / Kimball Av.	TS	22.3	47.3	C	D	34.3	54.7	C	D	D
11	Mountain Av. / Kimball Av.	TS	10.0	10.3	A	B	10.7	10.4	B	B	D
12	San Antonio Av. / Kimball Av.	TS	8.3	9.3	A	A	8.5	9.4	A	A	D
13	Fern Av. / Kimball Av.	TS	9.5	9.6	A	A	9.7	9.9	A	A	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	27.9	22.3	C	C	32.9	26.3	C	C	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	24.6	28.2	C	C	27.8	37.1	C	D	D
16	Euclid Av. (SR-83) / Walnut St.	TS	34.1	28.1	C	C	34.3	28.7	C	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	33.7	49.7	C	D	34.4	51.6	C	D	D
18	Euclid Av. (SR-83) / Chino Av.	TS	17.2	8.9	B	A	25.7	11.1	C	B	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	36.8	49.8	D	D	38.5	51.1	D	D	D
20	Euclid Av. (SR-83) / Edison Av.	TS	31.0	31.2	C	C	40.0	34.9	D	C	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	22.2	8.0	C	A	24.7	8.4	C	A	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	28.3	23.0	C	C	29.2	23.5	C	C	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	48.2	49.3	D	D	**118.1**	**82.3**	**F**	**F**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	45.6	16.6	D	B	47.4	53.7	D	D	D
25	Euclid Av. (SR-83) / Pine Av.	TS	47.9	37.3	D	D	48.4	45.2	D	D	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	16.3	13.0	B	B	21.2	13.3	C	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	40.9	34.1	D	C	50.3	34.8	D	C	D
28	Dwy. 1 / Bickmore Av.	CSS	Intersection Does Not Exist				14.4	9.8	B	A	C
29	Dwy. 2 / Bickmore Av.	CSS	Intersection Does Not Exist				14.4	9.6	B	A	C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				13.3	33.4	B	C	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				9.5	8.7	A	A	C
32	Mayhew Av. / Dwy. 4	CSS	Intersection Does Not Exist				8.7	9.6	A	A	C
33	Mayhew Av. / Dwy. 5	CSS	Intersection Does Not Exist				8.8	9.3	A	A	C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.3	9.1	A	A	C
35	Mayhew Av. / Dwy. 7	CSS	Intersection Does Not Exist				9.1	9.4	A	A	C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.9	9.7	A	A	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.5	9.6	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.4	9.6	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				9.0	9.2	A	A	C
40	Mayhew Av. / Dwy. 12	CSS	Intersection Does Not Exist				9.1	9.3	A	A	C
41	Mayhew Av. / Dwy. 13	CSS	Intersection Does Not Exist				9.3	9.4	A	A	C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				15.1	11.4	C	B	D

Table 4.11-15 Existing plus Project Intersection Analysis – Phase 1+2+3

#	Intersection	Traffic Control[2]	Existing (2016) Delay[1] (secs.) AM	Existing (2016) Delay[1] (secs.) PM	Existing (2016) Level of Service AM	Existing (2016) Level of Service PM	E+P (Project Buildout) Delay[1] (secs.) AM	E+P (Project Buildout) Delay[1] (secs.) PM	E+P (Project Buildout) Level of Service AM	E+P (Project Buildout) Level of Service PM	Acceptable LOS
43	Dwy. 14 / Kimball Av.	**CSS**	Intersection Does Not Exist				10.8	14.0	B	B	C
44	Street B / Kimball Av.	CSS/**TS**	20.1	0.0	C	A	32.4	15.9	C	B	C
45	Street B / Dwy. 15	**CSS**	Intersection Does Not Exist				12.3	12.3	B	B	C
46	Street B / Dwy. 16	**CSS**	Intersection Does Not Exist				10.3	10.4	B	B	C
47	Street B/Dwy. 17 / Dwy. 18	**CSS**	Intersection Does Not Exist				8.5	9.4	A	A	C
48	Dwy. 19 / Kimball Av.	**CSS**	Intersection Does Not Exist				9.6	13.7	A	B	C
49	Rincon Meadows Av. / Kimball Av.	CSS	18.5	20.4	C	C	20.3	22.4	C	C	D
50	Mill Creek Av. / Kimball Av.	TS	15.7	11.7	B	B	20.8	12.4	C	B	D
51	Main St. / Kimball Av.	TS	15.2	11.6	B	B	17.4	12.2	B	B	D
52	Flight Av. / Kimball Av.	CSS	22.9	22.1	C	C	26.7	25.7	D	D	D
53	Meadow Valley Av. / Kimball Av.	CSS	15.8	16.0	C	C	16.6	16.6	C	C	D
54	Hellman Av. / Kimball Av.	AWS	**>100.0**	**65.7**	**F**	**F**	**>100.0**	**62.8**	**F**	**F**	D
55	Archibald Av. / Limonite Av.	TS	33.5	46.9	C	D	Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	20.2	18.6	C	B	Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	17.4	16.2	B	B	Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	16.5	15.2	B	B	Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	32.6	33.6	C	C	Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	29.1	29.7	C	C	Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	24.7	25.0	C	C	Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

Source: (Urban Crossroads, 2019b, Table 5-3)

Table 4.11-16 Opening Year (2018) Intersection Analysis

#	Intersection	Traffic Control[2]	2018 Without Project				2018 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	12.2	18.1	B	B	12.2	18.1	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	31.7	30.5	C	C	38.6	32.1	D	C	D
3	Ramona Av. / Chino Hills Pkwy.	TS	42.9	46.9	D	D	43.2	47.5	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	24.1	26.0	C	D	24.6	26.2	C	D	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	18.7	16.4	B	B	19.1	16.4	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	29.4	52.7	C	D	30.5	54.4	C	D	D
7	Central Av. / El Prado Rd.	TS	**102.1**	**160.1**	**F**	**F**	**110.0**	**163.3**	**F**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	8.5	7.9	A	A	8.5	7.9	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	17.7	37.3	B	D	18.2	37.4	B	D	D
10	El Prado Rd. / Kimball Av.	TS	39.9	**95.4**	D	**F**	46.5	**98.1**	D	**F**	D
11	Mountain Av. / Kimball Av.	TS	13.1	15.7	B	B	13.7	16.0	B	B	D
12	San Antonio Av. / Kimball Av.	TS	16.3	13.3	B	B	16.4	13.5	B	B	D
13	Fern Av. / Kimball Av.	TS	14.8	18.5	B	B	15.0	18.9	B	B	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	**57.2**	**69.5**	**E**	**E**	**59.8**	**73.6**	**E**	**E**	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	**66.4**	**78.2**	**E**	**E**	**69.5**	**83.5**	**E**	**F**	D
16	Euclid Av. (SR-83) / Walnut St.	TS	37.4	28.5	D	C	37.7	28.6	D	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	35.0	**82.7**	C	**F**	35.7	**88.5**	D	**F**	D
18	Euclid Av. (SR-83) / Chino Av.	TS	23.8	7.0	C	A	24.5	7.0	C	A	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	48.3	**56.8**	D	**E**	49.1	**57.6**	D	**E**	D
20	Euclid Av. (SR-83) / Edison Av.	TS	**101.7**	**67.1**	**F**	**E**	**111.0**	**74.3**	**F**	**E**	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	29.3	10.7	C	B	30.0	11.0	C	B	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	**183.8**	**>200.0**	**F**	**F**	**186.2**	**>200.0**	**F**	**F**	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	**101.0**	**145.7**	**F**	**F**	**117.8**	**174.3**	**F**	**F**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	**55.3**	29.5	**E**	C	**56.1**	34.9	**E**	C	D
25	Euclid Av. (SR-83) / Pine Av.	TS	**55.2**	49.5	**E**	D	**55.5**	51.8	**E**	D	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	18.2	11.4	B	B	20.5	11.4	C	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	46.1	33.4	D	C	46.1	33.4	D	D	D
28	Dwy. 1 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
29	Dwy. 2 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				23.7	23.2	C	C	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				8.9	8.6	A	A	C
32	Mayhew Av. / Dwy. 4		Intersection Does Not Exist				Intersection Does Not Exist				C
33	Mayhew Av. / Dwy. 5		Intersection Does Not Exist				Intersection Does Not Exist				C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.5	9.7	A	A	C
35	Mayhew Av. / Dwy. 7		Intersection Does Not Exist				Intersection Does Not Exist				C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.6	9.7	A	A	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.2	9.4	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.1	9.2	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				8.9	9.0	A	A	C
40	Mayhew Av. / Dwy. 12		Intersection Does Not Exist				Intersection Does Not Exist				C
41	Mayhew Av. / Dwy. 13		Intersection Does Not Exist				Intersection Does Not Exist				C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				15.3	11.4	C	B	D

Table 4.11-16 Opening Year (2018) Intersection Analysis

#	Intersection	Traffic Control[2]	2018 Without Project				2018 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
43	Dwy. 14 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
44	Street B / Kimball Av.	CSS	24.3	0.0	C	A	24.6	0.0	C	A	C
45	Street B / Dwy. 15	**CSS**	Intersection Does Not Exist				Intersection Does Not Exist				C
46	Street B / Dwy. 16	**CSS**	Intersection Does Not Exist				Intersection Does Not Exist				C
47	Street B/Dwy. 17 / Dwy. 18	**CSS**	Intersection Does Not Exist				Intersection Does Not Exist				C
48	Dwy. 19 / Kimball Av.	**CSS**	Intersection Does Not Exist				Intersection Does Not Exist				C
49	Rincon Meadows Av. / Kimball Av.	CSS	18.7	28.9	C	D	24.5	29.2	C	D	D
50	Mill Creek Av. / Kimball Av.	TS	12.9	13.0	B	B	13.1	13.2	B	B	D
51	Main St. / Kimball Av.	TS	15.6	12.2	B	B	15.7	12.4	B	B	D
52	Flight Av. / Kimball Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
53	Meadow Valley Av. / Kimball Av.	CSS	17.5	18.3	C	C	17.6	18.4	C	C	D
54	Hellman Av. / Kimball Av.[3]	AWS	25.7	23.7	D	C	25.9	23.9	D	C	D
55	Archibald Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 6-1)

Table 4.11-17 Opening Year (2019) Intersection Analysis

#	Intersection	Traffic Control[2]	2019 Without Project				2019 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	12.2	19.2	B	B	12.4	19.3	B	B	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	34.5	32.6	C	C	39.3	37.6	D	D	D
3	Ramona Av. / Chino Hills Pkwy.	TS	44.1	48.3	D	D	44.6	50.7	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	31.5	27.2	D	D	26.6	28.0	D	D	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	19.3	16.4	B	B	19.7	16.5	B	B	D
6	Central Av. / Chino Hills Pkwy.	TS	30.2	**55.3**	C	**E**	33.3	**64.4**	C	**E**	D
7	Central Av. / El Prado Rd.	TS	**107.8**	**167.1**	**F**	**F**	**128.7**	**174.7**	**F**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	9.3	8.0	A	A	9.3	8.0	A	A	D
9	Central Av. / SR-71 SB Ramps	TS	18.2	37.9	B	D	19.7	38.2	B	D	D
10	El Prado Rd. / Kimball Av.	TS	42.2	**100.2**	D	**F**	**63.4**	**104.2**	**E**	**F**	D
11	Mountain Av. / Kimball Av.	TS	13.5	16.4	B	B	15.4	16.8	B	B	D
12	San Antonio Av. / Kimball Av.	TS	16.9	13.7	B	B	17.2	14.1	B	B	D
13	Fern Av. / Kimball Av.	TS	15.5	19.9	B	B	15.7	21.0	B	C	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	**60.5**	**71.5**	**E**	**E**	**67.6**	**82.9**	**E**	**F**	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	**70.0**	**84.0**	**E**	**F**	**78.1**	**99.0**	**E**	**F**	D
16	Euclid Av. (SR-83) / Walnut St.	TS	38.1	29.1	D	C	38.9	29.5	D	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	36.3	**88.3**	D	**F**	39.5	**101.2**	D	**F**	D
18	Euclid Av. (SR-83) / Chino Av.	TS	24.5	7.0	C	A	27.1	7.3	C	A	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	49.1	**58.2**	D	**E**	52.1	**62.3**	D	**E**	D
20	Euclid Av. (SR-83) / Edison Av.	TS	**105.1**	**75.4**	**F**	**E**	**134.9**	**95.8**	**F**	**F**	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	29.7	10.8	C	B	31.7	12.1	C	B	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	**188.9**	**>200.0**	**F**	**F**	**190.3**	**>200.0**	**F**	**F**	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	**104.2**	**147.0**	**F**	**F**	**153.4**	**192.2**	**F**	**F**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	**56.0**	30.1	**E**	C	**57.7**	50.9	**E**	D	D
25	Euclid Av. (SR-83) / Pine Av.	TS	**57.1**	50.4	**E**	D	**57.5**	**57.3**	**E**	**E**	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	22.3	11.7	C	B	25.1	13.4	C	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	51.8	33.7	D	C	53.6	34.3	D	C	D
28	Dwy. 1 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
29	Dwy. 2 / Bickmore Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				11.0	40.0	B	D	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				9.4	8.7	A	A	C
32	Mayhew Av. / Dwy. 4	CSS	Intersection Does Not Exist				Intersection Does Not Exist				C
33	Mayhew Av. / Dwy. 5	CSS	Intersection Does Not Exist				8.8	9.5	A	A	C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.6	9.9	A	A	C
35	Mayhew Av. / Dwy. 7	CSS	Intersection Does Not Exist				8.9	9.5	A	A	C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.9	10.1	A	B	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.4	9.5	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.3	9.5	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				9.0	9.3	A	A	C
40	Mayhew Av. / Dwy. 12		Intersection Does Not Exist				Intersection Does Not Exist				C
41	Mayhew Av. / Dwy. 13		Intersection Does Not Exist				Intersection Does Not Exist				C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				15.8	11.7	C	B	D

Table 4.11-17 Opening Year (2019) Intersection Analysis

#	Intersection	Traffic Control[2]	2019 Without Project Delay[1] (secs.) AM	2019 Without Project Delay[1] (secs.) PM	2019 Without Project Level of Service AM	2019 Without Project Level of Service PM	2019 With Project Delay[1] (secs.) AM	2019 With Project Delay[1] (secs.) PM	2019 With Project Level of Service AM	2019 With Project Level of Service PM	Acceptable LOS
43	Dwy. 14 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
44	Street B / Kimball Av.	CSS/TS	**33.4**	0.0	**D**	A	**143.5**	10.9	**F**	B	C
45	Street B / Dwy. 15		Intersection Does Not Exist				Intersection Does Not Exist				C
46	Street B / Dwy. 16		Intersection Does Not Exist				Intersection Does Not Exist				C
47	Street B/Dwy. 17 / Dwy. 18	CSS	Intersection Does Not Exist				8.4	8.9	A	A	C
48	Dwy. 19 / Kimball Av.		Intersection Does Not Exist				Intersection Does Not Exist				C
49	Rincon Meadows Av. / Kimball Av.	CSS	18.8	23.8	C	C	25.8	31.0	D	D	D
50	Mill Creek Av. / Kimball Av.	TS	13.1	13.2	B	B	13.8	13.7	B	B	D
51	Main St. / Kimball Av.	TS	15.8	12.4	B	B	16.2	12.8	B	B	D
52	Flight Av. / Kimball Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
53	Meadow Valley Av. / Kimball Av.	CSS	21.4	18.5	C	C	22.2	18.9	C	C	D
54	Hellman Av. / Kimball Av.[3]	AWS	28.3	24.7	D	C	28.7	25.4	D	D	D
55	Archibald Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; CSS = Improvement

[3] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 7-1)

Table 4.11-18 Opening Year (2020) Intersection Analysis

#	Intersection	Traffic Control[2]	2020 Without Project				2020 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	12.3	20.5	B	C	12.6	20.6	B	C	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	42.4	34.8	D	C	49.4	43.8	D	D	D
3	Ramona Av. / Chino Hills Pkwy.	TS	45.3	49.8	D	D	46.5	54.8	D	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	25.9	28.4	D	D	29.8	30.2	D	D	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	19.9	16.5	B	B	20.2	16.7	C	B	D
6	Central Av. / Chino Hills Pkwy.	TS	31.2	**57.7**	C	**E**	38.6	**75.8**	D	**E**	D
7	Central Av. / El Prado Rd.	TS	**113.7**	**173.3**	**F**	**F**	**154.7**	**189.5**	**F**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	10.2	8.1	B	A	10.2	8.1	B	A	D
9	Central Av. / SR-71 SB Ramps	TS	18.7	38.7	B	D	21.7	39.1	C	D	D
10	El Prado Rd. / Kimball Av.	TS	44.4	**105.7**	D	**F**	**90.9**	**115.1**	**F**	**F**	D
11	Mountain Av. / Kimball Av.	TS	13.9	17.1	B	B	19.1	18.6	B	B	D
12	San Antonio Av. / Kimball Av.	TS	17.5	14.0	B	B	18.5	15.1	B	B	D
13	Fern Av. / Kimball Av.	TS	16.1	21.2	B	C	17.0	24.6	B	C	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	**64.1**	**73.9**	**E**	**E**	**77.1**	**92.0**	**E**	**F**	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	**74.6**	**90.6**	**E**	**F**	**88.6**	**115.6**	**F**	**F**	D
16	Euclid Av. (SR-83) / Walnut St.	TS	38.9	29.7	D	C	41.2	29.9	D	C	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	37.8	**94.3**	D	**F**	41.1	**121.8**	D	**F**	D
18	Euclid Av. (SR-83) / Chino Av.	TS	25.3	7.2	C	A	34.2	10.5	C	B	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	49.7	**59.7**	D	**E**	**57.3**	**73.9**	**E**	**E**	D
20	Euclid Av. (SR-83) / Edison Av.	TS	**108.9**	**83.3**	**F**	**F**	**160.5**	**120.5**	**F**	**F**	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	30.1	11.0	C	B	34.7	14.0	C	B	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	**193.3**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	**107.6**	**147.9**	**F**	**F**	**>200.0**	**159.8**	**F**	**F**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	**55.5**	30.6	**E**	C	**71.4**	**80.7**	**E**	**F**	D
25	Euclid Av. (SR-83) / Pine Av.	TS	**59.2**	51.3	**E**	D	**60.2**	**63.1**	**E**	**E**	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	27.8	11.8	C	B	30.7	12.7	C	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	**58.2**	33.8	**E**	C	**62.5**	35.1	**E**	D	D
28	Dwy. 1 / Bickmore Av.	CSS	Intersection Does Not Exist				16.1	10.4	C	B	C
29	Dwy. 2 / Bickmore Av.	CSS	Intersection Does Not Exist				16.1	10.2	C	B	C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				20.9	**59.7**	C	**E**	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				9.5	8.7	A	A	C
32	Mayhew Av. / Dwy. 4	CSS	Intersection Does Not Exist				8.7	9.6	A	A	C
33	Mayhew Av. / Dwy. 5	CSS	Intersection Does Not Exist				8.8	9.3	A	A	C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.3	9.1	A	A	C
35	Mayhew Av. / Dwy. 7	CSS	Intersection Does Not Exist				9.1	9.4	A	A	C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.7	9.7	A	A	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.5	9.6	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.4	9.5	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				9.0	9.2	A	A	C
40	Mayhew Av. / Dwy. 12	CSS	Intersection Does Not Exist				9.1	9.3	A	A	C
41	Mayhew Av. / Dwy. 13	CSS	Intersection Does Not Exist				9.3	9.4	A	A	C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				16.8	12.5	C	B	D

Table 4.11-18 Opening Year (2020) Intersection Analysis

#	Intersection	Traffic Control[2]	2020 Without Project				2020 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
43	Dwy. 14 / Kimball Av.	**CSS**	Intersection Does Not Exist				13.4	15.2	B	C	C
44	Street B / Kimball Av.	CSS/**TS**	**34.3**	0.0	**D**	A	**150.1**	16.1	**F**	B	C
45	Street B / Dwy. 15	**CSS**	Intersection Does Not Exist				12.3	12.3	B	B	C
46	Street B / Dwy. 16	**CSS**	Intersection Does Not Exist				10.7	10.4	B	B	C
47	Street B/Dwy. 17 / Dwy. 18	**CSS**	Intersection Does Not Exist				8.5	9.4	A	A	C
48	Dwy. 19 / Kimball Av.	**CSS**	Intersection Does Not Exist				11.7	14.9	B	B	C
49	Rincon Meadows Av. / Kimball Av.	CSS	19.2	24.4	C	C	27.7	33.2	D	D	D
50	Mill Creek Av. / Kimball Av.	TS	13.3	13.4	B	B	15.1	14.5	B	B	D
51	Main St. / Kimball Av.	TS	16.0	12.6	B	B	16.9	13.5	B	B	D
52	Flight Av. / Kimball Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
53	Meadow Valley Av. / Kimball Av.	CSS	21.9	18.9	C	C	23.6	19.7	C	C	D
54	Hellman Av. / Kimball Av.[3]	AWS	30.0	25.9	D	D	31.2	27.3	D	D	D
55	Archibald Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
56	Harrison Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
57	Sumner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
58	Scholar Wy. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
59	Hamner Av. / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
60	I-15 SB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D
61	I-15 NB Ramps / Limonite Av.	TS	Intersection Not Evaluated				Intersection Not Evaluated				D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 8-1)

Table 4.11-19 Horizon Year (2040) Intersection Analysis with and without Limonite Extension

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-71 SB Ramps / Chino Hills Pkwy.	TS	13.9	20.9	B	C	14.2	21.1	B	C	D
2	SR-71 NB Ramps / Chino Hills Pkwy.	TS	**147.7**	**60.0**	**F**	**E**	**157.6**	**66.6**	**F**	**E**	D
3	Ramona Av. / Chino Hills Pkwy.	TS	**67.0**	**67.5**	**E**	**E**	**68.2**	**73.3**	**E**	**E**	D
4	Monte Vista Av. West / Chino Hills Pkwy.	CSS	**59.3**	**>100.0**	**F**	**F**	**73.9**	**>100.0**	**F**	**F**	D
5	Monte Vista Av. East / Chino Hills Pkwy.	TS	22.7	20.0	C	C	23.3	20.6	C	C	D
6	Central Av. / Chino Hills Pkwy.	TS	43.0	**85.1**	D	**F**	51.2	**99.7**	D	**F**	D
7	Central Av. / El Prado Rd.	TS	**119.6**	**189.3**	**F**	**F**	**159.8**	**>200.0**	**F**	**F**	D
8	Central Av. / SR-71 NB Ramps	TS	11.2	20.2	B	C	12.1	21.0	B	C	D
9	Central Av. / SR-71 SB Ramps	TS	18.7	39.2	B	D	22.1	44.3	B	D	D
10	El Prado Rd. / Kimball Av.	TS	46.7	**106.9**	D	**F**	**95.5**	**116.8**	**F**	**F**	D
11	Mountain Av. / Kimball Av.	TS	19.6	18.9	C	C	21.0	22.0	C	C	D
12	San Antonio Av. / Kimball Av.	TS	21.5	29.0	C	C	23.0	33.2	C	C	D
13	Fern Av. / Kimball Av.	TS	21.4	25.6	C	C	21.4	29.8	C	C	D
14	Euclid Av. (SR-83) / SR-60 WB Ramps	TS	**104.7**	**89.3**	**F**	**F**	**119.4**	**96.8**	**F**	**F**	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps	TS	**92.8**	**91.3**	**F**	**F**	**97.8**	**119.9**	**F**	**F**	D
16	Euclid Av. (SR-83) / Walnut St.	TS	49.9	44.1	D	D	56.9	44.3	E	D	E
17	Euclid Av. (SR-83) / Riverside Dr.	TS	**148.0**	**176.7**	**F**	**F**	**174.3**	**>200.0**	**F**	**F**	D
18	Euclid Av. (SR-83) / Chino Av.	TS	**83.8**	**96.3**	**F**	**F**	**111.6**	**134.2**	**F**	**F**	D
19	Euclid Av. (SR-83) / Schaefer Av.	TS	**118.8**	**164.4**	**F**	**F**	**145.6**	**191.0**	**F**	**F**	D
20	Euclid Av. (SR-83) / Edison Av.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
21	Euclid Av. (SR-83) / Eucalyptus Av.	TS	38.4	31.0	D	C	54.1	46.5	D	D	D
22	Euclid Av. (SR-83) / Merrill Av.	TS	**197.9**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
23	Euclid Av. (SR-83) / Kimball Av.	TS	**165.7**	**154.4**	**F**	**F**	**>200.0**	**160.5**	**F**	**F**	D
24	Euclid Av. (SR-83) / Bickmore Av.	TS	**58.0**	54.2	**E**	D	**74.2**	**81.5**	**E**	**F**	D
25	Euclid Av. (SR-83) / Pine Av.	TS	**175.4**	**>200.0**	**F**	**F**	**181.8**	**>200.0**	**F**	**F**	D
26	SR-71 NB Ramps / Euclid Av. (SR-83)	TS	29.7	17.3	C	B	31.9	17.3	C	B	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)	TS	**58.6**	33.8	**E**	C	**63.1**	37.4	**E**	D	D
28	Dwy. 1 / Bickmore Av.	CSS	Intersection Does Not Exist				19.8	11.0	C	B	C
29	Dwy. 2 / Bickmore Av.	CSS	Intersection Does Not Exist				19.8	10.7	C	B	C
30	Mayhew Av. / Kimball Av.	TS	Intersection Does Not Exist				13.5	**68.3**	B	**E**	D
31	Mayhew Av. / Dwy. 3	CSS	Intersection Does Not Exist				9.5	8.7	A	A	C
32	Mayhew Av. / Dwy. 4	CSS	Intersection Does Not Exist				8.7	9.6	A	A	C
33	Mayhew Av. / Dwy. 5	CSS	Intersection Does Not Exist				8.8	9.3	A	A	C
34	Mayhew Av. / Dwy. 6	CSS	Intersection Does Not Exist				9.3	9.1	A	A	C
35	Mayhew Av. / Dwy. 7	CSS	Intersection Does Not Exist				9.1	9.4	A	A	C
36	Mayhew Av. / Dwy. 8	CSS	Intersection Does Not Exist				9.9	9.9	A	A	C
37	Mayhew Av. / Dwy. 9	CSS	Intersection Does Not Exist				9.5	9.6	A	A	C
38	Mayhew Av. / Dwy. 10	CSS	Intersection Does Not Exist				9.4	9.5	A	A	C
39	Mayhew Av. / Dwy. 11	CSS	Intersection Does Not Exist				9.0	9.2	A	A	C
40	Mayhew Av. / Dwy. 12	CSS	Intersection Does Not Exist				9.1	9.3	A	A	C
41	Mayhew Av. / Dwy. 13	CSS	Intersection Does Not Exist				9.3	9.3	A	A	C
42	Mayhew Av. / Bickmore Av.	CSS	Intersection Does Not Exist				20.5	11.7	C	B	D

Table 4.11-19 Horizon Year (2040) Intersection Analysis with and without Limonite Extension

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
43	Dwy. 14 / Kimball Av.	**CSS**	Intersection Does Not Exist				12.6	15.8	B	C	C
44	Street B / Kimball Av.	CSS/**TS**	19.1	0.0	C	A	17.9	26.1	B	C	C
45	Street B / Dwy. 15	**CSS**	Intersection Does Not Exist				12.3	12.2	B	B	C
46	Street B / Dwy. 16	**CSS**	Intersection Does Not Exist				10.3	10.4	B	B	C
47	Street B/Dwy. 17 / Dwy. 18	**CSS**	Intersection Does Not Exist				8.5	9.4	A	A	C
48	Dwy. 19 / Kimball Av.	**CSS**	Intersection Does Not Exist				11.1	15.4	B	C	C
49	Rincon Meadows Av. / Kimball Av.	CSS	19.1	24.6	C	C	20.8	27.3	C	D	D
	- With Limonite Avenue Extension		23.2	27.3	C	D	16.0	31.9	C	D	
50	Mill Creek Av. / Kimball Av.	TS	13.3	19.3	B	B	13.8	21.6	B	C	D
	- With Limonite Avenue Extension		28.4	28.6	C	C	32.8	31.2	C	C	
51	Main St. / Kimball Av.	TS	20.0	34.7	C	D	20.7	36.3	C	D	D
	- With Limonite Avenue Extension		24.9	32.3	C	C	30.3	35.7	C	D	
52	Flight Av. / Kimball Av.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
	- With Limonite Avenue Extension		**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	
53	Meadow Valley Av. / Kimball Av.	CSS	30.1	28.6	D	D	33.4	30.1	D	D	D
	- With Limonite Avenue Extension		**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	
54	Hellman Av. / Kimball Av.[3]	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
	- With Limonite Avenue Extension		**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	
55	Archibald Av. / Limonite Av.	TS	**>200.0**	**>100.0**	**F**	**F**	**>200.0**	**>100.0**	**F**	**F**	D
	- With Limonite Avenue Extension		**>200.0**	**>100.0**	**F**	**F**	**>200.0**	**>100.0**	**F**	**F**	
56	Harrison Av. / Limonite Av.	TS	48.3	**133.8**	D	**F**	50.9	**139.1**	D	**F**	D
57	Sumner Av. / Limonite Av.	TS	**58.7**	**100.6**	**E**	**F**	**59.4**	**103.5**	**E**	**F**	D
58	Scholar Wy. / Limonite Av.	TS	40.6	**63.3**	D	**E**	41.4	**64.0**	D	**E**	D
59	Hamner Av. / Limonite Av.	TS	**76.4**	**96.1**	**E**	**F**	**76.4**	**96.6**	**E**	**F**	D
60	I-15 SB Ramps / Limonite Av.	TS	**124.8**	**64.4**	**F**	**E**	**125.0**	**64.4**	**F**	**E**	D
61	I-15 NB Ramps / Limonite Av.	TS	**70.2**	**117.0**	**E**	**F**	**75.5**	**117.3**	**E**	**F**	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[3] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 9-1)

Table 4.11-20 Existing plus Project Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	Existing (2016)				E+P (Phase 1)				E+P (Phase 2)				E+P (Phase 3)			
				Density[2]		LOS		Density[2]		LOS		Density[2]		LOS		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	19.8	17.5	C	B	19.9	17.5	C	B	20.1	17.6	C	B	20.4	17.7	C	B
		South of Chino Hills Pkwy.	3	15.1	11.1	B	B	15.2	11.1	B	B	15.3	11.1	B	B	15.4	11.2	B	B
		North of Central Av.	3	18.3	17.9	C	B	18.4	18.0	C	B	18.5	18.0	C	B	18.8	18.0	C	C
		South of Euclid Av. (SR-83)	2	**37.9**	26.6	**E**	D	**38.0**	26.8	**E**	D	**38.1**	27.2	**E**	D	**38.3**	27.7	**E**	D
	NB	North of Chino Hills Pkwy.	3	22.1	21.8	C	C	22.2	21.9	C	C	22.2	22.1	C	C	22.4	22.5	C	C
		South of Chino Hills Pkwy.	3	16.7	16.4	B	B	16.7	16.5	B	B	16.7	16.6	B	B	16.7	16.8	B	B
		North of Central Av.	3	**37.6**	30.5	**E**	D	**37.6**	30.6	**E**	D	**37.7**	30.7	**E**	D	**37.7**	31.0	**E**	D
		South of Euclid Av. (SR-83)	3	23.7	24.2	C	C	23.8	24.3	C	C	24.2	24.3	C	C	24.5	24.4	C	C
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	26.6	27.6	D	D	26.6	27.8	D	D	26.6	27.9	D	D	26.6	28.0	D	D
		East of Euclid Av. (SR-83)	4	27.2	28.7	D	D	27.2	28.7	D	D	27.3	28.7	D	D	27.6	28.7	D	D
	EB	West of Euclid Av. (SR-83)	4	27.7	24.2	D	C	27.7	24.3	D	C	27.8	24.3	D	C	27.9	24.3	D	C
		East of Euclid Av. (SR-83)	4	28.3	24.7	D	C	28.4	24.8	D	C	28.4	24.9	D	C	28.4	25.0	D	C

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 5-5)

Table 4.11-21 Existing plus Project Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	E+P (Phase 1)				E+P (Phase 2)				E+P (Project Buildout)			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	156	174	Yes	Yes	163	176	Yes	Yes	173	180	Yes	Yes
	SBL/T	1,210	156	176	Yes	Yes	161	176	Yes	Yes	168	178	Yes	Yes
	SBR	510	171	476[2]	Yes	Yes	171	476[2]	Yes	Yes	171	476[2]	Yes	Yes
SR-71 NB Ramps / Chino Hills Pkwy.	NBL	100	202[2]	165[2]	Yes[3]	Yes[3]	212[2]	165[2]	Yes[3]	Yes[3]	212[2]	165[2]	Yes[3]	Yes[3]
	NBT/R	530	160[2]	91	Yes	Yes	173[2]	91	Yes	Yes	173[2]	91	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	163	214	Yes	Yes	164	215	Yes	Yes	165	215	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	292	498	Yes	Yes	321	504	Yes	Yes	337	517	Yes	Yes
	SBL/R	740	246	695	Yes	Yes	248	697	Yes	Yes	267	704	Yes	Yes
Euclid Avenue/ SR-60 WB Ramps	WBL	400	388[2]	326[2]	Yes	Yes	407[2]	332[2]	Yes	Yes	416[2]	333[2]	Yes[3]	Yes
	WBL/T/R	1,430	384[2]	309[2]	Yes	Yes	406[2]	312[2]	Yes	Yes	431[2]	323[2]	Yes	Yes
	WBR	400	203	202	Yes	Yes	209	202	Yes	Yes	249[2]	207	Yes	Yes
Euclid Avenue/ SR-60 EB Ramps	EBL	900	301[2]	334[2]	Yes	Yes	301[2]	334[2]	Yes	Yes	301[2]	334[2]	Yes	Yes
	EBL/R	1,270	343[2]	310[2]	Yes	Yes	380[2]	320[2]	Yes	Yes	423[2]	333[2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	40	78	Yes	Yes	40	78	Yes	Yes	40	78	Yes	Yes
	NBR	420	119	1,114[2]	Yes	Yes[3]	272[2]	1,192[2]	Yes	Yes[3]	457[2]	1,268[2]	Yes[3]	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SBL	1,100	173	403	Yes	Yes	173	403	Yes	Yes	173	403	Yes	Yes
	SBL/T	1,560	171	402	Yes	Yes	171	402	Yes	Yes	171	402	Yes	Yes
	SBR	255	0	40	Yes	Yes	0	40	Yes	Yes	0	40	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Source: (Urban Crossroads, 2019b, Table 5-4)

Table 4.11-22 Existing plus Project Freeway Ramp Merge / Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	Existing (2016)				E+P (Phase 1)				E+P (Phase 2)				E+P (Project Buildout)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	27.9	C	26.7	C	28.0	D	26.7	C	28.2	D	26.7	C	28.5	D	26.8	C
		Off-Ramp at Central Av.	3	26.2	C	27.8	C	26.3	C	27.8	C	26.4	C	27.9	C	26.8	C	27.9	C
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	32.4	D	29.1	D	32.4	D	29.3	D	32.5	D	29.6	D	32.6	D	30.0	D
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	32.4	D	29.1	D	32.4	D	29.3	D	32.5	D	29.6	D	32.6	D	30.0	D
	NB	On-Ramp at Chino Hills Pkwy.	3	26.7	C	26.3	C	26.7	C	26.4	C	26.7	C	26.6	C	26.8	C	27.0	C
		On-Ramp at Central Av.	3	35.0	D	30.6	D	35.0	D	30.7	D	35.0	D	30.9	D	**35.0**	E	31.1	D
		Off-Ramp at Euclid Av. (SR-83)	3	31.9	D	33.4	D	32.0	D	33.4	D	32.4	D	33.5	D	32.7	D	33.6	D
SR-60	WB	On-Ramp at Euclid Av. (SR-83)	4	25.9	C	26.7	C	25.9	C	26.8	C	26.0	C	27.0	C	26.0	C	27.2	C
		Off-Ramp at Euclid Av. (SR-83)	4	33.8	D	**35.2**	E	33.9	D	**35.2**	E	34.1	D	**35.2**	E	34.5	D	**35.3**	E
	EB	Off-Ramp at Euclid Av. (SR-83)	4	32.6	D	30.4	D	32.7	D	30.4	D	32.9	D	30.4	D	33.1	D	30.5	D
		On-Ramp at Euclid Av. (SR-83)	4	28.7	D	26.7	C	28.7	D	26.8	C	28.7	D	27.0	C	28.8	D	27.2	C

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 5-6)

Table 4.11-23 Opening Year (2018) Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	2018 Without Project				2018 With Project			
				Density[2]		LOS		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	21.4	19.1	C	C	21.6	19.1	C	C
		South of Chino Hills Pkwy.	3	16.3	12.1	B	B	16.4	12.1	B	B
		North of Central Av.	3	19.8	19.3	C	C	19.8	19.3	C	C
		South of Euclid Av. (SR-83)	2	**44.4**	31.4	**E**	D	**44.6**	31.7	**E**	D
	NB	North of Chino Hills Pkwy.	3	24.1	24.0	C	C	24.1	24.1	C	C
		South of Chino Hills Pkwy.	3	17.8	17.8	B	B	17.8	17.8	B	B
		North of Central Av.	3	**41.9**	33.6	**E**	D	**41.9**	33.7	**E**	D
		South of Euclid Av. (SR-83)	3	26.4	27.0	D	D	26.6	27.0	D	D
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	28.7	30.7	D	D	28.7	30.7	D	D
		East of Euclid Av. (SR-83)	4	29.5	30.8	D	D	29.6	30.9	D	D
	EB	West of Euclid Av. (SR-83)	4	30.6	26.2	D	D	30.6	26.2	D	D
		East of Euclid Av. (SR-83)	4	30.5	26.8	D	D	30.5	26.9	D	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 6-3)

Table 4.11-24 Opening Year (2019) Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	2019 Without Project				2019 With Project			
				Density[2]		LOS		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	21.9	19.5	C	D	22.4	19.6	C	C
		South of Chino Hills Pkwy.	3	16.6	12.3	B	B	16.8	12.4	B	B
		North of Central Av.	3	20.2	19.7	C	C	20.4	19.7	C	C
		South of Euclid Av. (SR-83)	2	**46.4**	32.1	**F**	D	**46.7**	33.1	**F**	D
	NB	North of Chino Hills Pkwy.	3	24.7	24.5	C	C	24.8	24.9	C	C
		South of Chino Hills Pkwy.	3	18.2	18.1	C	C	18.2	18.3	C	C
		North of Central Av.	3	**43.7**	34.7	**E**	D	**43.8**	**35.1**	**E**	**E**
		South of Euclid Av. (SR-83)	3	27.1	27.7	D	D	27.5	27.8	D	D
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	29.5	31.6	D	D	29.5	31.8	D	D
		East of Euclid Av. (SR-83)	4	30.4	31.8	D	D	30.6	31.9	D	D
	EB	West of Euclid Av. (SR-83)	4	31.5	26.9	D	D	31.7	26.9	D	D
		East of Euclid Av. (SR-83)	4	31.4	27.6	D	D	31.4	27.7	D	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 7-3)

Table 4.11-25 Opening Year (2020) Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	2020 Without Project				2020 With Project			
				Density[2]		LOS		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	22.4	19.8	C	C	23.2	20.0	C	C
		South of Chino Hills Pkwy.	3	17.0	12.6	B	B	17.3	12.7	B	B
		North of Central Av.	3	20.6	20.1	C	C	21.0	20.3	C	C
		South of Euclid Av. (SR-83)	2	**48.6**	33.1	**F**	D	**49.1**	34.8	**F**	D
	NB	North of Chino Hills Pkwy.	3	25.3	25.1	C	C	25.5	25.8	C	C
		South of Chino Hills Pkwy.	3	18.5	18.5	C	C	18.6	18.8	C	C
		North of Central Av.	3	**45.6**	**35.9**	**F**	**E**	**45.8**	**36.6**	**F**	**E**
		South of Euclid Av. (SR-83)	3	27.8	28.5	D	D	28.7	28.7	D	D
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	30.4	32.6	D	D	30.4	32.9	D	D
		East of Euclid Av. (SR-83)	4	31.3	32.8	D	D	31.7	32.9	D	D
	EB	West of Euclid Av. (SR-83)	4	32.5	27.6	D	D	32.8	27.7	D	D
		East of Euclid Av. (SR-83)	4	32.4	28.3	D	D	32.4	28.6	D	D

BOLD = Unacceptable Level of Service

[1]Number of lane are in the specified direction and is based on existing conditions.
[2]Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 8-3)

Table 4.11-26 Opening Year (2018) Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	2018 Without Project				2018 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	171	197 [2]	Yes	Yes	175	193 [2]	Yes	Yes
	SBL/T	1,210	168	190	Yes	Yes	171	194	Yes	Yes
	SBR	510	190 [2]	500 [2]	Yes	Yes	190 [2]	500 [2]	Yes	Yes
SR-71 NB Ramps / Chino Hills Pkwy.	NBL	100	210 [2]	175 [2]	Yes[3]	Yes[3]	210 [2]	175 [2]	Yes[3]	Yes[3]
	NBT/R	530	169 [2]	93	Yes	Yes	169 [2]	93	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	172	231	Yes	Yes	172	231	Yes	Yes
	NBL/R	1,070	172	231	Yes	Yes	172	231	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	385	718	Yes	Yes	393	728	Yes	Yes
	SBL/R	740	312	898 [2]	Yes	Yes[3]	321	902 [2]	Yes	Yes[3]
Euclid Avenue/ SR-60 WB Ramps	WBL	400	465 [2]	386 [2]	Yes[3]	Yes	483 [2]	383 [2]	Yes[3]	Yes
	WBL/T/R	1,430	478 [2]	380 [2]	Yes	Yes	492 [2]	387 [2]	Yes	Yes
	WBR	400	293 [2]	252 [2]	Yes	Yes	293 [2]	274 [2]	Yes	Yes
Euclid Avenue/ SR-60 EB Ramps	EBL	900	320 [2]	352 [2]	Yes	Yes	320 [2]	352 [2]	Yes	Yes
	EBL/R	1,270	773 [2]	657 [2]	Yes	Yes	796 [2]	665 [2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	42	81	Yes	Yes	42	81	Yes	Yes
	NBR	420	702 [2]	1,618 [2]	Yes[3]	Yes[3]	763 [2]	1,667 [2]	Yes[3]	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SLB	1,100	184	437	Yes	Yes	184	437	Yes	Yes
	SBL/T	1,560	181	431	Yes	Yes	181	431	Yes	Yes
	SBR	255	0	41	Yes	Yes	0	41	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the SR-71 or SR-60 Freeway mainline.

Source: (Urban Crossroads, 2019b, Table 6-2)

Table 4.11-27 Opening Year (2019) Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	2019 Without Project				2019 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak	PM Peak Hour	AM	PM	AM Peak	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	174	203 [2]	Yes	Yes	183	206 [2]	Yes	Yes
	SBL/T	1,210	171	195	Yes	Yes	182	200	Yes	Yes
	SBR	510	216 [2]	514 [2]	Yes	Yes	216 [2]	514 [2]	Yes	Yes
SR-71 NB Ramps / Chino Hills Pkwy.										
	NBL	100	226 [2]	180 [2]	Yes[3]	Yes[3]	226 [2]	180 [2]	Yes[3]	Yes[3]
	NBT/R	530	185 [2]	96	Yes	Yes	185 [2]	96	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	174	235	Yes	Yes	175	236	Yes	Yes
	NBL/R	1,070	174	235	Yes	Yes	175	236	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	393	749	Yes	Yes	432 [2]	777 [2]	Yes	Yes
	SBL/R	740	324	933 [2]	Yes	Yes[3]	346	935 [2]	Yes	Yes[3]
Euclid Avenue/ SR-60 WB Ramps	WBL	400	475 [2]	396 [2]	Yes[3]	Yes	516 [2]	397 [2]	Yes[3]	Yes
	WBL/T/R	1,430	489 [2]	390 [2]	Yes	Yes	527 [2]	402 [2]	Yes	Yes
	WBR	400	310 [2]	280 [2]	Yes	Yes	310 [2]	286 [2]	Yes	Yes
Euclid Avenue/ SR-60 EB Ramps	EBL	900	329 [2]	362 [2]	Yes	Yes	329 [2]	362 [2]	Yes	Yes
	EBL/R	1,270	784 [2]	672 [2]	Yes	Yes	844 [2]	688 [2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	42	82	Yes	Yes	42	82	Yes	Yes
	NBR	420	734 [2]	1,723 [2]	Yes[3]	Yes[3]	871 [2]	1,848 [2]	Yes[3]	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SLB	1,100	186	449	Yes	Yes	186	449	Yes	Yes
	SBL/T	1,560	183	443	Yes	Yes	183	443	Yes	Yes
	SBR	255	0	41	Yes	Yes	0	41	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the SR-71 or SR-60 Freeway mainline.

Source: (Urban Crossroads, 2019b, Table 7-2)

Table 4.11-28 Opening Year (2020) Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	2020 Without Project				2020 With Project			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak	PM Peak Hour	AM	PM	AM Peak	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	178	225[2]	Yes	Yes	202[2]	232[2]	Yes	Yes
	SBL/T	1,210	174	201	Yes	Yes	193	205	Yes	Yes
	SBR	510	224[2]	527[2]	Yes	Yes[3]	224[2]	527[2]	Yes	Yes[3]
SR-71 NB Ramps / Chino Hills Pkwy.										
	NBL	100	230[2]	184[2]	Yes[3]	Yes[3]	230[2]	184[2]	Yes[3]	Yes[3]
	NBT/R	530	190[2]	97	Yes	Yes	190[2]	97	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	178	241	Yes	Yes	180	242	Yes	Yes
	NBL/R	1,070	178	241	Yes	Yes	180	242	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	405	806[2]	Yes	Yes	502[2]	929[2]	Yes	Yes
	SBL/R	740	334	965[2]	Yes	Yes[3]	383	968[2]	Yes	Yes[3]
Euclid Avenue/ SR-60 WB Ramps	WBL	400	485[2]	405[2]	Yes[3]	Yes	554[2]	415[2]	Yes[3]	Yes
	WBL/T/R	1,430	498[2]	400[2]	Yes	Yes	564[2]	413[2]	Yes	Yes
	WBR	400	326[2]	291[2]	Yes	Yes	327[2]	305[2]	Yes	Yes
Euclid Avenue/ SR-60 EB Ramps	EBL	900	338[2]	372[2]	Yes	Yes	338[2]	372[2]	Yes	Yes
	EBL/R	1,270	795[2]	686[2]	Yes	Yes	894[2]	717[2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	43	84	Yes	Yes	43	84	Yes	Yes
	NBR	420	780[2]	1,816[2]	Yes[3]	Yes[3]	1,019[2]	1,938[2]	Yes[3]	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SLB	1,100	190	461	Yes	Yes	190	461	Yes	Yes
	SBL/T	1,560	187	454	Yes	Yes	187	454	Yes	Yes
	SBR	255	0	42	Yes	Yes	0	42	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the SR-71 or SR-60 Freeway mainline.

Source: (Urban Crossroads, 2019b, Table 8-2)

Table 4.11-29 Opening Year (2018) Freeway Ramp Merge / Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2018 Without Project				2018 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	29.4	D	28.4	D	29.5	D	28.4	D
		Off-Ramp at Central Av.	3	27.8	C	29.5	D	27.9	C	29.5	D
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	35.0	D	32.3	D	**35.0**	**E**	32.5	D
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	35.0	D	32.3	D	**35.0**	**E**	32.5	D
	NB	On-Ramp at Chino Hills Pkwy.	3	28.3	D	28.2	D	28.4	D	28.4	D
		On-Ramp at Central Av.	3	**37.0**	**E**	32.8	D	**37.0**	**E**	32.9	D
		Off-Ramp at Euclid Av. (SR-83)	3	34.2	D	**35.7**	**E**	34.3	D	**35.8**	**E**
SR-60 Freeway	WB	On-Ramp at Euclid Av. (SR-83)	4	27.8	C	29.4	D	27.8	C	29.5	D
		Off-Ramp at Euclid Av. (SR-83)	4	**36.1**	**E**	**37.1**	**E**	**36.3**	**E**	**37.2**	**E**
	EB	Off-Ramp at Euclid Av. (SR-83)	4	**35.7**	**E**	32.8	D	**35.8**	**E**	32.9	D
		On-Ramp at Euclid Av. (SR-83)	4	30.3	D	28.7	D	30.3	D	28.8	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 6-4)

Table 4.11-30 Opening Year (2019) Freeway Ramp Merge / Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2019 Without Project				2019 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	29.8	D	28.8	D	30.2	D	28.8	D
		Off-Ramp at Central Av.	3	28.2	D	30.0	D	28.5	D	30.0	D
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	**35.6**	**E**	32.9	D	**35.7**	**E**	33.3	D
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	**35.6**	**E**	32.9	D	**35.7**	**E**	33.3	D
	NB	On-Ramp at Chino Hills Pkwy.	3	28.8	D	28.7	D	28.9	D	29.1	D
		On-Ramp at Central Av.	3	**37.6**	**E**	33.4	D	**37.7**	**E**	33.7	D
		Off-Ramp at Euclid Av. (SR-83)	3	34.6	D	**36.2**	**E**	35.0	D	**36.3**	**E**
SR-60 Freeway	WB	On-Ramp at Euclid Av. (SR-83)	4	28.3	D	29.9	D	28.4	D	30.2	D
		Off-Ramp at Euclid Av. (SR-83)	4	**36.8**	**E**	**37.8**	**E**	**37.1**	**E**	**37.9**	**E**
	EB	Off-Ramp at Euclid Av. (SR-83)	4	**36.3**	**E**	33.4	D	**36.6**	**E**	33.5	D
		On-Ramp at Euclid Av. (SR-83)	4	30.8	D	29.2	D	30.9	D	29.5	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 7-4)

Table 4.11-31 Opening Year (2020) Freeway Ramp Merge / Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2020 Without Project				2020 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	30.3	D	29.1	D	30.9	D	29.4	D
		Off-Ramp at Central Av.	3	28.6	D	30.4	D	29.1	D	30.6	D
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	**36.3**	**E**	33.4	D	**36.4**	**E**	34.3	D
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	**36.3**	**E**	33.4	D	**36.4**	**E**	34.3	D
	NB	On-Ramp at Chino Hills Pkwy.	3	29.3	D	29.2	D	29.5	D	29.9	D
		On-Ramp at Central Av.	3	**38.3**	**F**	34.0	D	**38.5**	**F**	34.5	D
		Off-Ramp at Euclid Av. (SR-83)	3	**35.0**	**E**	**36.7**	**E**	**35.7**	**E**	**36.9**	**E**
SR-60 Freeway	WB	On-Ramp at Euclid Av. (SR-83)	4	28.9	D	30.5	D	28.9	D	30.9	D
		Off-Ramp at Euclid Av. (SR-83)	4	**37.5**	**E**	**38.5**	**E**	**38.0**	**E**	**38.6**	**E**
	EB	Off-Ramp at Euclid Av. (SR-83)	4	**37.0**	**E**	34.0	D	**37.4**	**E**	34.1	D
		On-Ramp at Euclid Av. (SR-83)	4	31.4	D	29.7	D	31.5	D	30.2	D

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 8-4)

Table 4.11-32 Horizon Year (2040) Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	2040 Without Project				2040 With Project			
				Density[2]		LOS		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
SR-71 Freeway	SB	North of Chino Hills Pkwy.	3	30.8	24.0	D	C	31.7	24.3	D	C
		South of Chino Hills Pkwy.	3	22.0	15.1	C	B	22.4	15.2	C	B
		North of Central Av.	3	30.1	27.9	D	D	30.7	28.0	D	D
		South of Euclid Av. (SR-83)	2	**856.4**	**300.1**	**F**	**F**	**989.9**	**448.7**	**F**	**F**
	NB	North of Chino Hills Pkwy.	3	**42.9**	**49.0**	**E**	**F**	**43.2**	**51.3**	**E**	**F**
		South of Chino Hills Pkwy.	3	27.6	30.7	D	D	27.7	31.5	D	D
		North of Central Av.	3	**93.9**	**78.7**	**F**	**F**	**94.9**	**81.6**	**F**	**F**
		South of Euclid Av. (SR-83)	3	**86.1**	**105.4**	**F**	**F**	**91.4**	**107.4**	**F**	**F**
SR-60 Freeway	WB	West of Euclid Av. (SR-83)	4	27.4	**38.0**	D	**E**	27.4	**38.3**	D	**E**
		East of Euclid Av. (SR-83)	4	26.0	**39.7**	C	**E**	26.2	**39.8**	D	**E**
	EB	West of Euclid Av. (SR-83)	4	**41.1**	**39.9**	**E**	**E**	**42.0**	**40.4**	**E**	**E**
		East of Euclid Av. (SR-83)	4	**44.4**	**37.4**	**E**	**E**	**44.5**	**38.2**	**E**	**E**
I-15 Freeway	SB	North of Limonite Av.	3	**36.4**	24.7	**E**	C	**36.4**	24.7	**E**	C
		South of Limonite Av.	3	**54.0**	29.0	**F**	D	**54.2**	29.3	**F**	D
	NB	North of Limonite Av.	3	28.7	23.2	D	C	28.7	23.2	D	C
		South of Limonite Av.	3	32.4	28.7	D	D	32.8	28.8	D	D

BOLD = Unacceptable Level of Service

Source: (Urban Crossroads, 2019b, Table 9-3)

Table 4.11-33 Horizon Year (2040) Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak	PM Peak Hour	AM	PM	AM Peak	PM Peak Hour	AM	PM
SR-71 SB Ramps / Chino Hills Pkwy.	SBL	775	249 [2]	309 [2]	Yes	Yes	269 [2]	317 [2]	Yes	Yes
	SBL/T	1,210	221 [2]	304 [2]	Yes	Yes	265 [2]	307 [2]	Yes	Yes
	SBR	510	168 [2]	482 [2]	Yes	Yes	168 [2]	482 [2]	Yes	Yes
SR-71 NB Ramps / Chino Hills Pkwy.										
	NBL	100	**380** [2]	**290** [2]	**No**	**No**	**380** [2]	**290** [2]	**No**	**No**
	NBT/R	530	298 [2]	225 [2]	Yes	Yes	302 [2]	226 [2]	Yes	Yes
Central Avenue / SR-71 NB Ramps	NBL	1,490	182	324	Yes	Yes	184	412 [2]	Yes	Yes
	NBL/R	1,070	182	324	Yes	Yes	184	412 [2]	Yes	Yes
Central Avenue / SR-71 SB Ramps	SBL	1,530	186	200	Yes	Yes	231	210	Yes	Yes
	SBL/R	740	189	1,153	Yes	Yes[3]	195	1,157	Yes	Yes[3]
Euclid Avenue/ SR-60 WB Ramps	WBL	400	394 [2]	516 [2]	Yes	Yes[3]	448 [2]	526 [2]	Yes[3]	Yes[3]
	WBL/T/R	1,430	396 [2]	520 [2]	Yes	Yes	450 [2]	535 [2]	Yes	Yes
	WBR	400	282 [2]	407 [2]	Yes	Yes	313 [2]	417 [2]	Yes	Yes[3]
Euclid Avenue/ SR-60 EB Ramps	EBL	900	423 [2]	607 [2]	Yes	Yes	423 [2]	607 [2]	Yes	Yes
	EBL/R	1,270	454 [2]	658 [2]	Yes	Yes	558 [2]	686 [2]	Yes	Yes
SR-71 NB Ramps / Euclid Avenue	NBL	1,745	113	134	Yes	Yes	113	134	Yes	Yes
	NBR	420	764 [2]	1,529 [2]	Yes[3]	Yes[3]	992 [2]	1,591 [2]	Yes[3]	Yes[3]
SR-71 SB Ramps / Euclid Avenue	SBL	1,100	184	421	Yes	Yes	184	421	Yes	Yes
	SBL/T	1,560	184	412	Yes	Yes	184	412	Yes	Yes
	SBR	255	0	15	Yes	Yes	0	15	Yes	Yes
I-15 SB Ramps / Limonite Avenue	SBL	400	342 [2]	434 [2,4]	Yes	Yes[3]	342 [2]	434 [2]	Yes	Yes[3]
	SBL/T/R	400	267 [2]	383 [2]	Yes	Yes	267 [2]	383 [2]	Yes	Yes
	SBR	1,200	226 [2]	343 [2]	Yes	Yes	226 [2]	343 [2]	Yes	Yes
I-15 NB Ramps / Limonite Avenue	NBL	450	738 [2,4]	650 [2,4]	Yes[3]	Yes[3]	758 [2,4]	655 [2,4]	Yes[3]	Yes[3]
	NBL/T/R	1,235	673 [2]	613 [2]	Yes	Yes	704 [2]	610 [2]	Yes	Yes
	NBR	400	611 [2,4]	550 [2,4]	Yes[3]	Yes[3]	636 [2,4]	565 [2,4]	Yes[3]	Yes[3]

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the SR-71, SR-60, or I-15 Freeway mainline.

Source: (Urban Crossroads, 2019b, Table 9-2)

Table 4.11-34 Horizon Year (2040) Freeway Ramp Merge / Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2040 Without Project				2040 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
SR-71 Freeway	SB	Off-Ramp at Chino Hills Pkwy.	3	**35.8**	**E**	32.9	D	**36.3**	**E**	33.2	D
		Off-Ramp at Central Av.	3	34.7	D	**35.1**	**E**	**35.1**	**E**	**35.2**	**E**
		Loop On-Ramp at Euclid Av. (SR-83) (Upstream)	2	**52.0**	**F**	**54.9**	**F**	**52.1**	**F**	**55.7**	**F**
		Loop On-Ramp at Euclid Av. (SR-83) (Downstream)	2	**52.0**	**F**	**54.9**	**F**	**52.1**	**F**	**55.7**	**F**
	NB	On-Ramp at Chino Hills Pkwy.	3	**39.4**	**E**	**41.5**	**F**	**39.5**	**E**	**42.2**	**F**
		On-Ramp at Central Av.	3	**51.6**	**F**	**48.7**	**F**	**51.8**	**F**	**49.0**	**F**
		Off-Ramp at Euclid Av. (SR-83)	3	**57.2**	**F**	**60.4**	**F**	**58.2**	**F**	**60.7**	**F**
SR-60 Freeway	WB	On-Ramp at Euclid Av. (SR-83)	4	29.8	D	34.3	D	29.8	D	34.3	D
		Off-Ramp at Euclid Av. (SR-83)	4	34.6	D	**43.9**	**E**	**35.1**	**E**	**44.1**	**E**
	EB	Off-Ramp at Euclid Av. (SR-83)	4	**41.5**	**E**	**42.3**	**E**	**42.1**	**E**	**42.6**	**E**
		On-Ramp at Euclid Av. (SR-83)	4	**37.4**	**E**	33.7	D	**37.5**	**E**	34.2	D
I-15 Freeway	SB	Off-Ramp at Limonite Av.	3	**36.7**	**E**	31.6	D	**36.7**	**E**	31.6	D
		On-Ramp at Limonite Av.	3	**43.0**	**F**	32.2	D	**43.0**	**F**	32.4	D
	NB	On-Ramp at Limonite Av.	3	29.6	D	25.3	C	29.6	D	25.3	C
		Off-Ramp at Limonite Av.	3	**36.3**	**E**	**35.1**	**E**	**36.5**	**E**	**35.2**	**E**

BOLD = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2019b, Table 9-4)

Table 4.11-35 Intersection Analysis for Existing plus Project Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
7	Central Av. / El Prado Rd.																	
	- Existing Conditions	TS	1	2	1	1	3	0	1	1	0	1	1	1>	50.3	**88.1**	D	**F**
	- With Improvements	TS	1	2	**1>**	1	3	0	1	1	0	1	1	1>	41.5	39.5	D	D
	- E+P (Phase 1)	TS	1	2	1	1	3	0	1	1	0	1	1	1>	54.3	**92.2**	D	**F**
	- E+P (Phase 2)	TS	1	2	1	1	3	0	1	1	0	1	1	1>	**62.4**	**96.6**	**E**	**F**
	- With Improvements[4]	TS	1	2	**1>**	1	3	0	1	1	0	1	1	1>	46.9	42.0	D	D
	- E+P (Project Buildout)	TS	1	2	1	1	3	0	1	1	0	1	1	1>	**76.9**	**103.3**	**E**	**F**
	- With Improvements[4]	TS	1	2	**1>**	1	3	0	1	1	0	1	1	1>	52.8	44.9	D	D
23	Euclid Av. (SR-83) / Kimball Av.																	
	- Existing Conditions	TS	1	2	1	1	2	0	1	2	0	1	2	0	48.2	49.3	D	D
	- E+P (Phase 1)	TS	1	2	1	1	2	0	1	2	0	1	2	0	52.4	53.0	D	D
	- E+P (Phase 2)	TS	1	2	1	1	2	0	1	2	0	1	2	0	**71.5**	**64.8**	**E**	**E**
	- With Improvements[5]	TS	1	2	1	1	2	**1>**	**2**	2	0	1	2	0	47.3	49.3	D	D
	- E+P (Project Buildout)	TS	1	2	1	1	2	0	1	2	0	1	2	0	**118.1**	**82.3**	**F**	**F**
	- With Improvements	TS	1	2	1	**2**	2	**1>**	**2**	2	0	1	2	**1**	39.1	46.0	D	D
54	Hellman Av. / Kimball Av.																	
	- Existing Conditions	AWS	1	0	0	0	0	0	0	0	1	0	0	0	**>100.0**	**65.7**	**F**	**F**
	- With Improvements	**TS**	1	0	0	0	0	0	0	0	1	0	0	0	3.4	1.9	A	A
	- E+P (Phase 1)	AWS	1	0	0	0	0	0	0	0	1	0	0	0	**96.9**	**55.2**	**F**	**F**
	- E+P (Phase 2)	AWS	1	0	0	0	0	0	0	0	1	0	0	0	**>100.0**	**58.0**	**F**	**F**
	- With Improvements[4]	**TS**	1	0	0	0	0	0	0	0	1	0	0	0	3.4	1.9	A	A
	- E+P (Project Buildout)	AWS	1	0	0	0	0	0	0	0	1	0	0	0	**>100.0**	**62.8**	**F**	**F**
	- With Improvements[4]	**TS**	1	0	0	0	0	0	0	0	1	0	0	0	3.5	1.9	A	A

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; d= Defacto Right Turn Lane; **1** = Improvement

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **TS** = Improvement

[4] Mitigation measure consists of fair share contribution towards the improvements (as the same improvements are required for existing conditions).

[5] Improvements shown are consistent with those currently under construction.

Source: (Urban Crossroads, 2019b, Table 5-7)

Table 4.11-36 Intersection Analysis for Opening (2018) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
7	Central Av. / El Prado Rd.																	
	- Without Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	39.0	34.2	D	C
	- With Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	39.7	34.9	D	C
10	El Prado Rd. / Kimball Av.																	
	- Without Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	21.2	23.6	C	C
	- With Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	21.4	23.9	C	C
14	Euclid Av. (SR-83) / SR-60 WB Ramps																	
	- Without Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	37.9	37.6	D	D
	- With Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	39.0	38.6	D	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps																	
	- Without Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	46.3	43.7	D	D
	- With Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	48.8	46.5	D	D
17	Euclid Av. (SR-83) / Riverside Dr.																	
	- Without Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	46.4	52.0	D	D
	- With Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	46.5	52.2	D	D
19	Euclid Av. (SR-83) / Schaefer Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	38.1	49.7	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	38.3	49.7	D	D
20	Euclid Av. (SR-83) / Edison Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	35.9	35.3	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	36.7	35.9	D	D
22	Euclid Av. (SR-83) / Merrill Av.																	
	- Without Project	TS	1	3	1	1	3	0	0	1	0	0	1	1>	54.6	35.5	D	D
	- With Project	TS	1	3	1	1	3	0	0	1	0	0	1	1>	54.9	38.7	D	D
23	Euclid Av. (SR-83) / Kimball Av.																	
	- Without Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1	45.2	46.5	D	D
	- With Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1	45.1	54.5	D	D
24	Euclid Av. (SR-83) / Bickmore Av.																	
	- Without Project[5]	TS	1	2	0	1	2	1	1	1	1	1	1	1	31.9	33.6	C	C
	- With Project[5]	TS	1	2	0	1	2	1	1	1	1	1	1	1	32.2	33.8	C	C
25	Euclid Av. (SR-83) / Pine Av.																	
	- Without Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	50.3	40.3	D	D
	- With Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	50.3	40.8	D	D
52	Flight Av. / Kimball Av.																	
	- Without Project	TS	0	1	0	0	1	0	1	2	0	1	2	0	25.2	24.2	C	C
	- With Project	TS	0	1	0	0	1	0	1	2	0	1	2	0	26.0	24.9	C	C

Table 4.11-36 Intersection Analysis for Opening (2018) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
54	Hellman Av. / Kimball Av.																	
	- Without Project[7]	TS	1	1	0	0	1	1	1	0	1	0	0	0	15.1	19.7	B	B
	- With Project[7]	TS	1	1	0	0	1	1	1	0	1	0	0	0	15.3	20.0	B	C

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

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; CSS = Improvement

[4] Restripe the southbound approach to provide dual left turns and two through lanes.

[5] Restripe the southbound approach to provide dual left turns and a single shared through-right turn lane.

[6] Includes new lanes on the westbound approach, implementing split phase for the eastbound and westbound approaches and removing the eastbound (south leg) crosswalk.

[7] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 6-5)

Table 4.11-37 Intersection Analysis is for Opening Year (2019) – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
6	Central Av. / Chino Hills Pkwy.																	
	- Without Project	TS	1	2	1	1	2	1	1	1	1>	1	1	1	28.0	44.2	C	D
	- With Project	TS	1	2	1	1	2	1	1	1	1>	1	1	1	28.4	48.3	C	D
7	Central Av. / El Prado Rd.																	
	- Without Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	40.1	35.3	D	D
	- With Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	43.1	36.3	D	D
10	El Prado Rd. / Kimball Av.																	
	- Without Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	21.7	24.1	C	C
	- With Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	22.3	25.0	C	C
14	Euclid Av. (SR-83) / SR-60 WB Ramps																	
	- Without Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	39.7	39.4	D	D
	- With Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	43.0	42.4	D	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps																	
	- Without Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	30.6	32.4	C	C
	- With Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	36.5	38.2	D	D
17	Euclid Av. (SR-83) / Riverside Dr.																	
	- Without Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	46.9	52.7	D	D
	- With Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	47.3	53.3	D	D
19	Euclid Av. (SR-83) / Schaefer Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	38.8	51.0	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	39.0	53.8	D	D
20	Euclid Av. (SR-83) / Edison Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	37.2	35.9	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	37.6	37.7	D	D
22	Euclid Av. (SR-83) / Merrill Av.																	
	- Without Project	TS	1	3	1	2	3	0	0	1	0	0	1	1>	39.2	43.3	D	D
	- With Project	TS	1	3	1	2	3	0	0	1	0	0	1	1>	40.7	50.4	D	D
23	Euclid Av. (SR-83) / Kimball Av.																	
	- Without Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1>	45.4	44.0	D	D
	- With Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1>	46.5	47.6	D	D
24	Euclid Av. (SR-83) / Bickmore Av.																	
	- Without Project[5]	TS	1	2	0	1	2	1	1	1	1	1	1	1	31.9	34.4	C	C
	- With Project[5]	TS	1	2	0	1	2	1	1	1	1	1	1	1	33.9	39.5	C	D
25	Euclid Av. (SR-83) / Pine Av.																	
	- Without Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	52.1	41.0	D	D
	- With Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	54.1	43.4	D	D
44	Street B / Kimball Av.																	
	- Without Project	TS	0	0	0	0	1	0	1	2	0	0	2	1	3.4	0.0	A	A
	- With Project	TS	0	1	0	0	1	0	1	2	1	1	2	1	18.2	9.1	B	A
52	Flight Av. / Kimball Av.																	
	- Without Project	TS	0	1	0	0	1	0	1	2	0	1	2	0	25.7	24.5	C	C
	- With Project	TS	0	1	0	0	1	0	1	2	0	1	2	0	28.1	26.4	C	C

Table 4.11-37 Intersection Analysis is for Opening Year (2019) – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
54	Hellman Av. / Kimball Av.																	
	- Without Project[6]	TS	1	1	0	0	1	1	1	0	1	0	0	0	15.4	20.3	B	C
	- With Project[6]	TS	1	1	0	0	1	1	1	0	1	0	0	0	16.0	21.2	B	C

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

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; CSS = Improvement

[4] Restripe the southbound approach to provide dual left turns and a single shared through-right turn lane.

[5] Includes new lanes on the westbound approach, implementing split phase for the eastbound and westbound approaches and removing the eastbound (south leg) crosswalk.

[6] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 7-5)

Table 4.11-38 Intersection Analysis for Opening Year (2020) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
6	Central Av. / Chino Hills Pkwy.																	
	- Without Project	TS	1	2	1	1	2	1	1	1	1>	1	1	1	28.9	46.8	C	D
	- With Project	TS	1	2	1	1	2	1	1	1	1>	1	1	1	29.9	54.8	C	D
7	Central Av. / El Prado Rd.																	
	- Without Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	41.9	36.3	D	D
	- With Project	TS	1	2	1>	2	3	0	1	1	0	1	1	1>	42.2	36.6	D	D
10	El Prado Rd. / Kimball Av.																	
	- Without Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	22.1	24.8	C	C
	- With Project[4]	TS	1	1	1	2	1	0	1	1	0	0	1	1>	23.3	27.3	C	C
14	Euclid Av. (SR-83) / SR-60 WB Ramps																	
	- Without Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	41.8	41.4	D	D
	- With Project	TS	2	2	0	0	2	1	0	0	0	1	1	1	47.9	46.3	D	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps																	
	- Without Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	35.1	33.9	D	C
	- With Project	TS	0	2	1	2	2	0	1	1	1	0	0	0	40.3	46.5	D	D
17	Euclid Av. (SR-83) / Riverside Dr.																	
	- Without Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	47.3	53.6	D	D
	- With Project	TS	1	3	1	1	3	1>	1	2	0	1	2	d	47.9	54.8	D	D
19	Euclid Av. (SR-83) / Schaefer Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	39.4	52.4	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	39.9	52.3	D	D
20	Euclid Av. (SR-83) / Edison Av.																	
	- Without Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	38.7	36.4	D	D
	- With Project	TS	1	3	1	1	3	1	1	1	1	1	1	0	46.4	39.7	D	D
22	Euclid Av. (SR-83) / Merrill Av.																	
	- Without Project	TS	1	3	1	2	3	0	0	1	0	0	1	1>	40.0	44.0	D	D
	- With Project	TS	1	3	1	2	3	0	0	1	0	0	1	1>	41.9	52.0	D	D
23	Euclid Av. (SR-83) / Kimball Av.																	
	- Without Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1>	45.8	44.1	D	D
	- With Project	TS	1	3	1	2	3	1>	2	2	0	1	2	1>	45.8	50.0	D	D
24	Euclid Av. (SR-83) / Bickmore Av.																	
	- Without Project[5]	TS	1	3	0	1	3	1	1	1	1	1	1	1	33.1	35.0	C	C
	- With Project[5]	TS	1	3	0	1	3	1	1	1	1	1	1	1	37.7	46.3	D	D
25	Euclid Av. (SR-83) / Pine Av.																	
	- Without Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	54.0	41.8	D	D
	- With Project	TS	1	3	1>	1	3	0	1	1	1>>	2	1	0	54.0	45.4	D	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)																	
	- Without Project	TS	1	0	1	2	1	1	0	2	0	1	2	1>>	38.9	32.8	D	C
	- With Project	TS	1	0	1	2	1	1	0	2	0	1	2	1>>	39.2	34.7	D	C
30	Mayhew Av. / Kimball Av.																	
	- Without Project		Intersection Does Not Exist															
	- With Project	TS	1	0	1	0	0	0	0	2	1	1	2	0	7.6	10.4	A	B

Table 4.11-38 Intersection Analysis for Opening Year (2020) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
42	Mayhew Av. / Bickmore Av.																	
	- Without Project		Intersection Does Not Exist															
	- With Project	**TS**	0	0	0	**1**	0	**1**	**1**	**2**	0	0	**2**	**d**	14.6	9.3	B	A
44	Street B / Kimball Av.																	
	- Without Project	**TS**	0	0	0	0	1	0	1	**2**	0	0	**2**	1	2.5	0.8	A	A
	- With Project	**TS**	0	**1**	0	0	1	0	1	**2**	**1**	**1**	**2**	1	12.1	13.4	B	B
52	Flight Av. / Kimball Av.																	
	- Without Project	**TS**	0	1	0	0	1	0	1	2	0	1	**2**	0	26.3	24.7	C	C
	- With Project	**TS**	0	1	0	0	1	0	1	2	0	1	**2**	0	31.4	28.5	C	C
54	Hellman Av. / Kimball Av.																	
	- Without Project[6]	**TS**	1	**1**	0	0	**1**	**1**	**1**	0	1	0	0	0	15.8	20.9	B	C
	- With Project[6]	**TS**	1	**1**	0	0	**1**	**1**	**1**	0	1	0	0	0	17.1	22.9	B	C

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

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[4] Restripe the southbound approach to provide dual left turns and two through lanes.

[5] Includes restriping the westbound shared left-through lane to an exclusive through lane.

[6] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane.

Source: (Urban Crossroads, 2019b, Table 8-5)

Table 4.11-39 Intersection Analysis for Horizon Year (2040) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
2	SR-71 NB Ramps / Chino Hills Pkwy.																	
	- Without Project[4]	TS	1	2	0	0	0	0	2	2	0	0	2	1	39.0	41.2	D	D
	- With Project[4]	TS	1	2	0	0	0	0	2	2	0	0	2	1	39.1	44.7	D	D
3	Ramona Av. / Chino Hills Pkwy.																	
	- Without Project	TS	1	2	0	1	2	d	**2**	3	0	1	2	1	42.8	51.4	D	D
	- With Project	TS	1	2	0	1	2	d	**2**	3	0	1	2	1	43.9	54.6	D	D
4	Monte Vista Av. West / Chino Hills Pkwy.																	
	- Without Project	**TS**	0	1	0	0	0	0	0	2	1	1	2	0	11.0	11.6	B	B
	- With Project	**TS**	0	1	0	0	0	0	0	2	1	1	2	0	11.5	11.7	B	B
6	Central Av. / Chino Hills Pkwy.																	
	- Without Project	TS	**2**	2	**0**	1	2	**1>**	1	1	**1>**	1	1	1	28.2	43.3	C	D
	- With Project	TS	**2**	2	**0**	1	2	**1>**	1	1	**1>**	1	1	1	28.7	46.9	C	D
7	Central Av. / El Prado Rd.																	
	- Without Project	TS	1	2	**1>**	**2**	3	0	1	1	0	1	1	1>	19.2	31.9	B	C
	- With Project	TS	1	2	**1>**	**2**	3	0	1	1	0	1	1	1>	20.7	34.6	C	C
10	El Prado Rd. / Kimball Av.																	
	- Without Project[5]	TS	1	1	1	**2**	**1**	0	1	1	0	0	1	1>	20.2	31.7	C	C
	- With Project[5]	TS	1	1	1	**2**	**1**	0	1	1	0	0	1	1>	25.5	32.3	C	C
14	Euclid Av. (SR-83) / SR-60 WB Ramps																	
	- Without Project	TS	**2**	2	0	0	2	1	0	0	0	1	1	1	51.0	49.5	D	D
	- With Project	TS	**2**	2	0	0	2	1	0	0	0	1	1	1	51.5	50.2	D	D
15	Euclid Av. (SR-83) / SR-60 EB Ramps																	
	- Without Project	TS	0	2	1	**2**	2	0	1	1	**1**	0	0	0	25.9	21.7	C	C
	- With Project	TS	0	2	1	**2**	2	0	1	1	**1**	0	0	0	27.2	21.9	C	C
17	Euclid Av. (SR-83) / Riverside Dr.																	
	- Without Project	TS	1	**3**	1	1	**3**	1>	1	2	0	1	2	d	48.8	54.1	D	D
	- With Project	TS	1	**3**	1	1	**3**	1>	1	2	0	1	2	d	49.4	54.9	D	D
18	Euclid Av. (SR-83) / Chino Av.																	
	- Without Project	TS	1	**3**	1	1	**3**	1	1	1	1	**1**	1	0	26.0	13.6	C	B
	- With Project	TS	1	**3**	1	1	**3**	1	1	1	1	**1**	1	0	33.4	19.7	C	B
19	Euclid Av. (SR-83) / Schaefer Av.																	
	- Without Project	TS	1	**3**	1	1	**3**	1	**2**	1	1	1	1	0	36.2	26.8	D	C
	- With Project	TS	1	**3**	1	1	**3**	1	**2**	1	1	1	1	0	40.5	27.9	D	C
20	Euclid Av. (SR-83) / Edison Av.																	
	- Without Project	TS	**2**	**3**	1	**2**	**3**	1	**2**	**2**	1	**2**	**2**	**1>**	49.7	53.4	D	D
	- With Project	TS	**2**	**3**	1	**2**	**3**	1	**2**	**2**	1	**2**	**2**	**1>**	54.9	53.8	D	D
22	Euclid Av. (SR-83) / Merrill Av.																	
	- Without Project	TS	1	**3**	1	**2**	**3**	0	0	1	0	0	1	**1>**	29.8	31.4	C	C
	- With Project	TS	1	**3**	1	**2**	**3**	0	0	1	0	0	1	**1>**	31.6	36.5	C	D

Table 4.11-39 Intersection Analysis for Horizon Year (2040) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
23	Euclid Av. (SR-83) / Kimball Av.																	
	- Without Project	TS	1	3	1	2	3	1>	2	2	0	2	2	1>	43.9	39.7	D	D
	- With Project	TS	1	3	1	2	3	1>	2	2	0	2	2	1>	44.3	39.7	D	D
24	Euclid Av. (SR-83) / Bickmore Av.																	
	- Without Project	TS	1	3	1	2	3	1	1	1	1	2	1	1	12.6	37.8	B	D
	- With Project	TS	1	3	1	2	3	1	1	1	1	2	1	1	12.9	39.3	B	D
25	Euclid Av. (SR-83) / Pine Av.																	
	- Without Project	TS	2	3	1>	2	3	0	1	2	1>>	2	2	1	41.3	53.7	D	D
	- With Project	TS	2	3	1>	2	3	0	1	2	1>>	2	2	1	41.9	54.8	D	D
27	SR-71 SB Ramps / Euclid Av. (SR-83)																	
	- Without Project[6]	TS	1	0	1	2	1	1	0	2	0	1	2	1>>	47.1	33.6	D	C
	- With Project[6]	TS	1	0	1	2	1	1	0	2	0	1	2	1>>	48.6	33.7	D	C
30	Mayhew Av. / Kimball Av.																	
	- Without Project		Intersection Does Not Exist															
	- With Project	TS	1	0	1	0	0	0	0	2	1	1	2	0	7.6	10.5	A	B
52	Flight Av. / Kimball Av.																	
	- Without Project																	
	Without Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	1	19.0	32.5	B	C
	With Limonite Av. Extension	TS	0	1	0	1	1	0	1	2	0	1	2	1	21.4	36.7	C	D
	- With Project																	
	Without Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	1	22.5	40.9	C	D
	With Limonite Av. Extension	TS	0	1	0	1	1	0	1	2	0	1	2	1	25.0	44.3	C	D
53	Meadow Valley Av. / Kimball Av.																	
	- Without Project																	
	Without Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	0	12.8	11.3	B	B
	With Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	0	13.2	12.5	B	B
	- With Project																	
	Without Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	0	12.8	11.4	B	B
	With Limonite Av. Extension	TS	0	1	0	0	1	0	1	2	0	1	2	0	13.6	13.2	B	B
54	Hellman Av. / Kimball Av.																	
	- Without Project[7]																	
	Without Limonite Av. Extension	TS	1	2	0	1	2	1	1	1	1>	1	2	0	29.3	31.7	C	C
	With Limonite Av. Extension	TS	1	2	1>	1	2	1	1	2	1>	1	2	0	34.1	42.8	C	D
	- With Project[7]																	
	Without Limonite Av. Extension	TS	1	2	0	1	2	1	1	1	1>	1	2	0	30.6	32.3	C	C
	With Limonite Av. Extension	TS	1	2	1>	1	2	1	1	2	1>	1	2	0	36.2	45.9	D	D
55	Archibald Av. / Limonite Av.																	
	- Without Project																	
	Without Limonite Av. Extension	TS	0	3	1>	2	3	0	0	0	0	2	0	2>	29.3	49.7	C	D
	With Limonite Av. Extension	TS	2	3	1>	2	3	1	2	2	1	2	2	2>	32.4	52.7	C	D
	- With Project																	
	Without Limonite Av. Extension	TS	0	3	1>	2	3	0	0	0	0	2	0	2>	30.1	53.5	C	D
	With Limonite Av. Extension	TS	2	3	1>	2	3	1	2	2	1	2	2	2>	33.3	54.9	C	D
56	Harrison Av. / Limonite Av.																	
	- Without Project	TS	1	1	1	1	1	0	1	3	d	1	3	1	23.8	51.3	C	D
	- With Project	TS	1	1	1	1	1	0	1	3	d	1	3	1	24.0	53.9	C	D

Table 4.11-39 Intersection Analysis for Horizon Year (2040) Conditions – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
57	Sumner Av. / Limonite Av.																	
	- Without Project	TS	**2**	2	0	1	2	0	2	3	**1>**	2	3	1	27.5	33.1	C	C
	- With Project	TS	**2**	2	0	1	2	0	2	3	**1>**	2	3	1	27.5	33.4	C	C
58	Scholar Wy. / Limonite Av.																	
	- Without Project	TS	1	1	1	1	2	1	1	**3**	1	1	**3**	1	21.6	28.6	C	C
	- With Project	TS	1	1	1	1	2	1	1	**3**	1	1	**3**	1	21.6	28.8	C	C
59	Hamner Av. / Limonite Av.																	
	- Without Project	TS	2	3	1	2	**3**	**1>**	2	3	1	2	**3**	**1>**	45.8	53.2	D	D
	- With Project	TS	2	3	1	2	**3**	**1>**	2	3	1	2	**3**	**1>**	46.0	53.8	D	D
60	I-15 SB Ramps / Limonite Av.																	
	- Without Project[8]	TS	0	0	0	1	1	**2**	0	**3**	**1>>**	0	**3**	**1>>**	16.7	8.0	B	A
	- With Project[8]	TS	0	0	0	1	1	**2**	0	**3**	**1>>**	0	**3**	**1>>**	16.8	8.0	B	A
61	I-15 NB Ramps / Limonite Av.																	
	- Without Project[8]	TS	1	1	**2**	0	0	0	**0**	**3**	**1>>**	0	**3**	**1>>**	9.1	12.9	A	B
	- With Project[8]	TS	1	1	**2**	0	0	0	**0**	**3**	**1>>**	0	**3**	**1>>**	9.4	12.9	A	B

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

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

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[4] No lane geometric changes. Improvement is to modify the signal timing for a 120 second cycle length from the current 60 second cycle length. This improvement also includes modifying the signal timing at the adjacent southbound ramp to maintain the coordination between the two ramps.

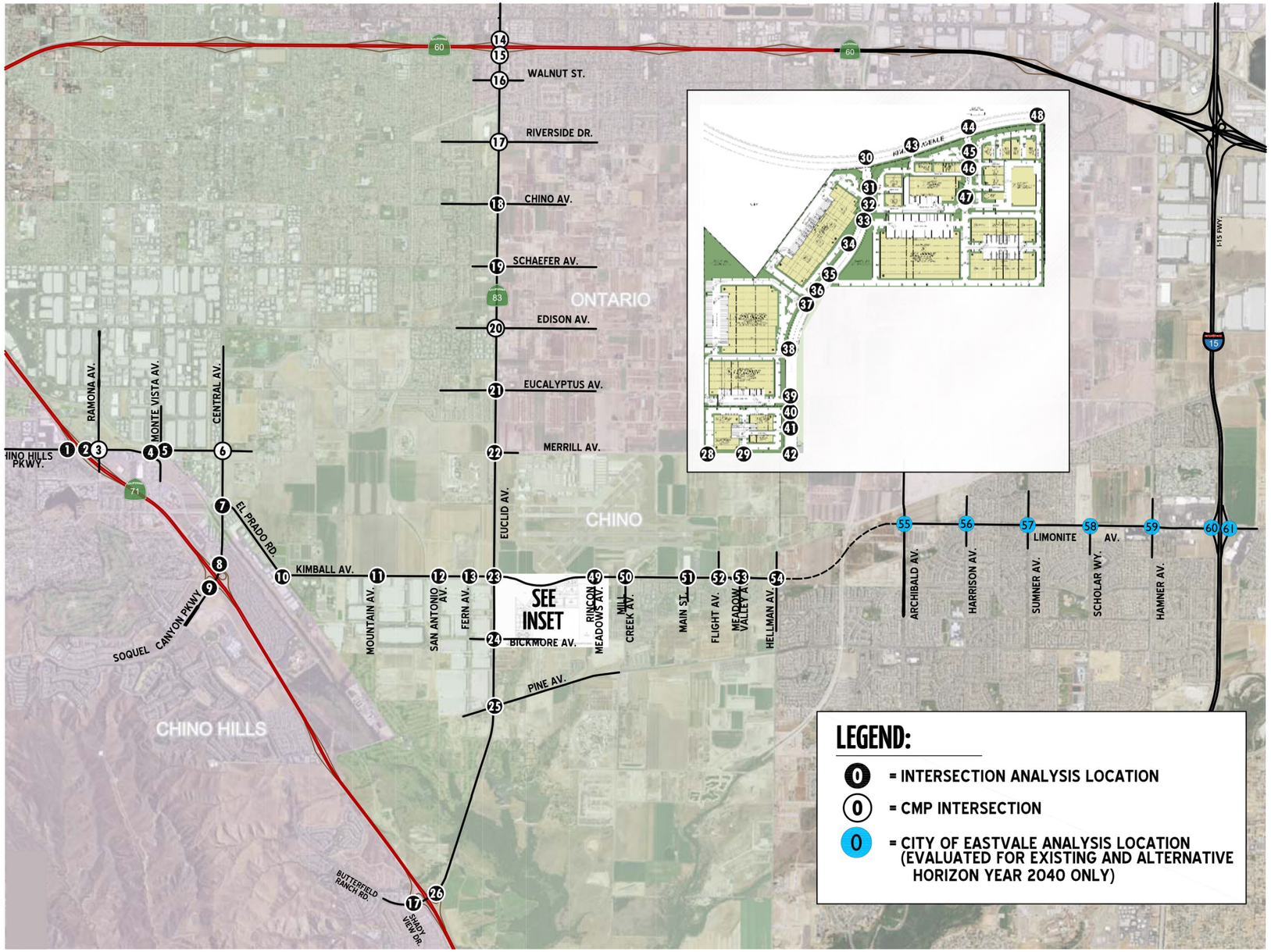
[5] Restripe the southbound approach to provide dual left turns and a single shared through-right turn lane.

[6] Improvements include restriping the southbound approach only.

[7] Includes additional lanes needed to serve future cumulative development projects. Specifically, a northbound through lane, southbound through lane, southbound right turn lane, and eastbound left turn lane. LOS results previously presented on Table 8-1.

[8] Improvements are consistent with planned partial cloverleaf interchange.

Source: (Urban Crossroads, 2019b, Table 9-5)

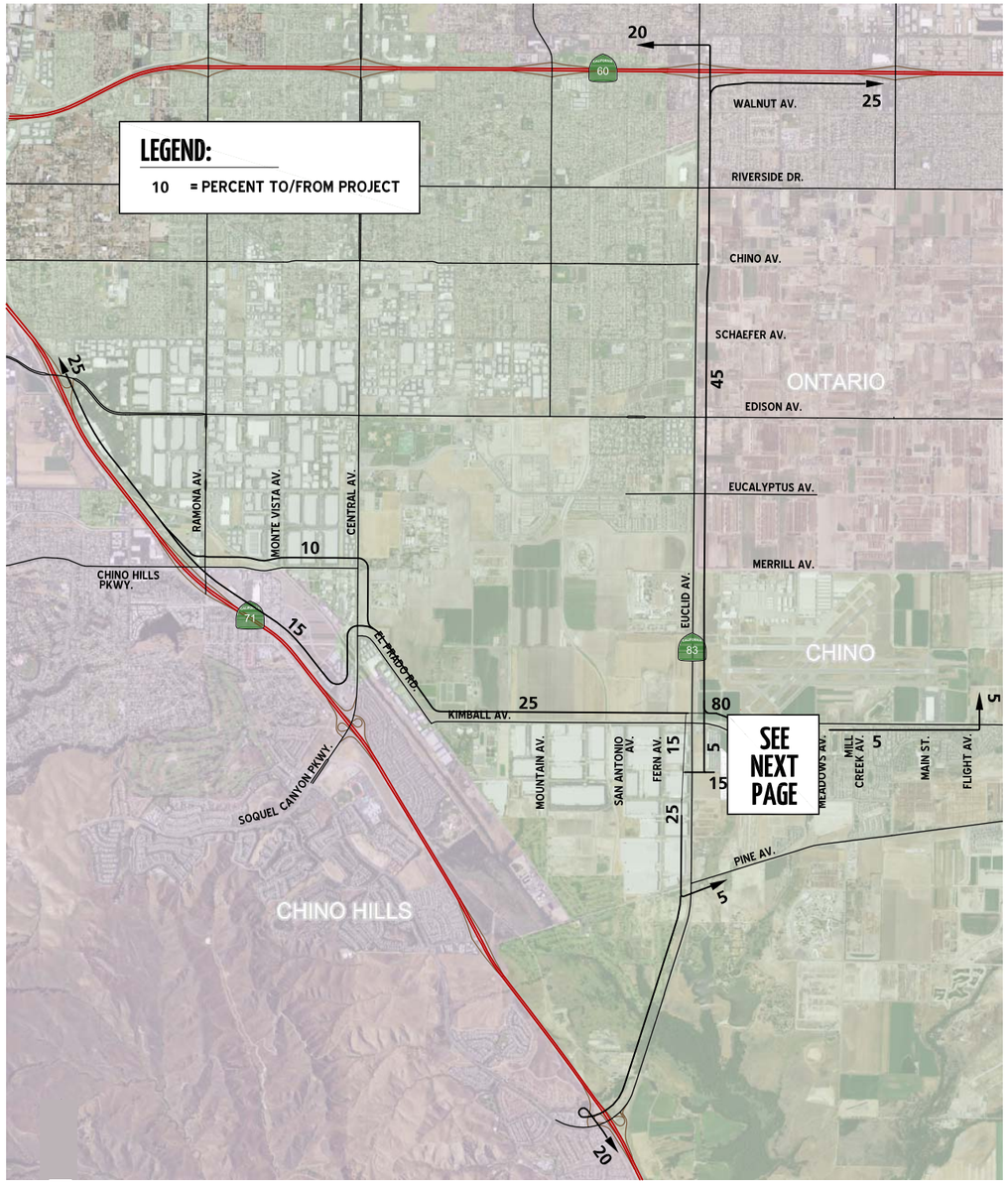


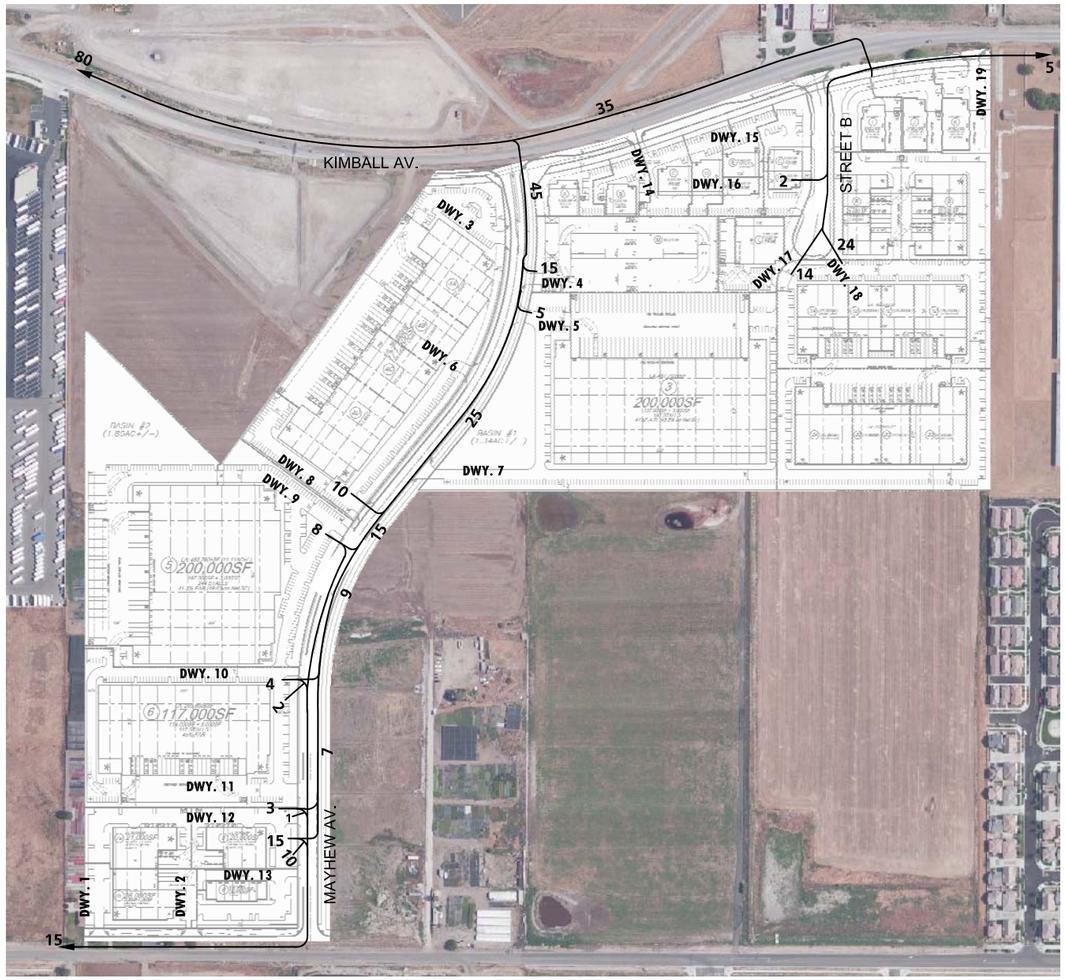
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-1

NOT TO SCALE

STUDY AREA INTERSECTION LOCATIONS





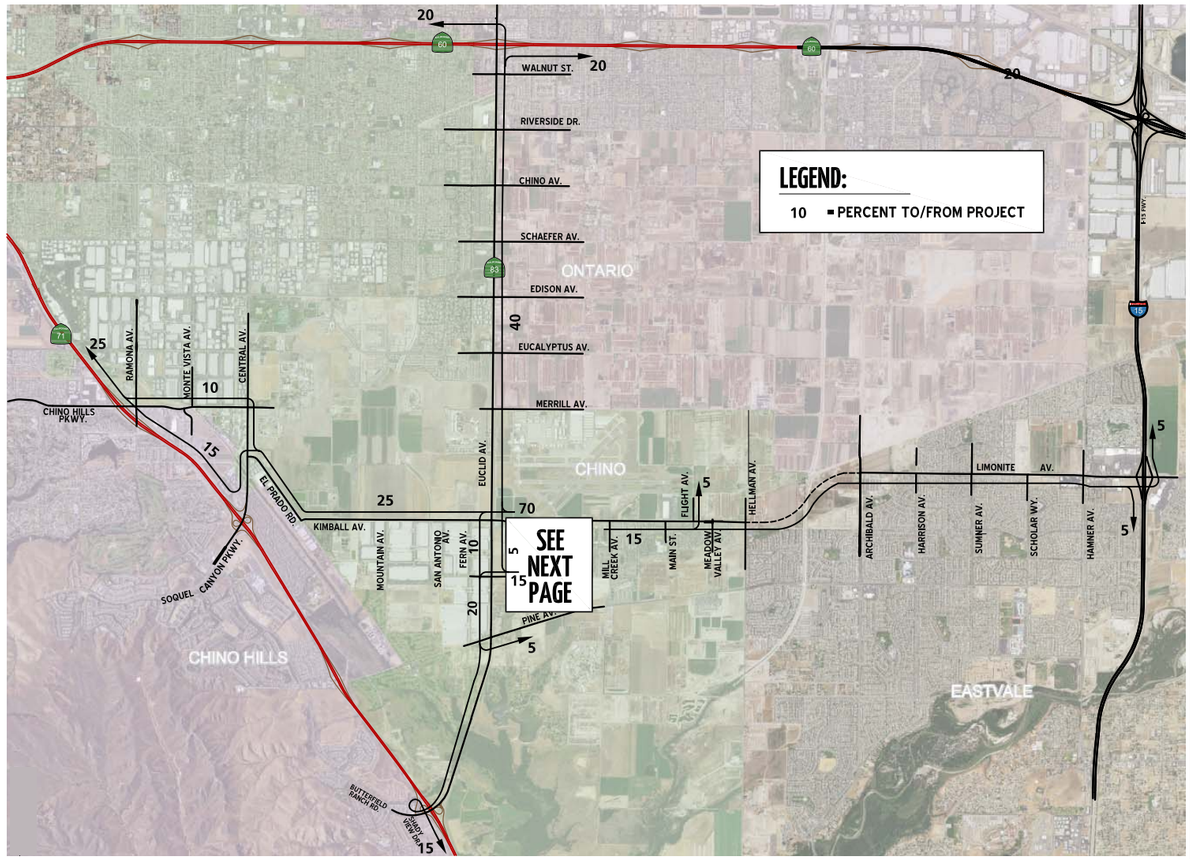
LEGEND:
10 = PERCENT TO/FROM PROJECT

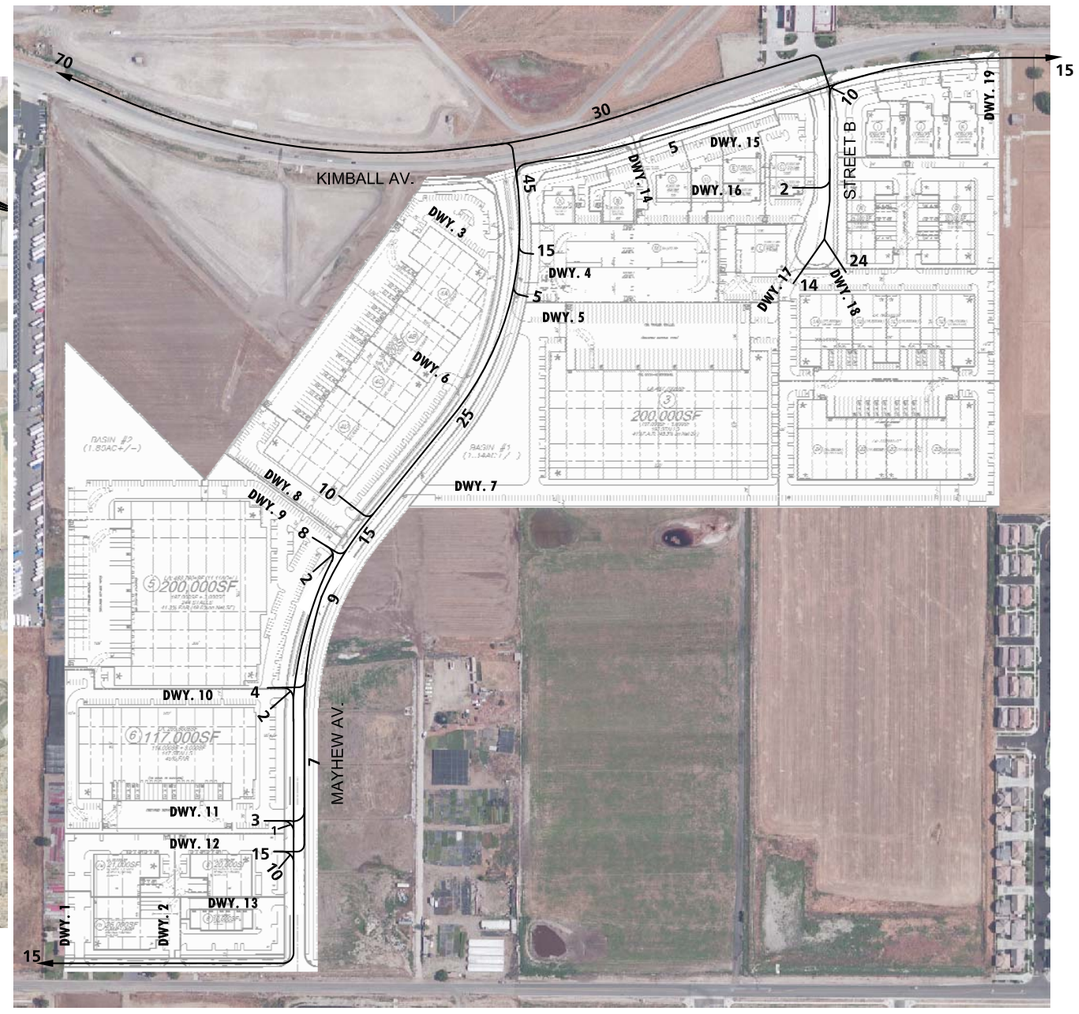
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-2

NOT TO SCALE

**PROJECT TRUCK TRIP DISTRIBUTION –
INTERIM YEAR AND HORIZON YEAR WITHOUT LIMONITE AVE. EXTENSION**





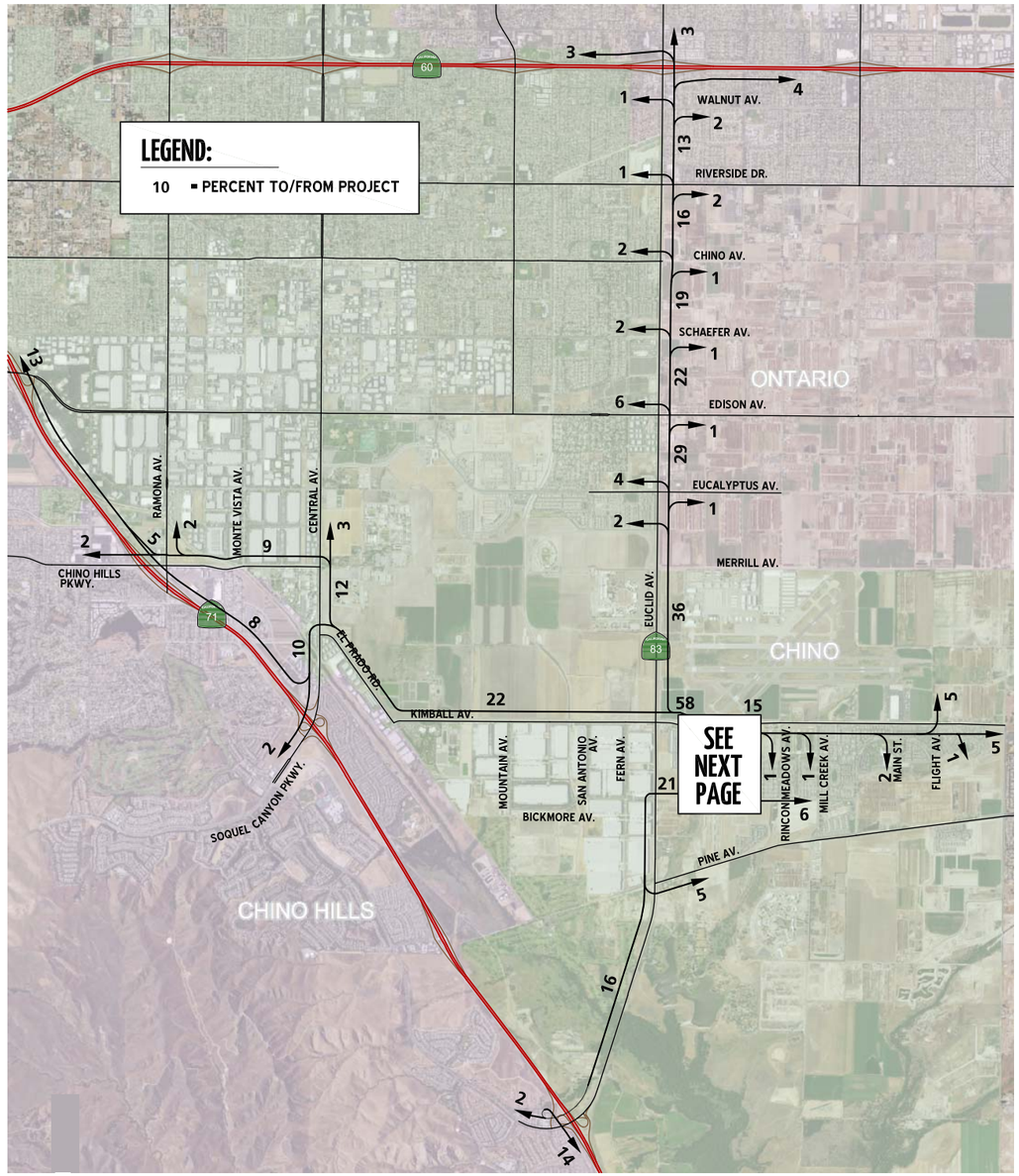
LEGEND:
10 = PERCENT TO/FROM PROJECT

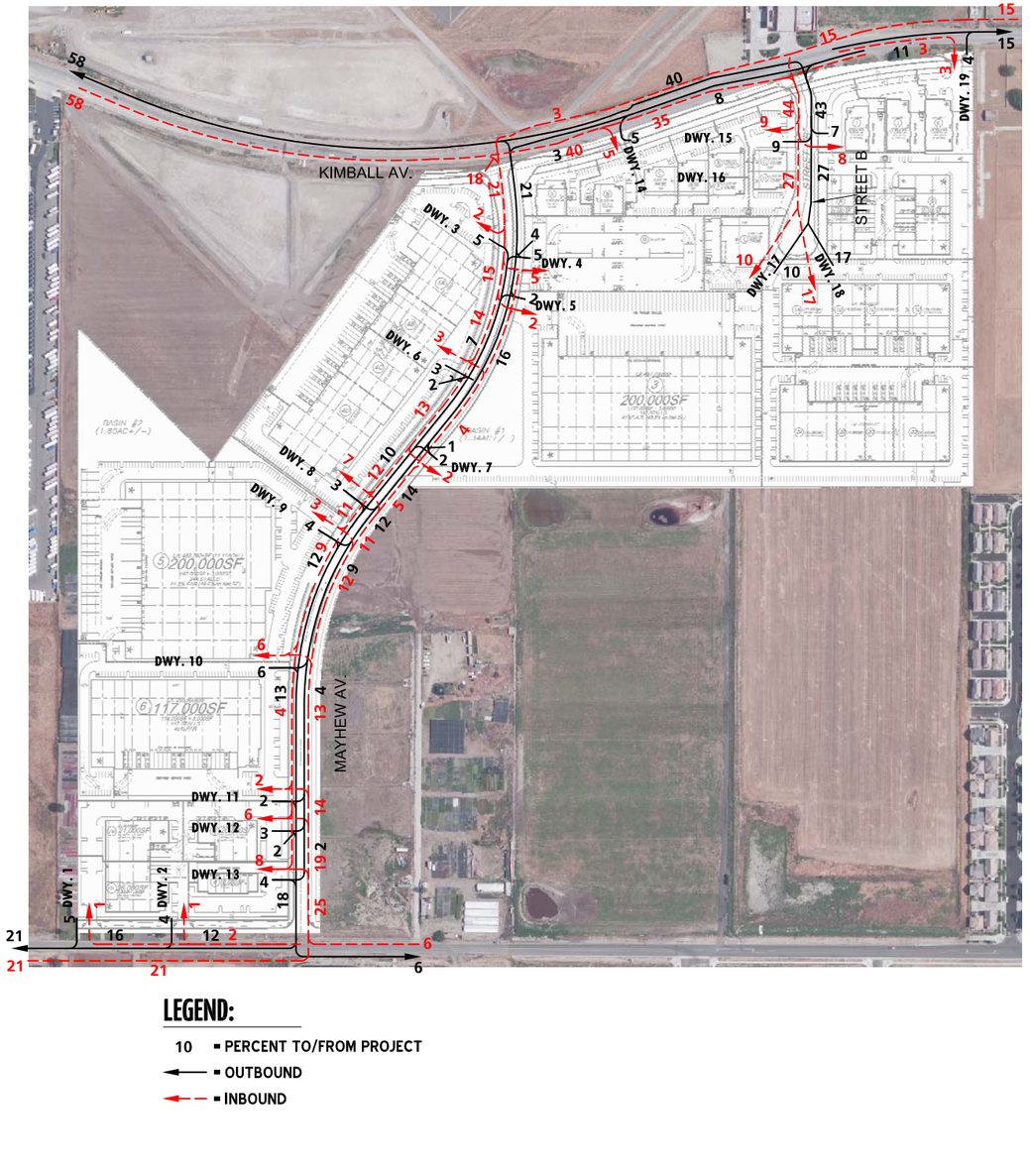
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-3

NOT TO SCALE

**PROJECT TRUCK TRIP DISTRIBUTION –
HORIZON YEAR WITH LIMONITE AVE. EXTENSION**



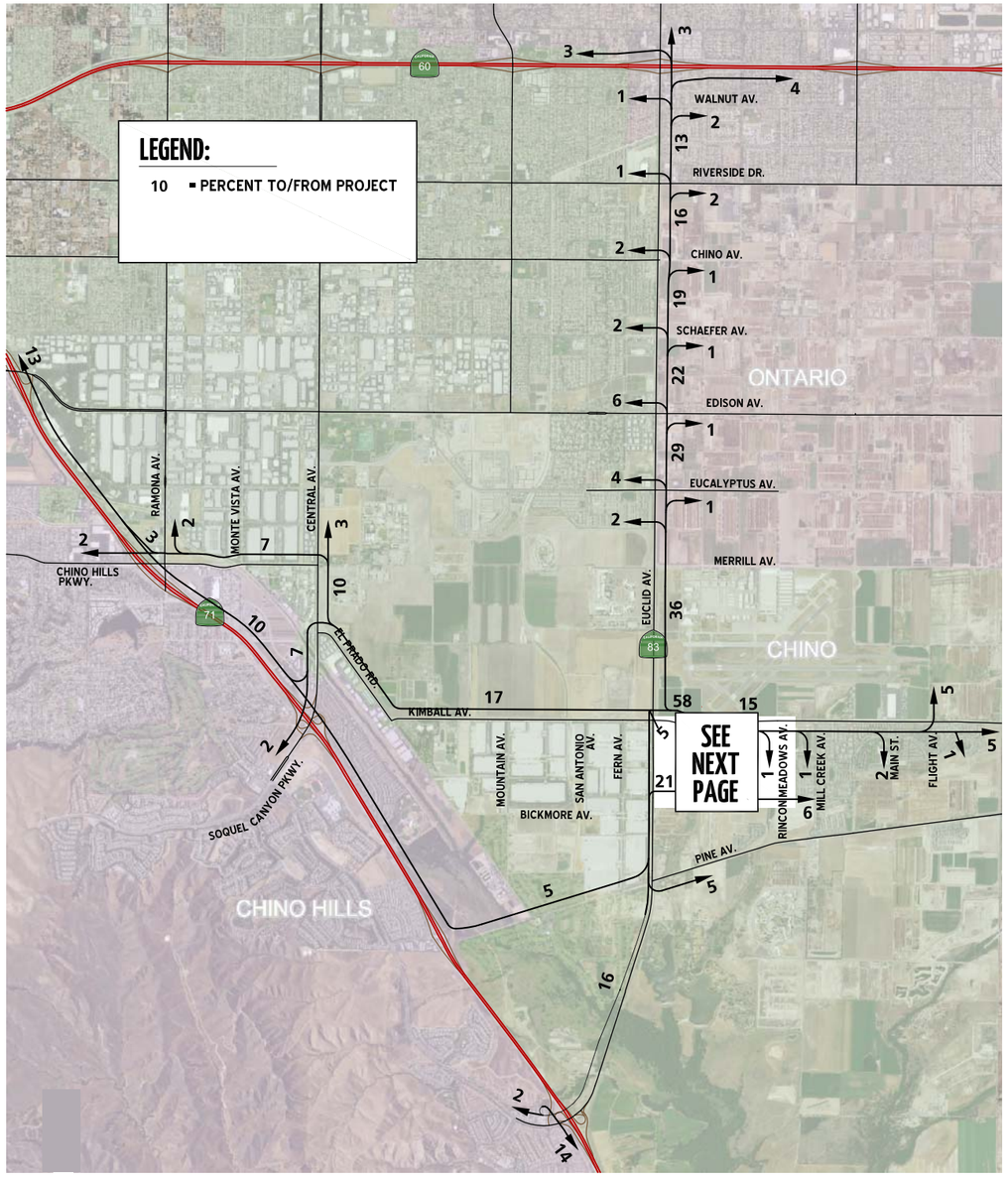


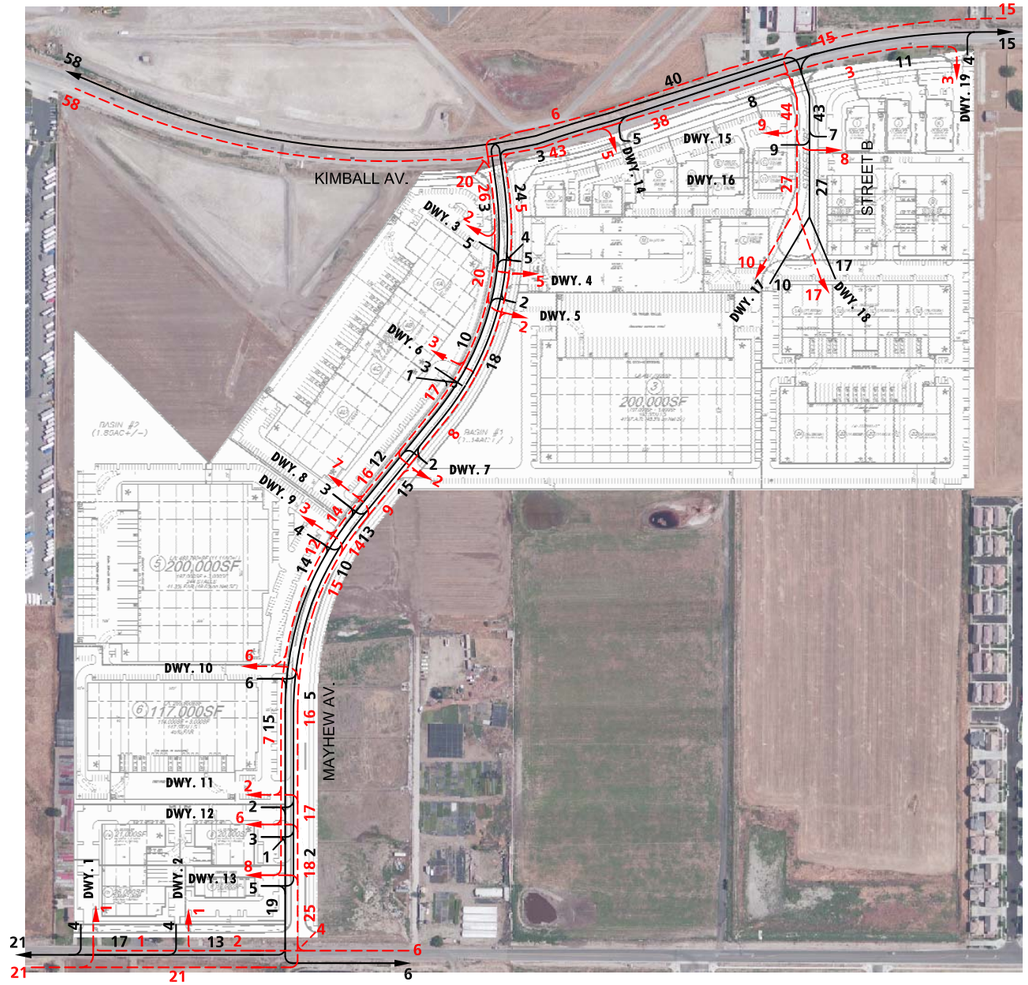
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-4

NOT TO SCALE

PROJECT PASSENGER CAR TRIP DISTRIBUTION – INTERIM YEAR





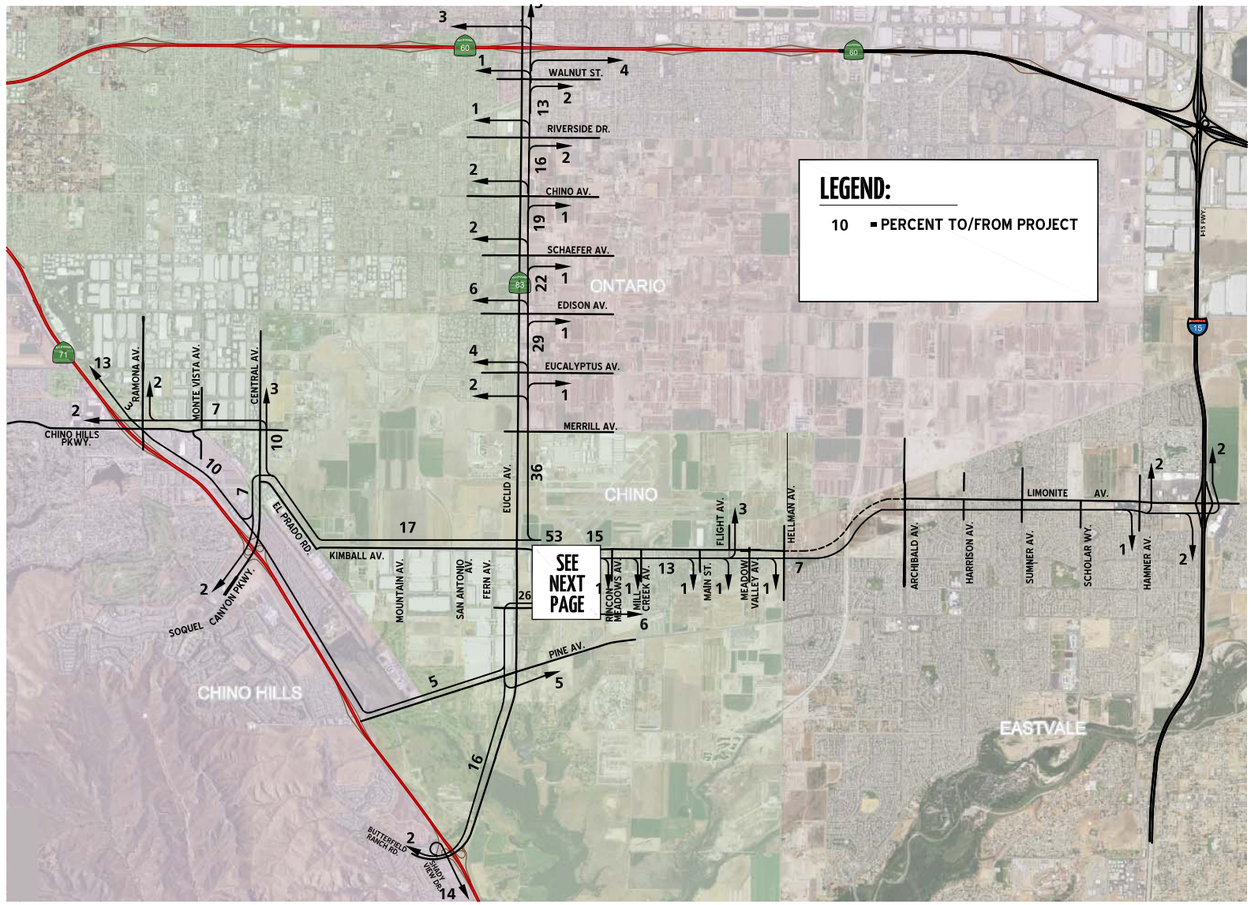
LEGEND:
10 = PERCENT TO/FROM PROJECT
= OUTBOUND
= INBOUND

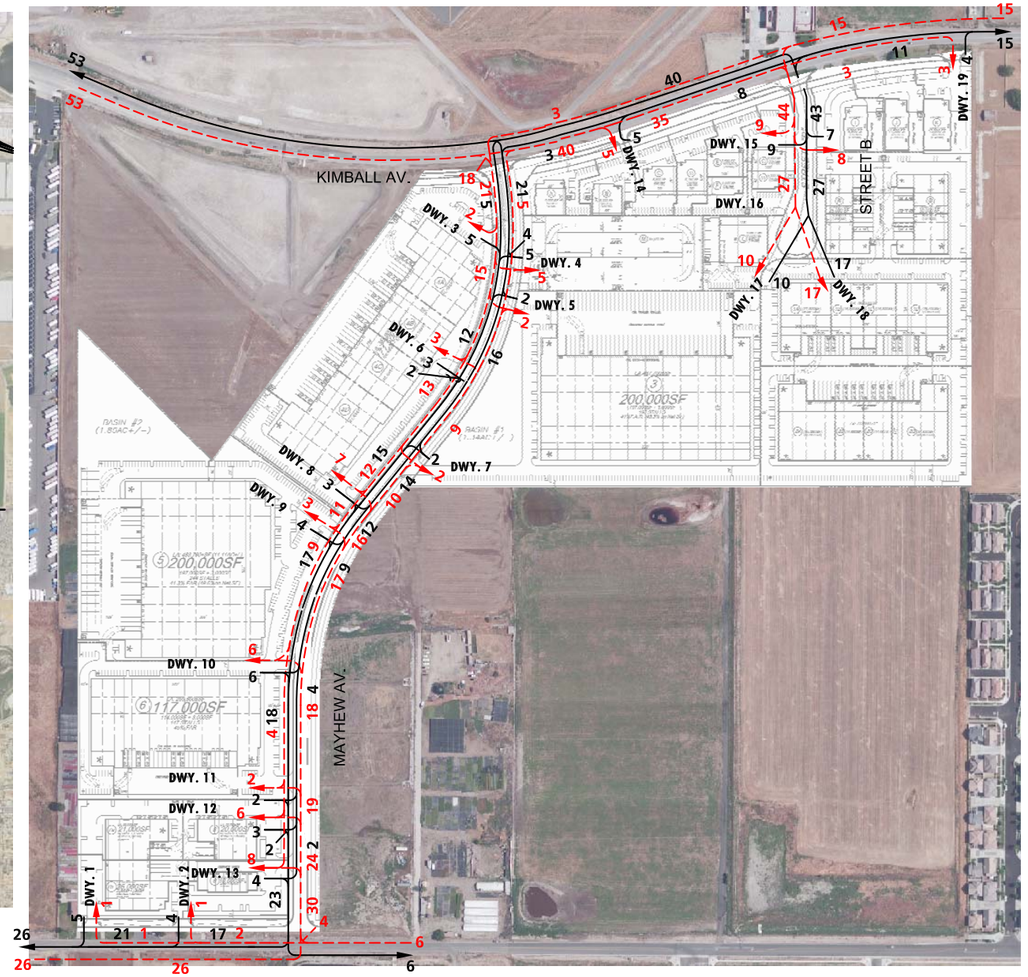
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-5

NOT TO SCALE

PROJECT PASSENGER CAR TRIP DISTRIBUTION – HORIZON YEAR (2040) WITHOUT LIMONITE AVE. EXTENSION



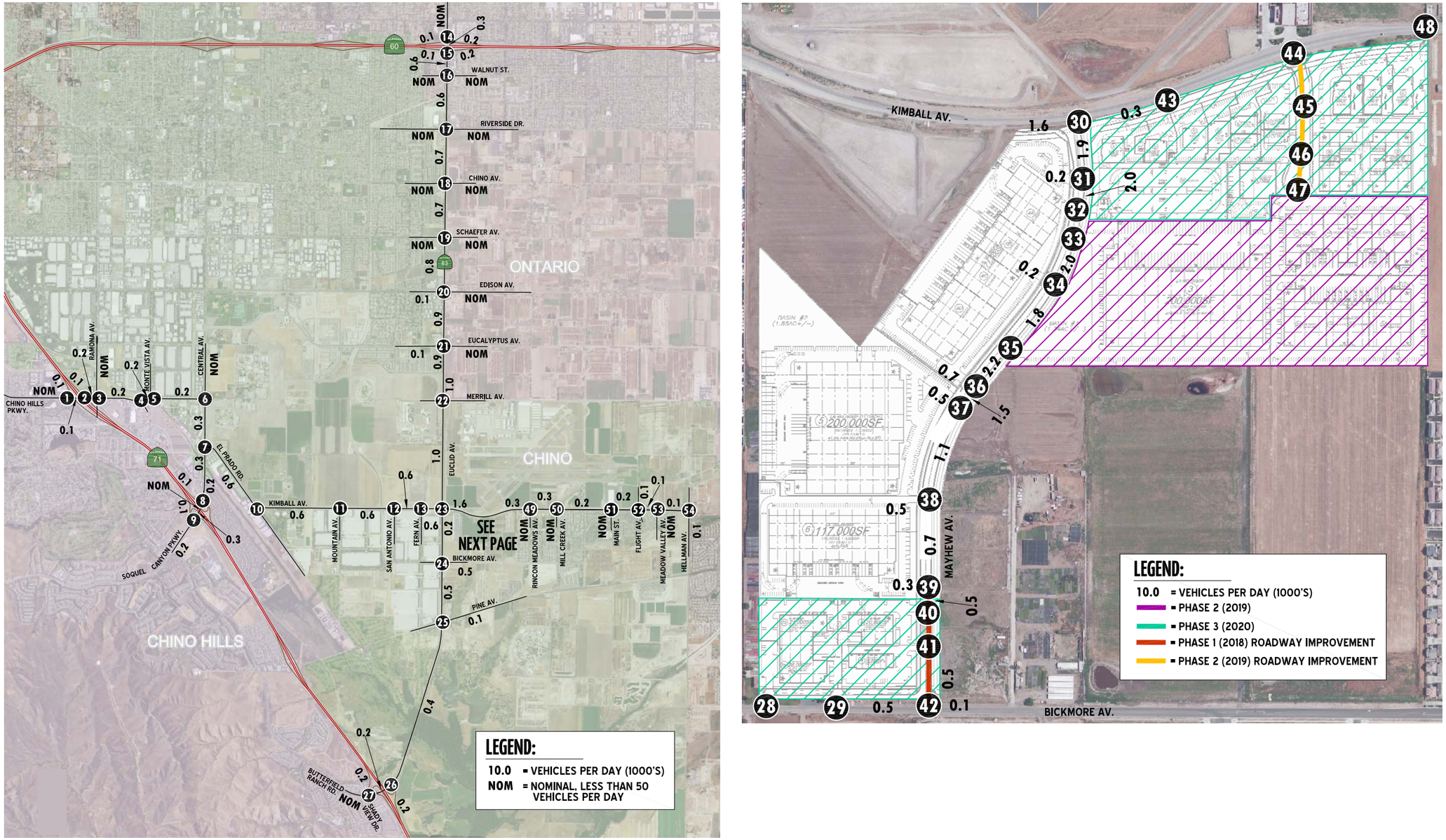


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-6

NOT TO SCALE

PROJECT PASSENGER CAR TRIP DISTRIBUTION – HORIZON YEAR (2040) WITH LIMONITE AVE. EXTENSION

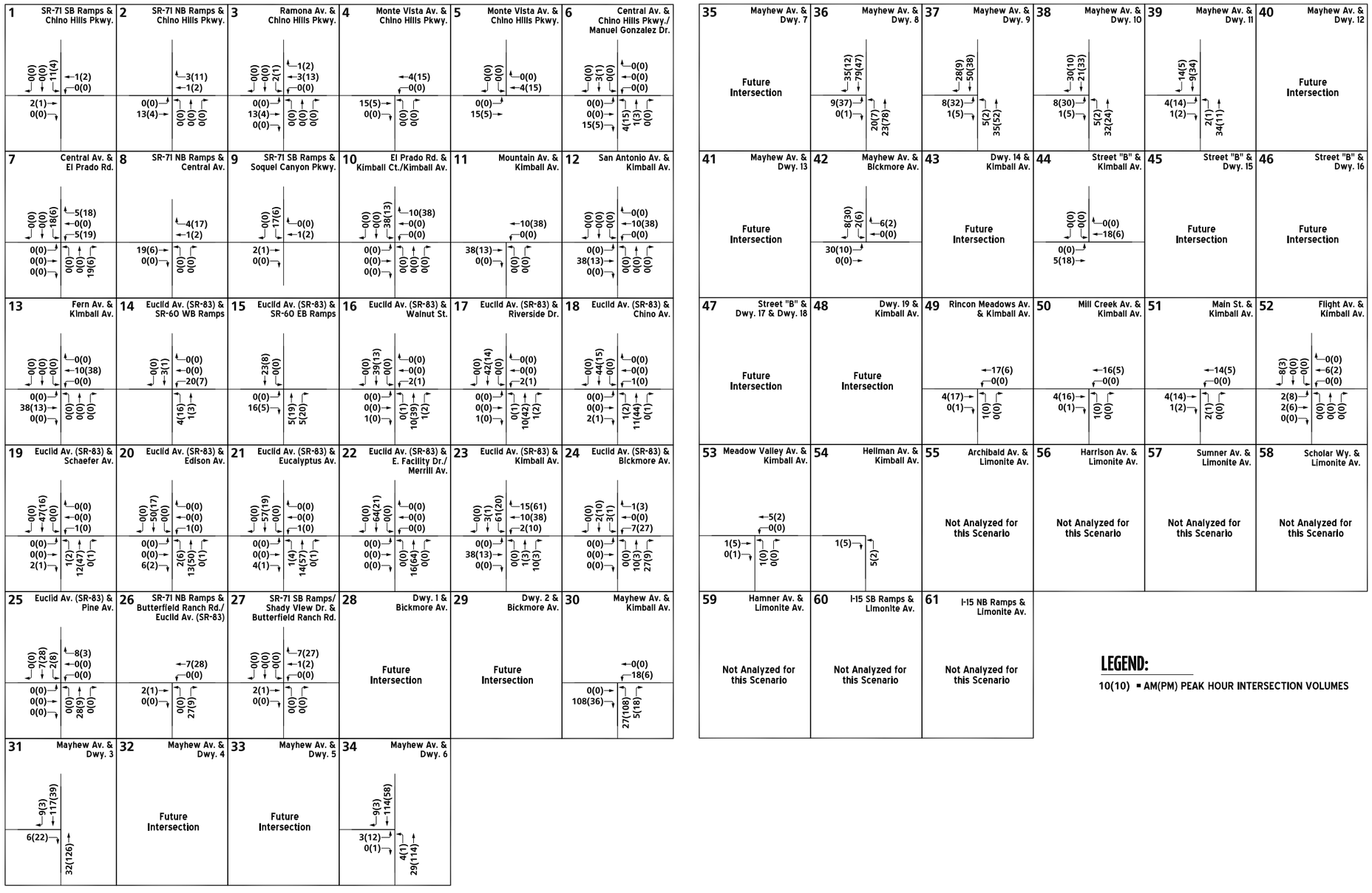


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-7

NOT TO SCALE

PROJECT AVERAGE DAILY TRAFFIC – PHASE 1

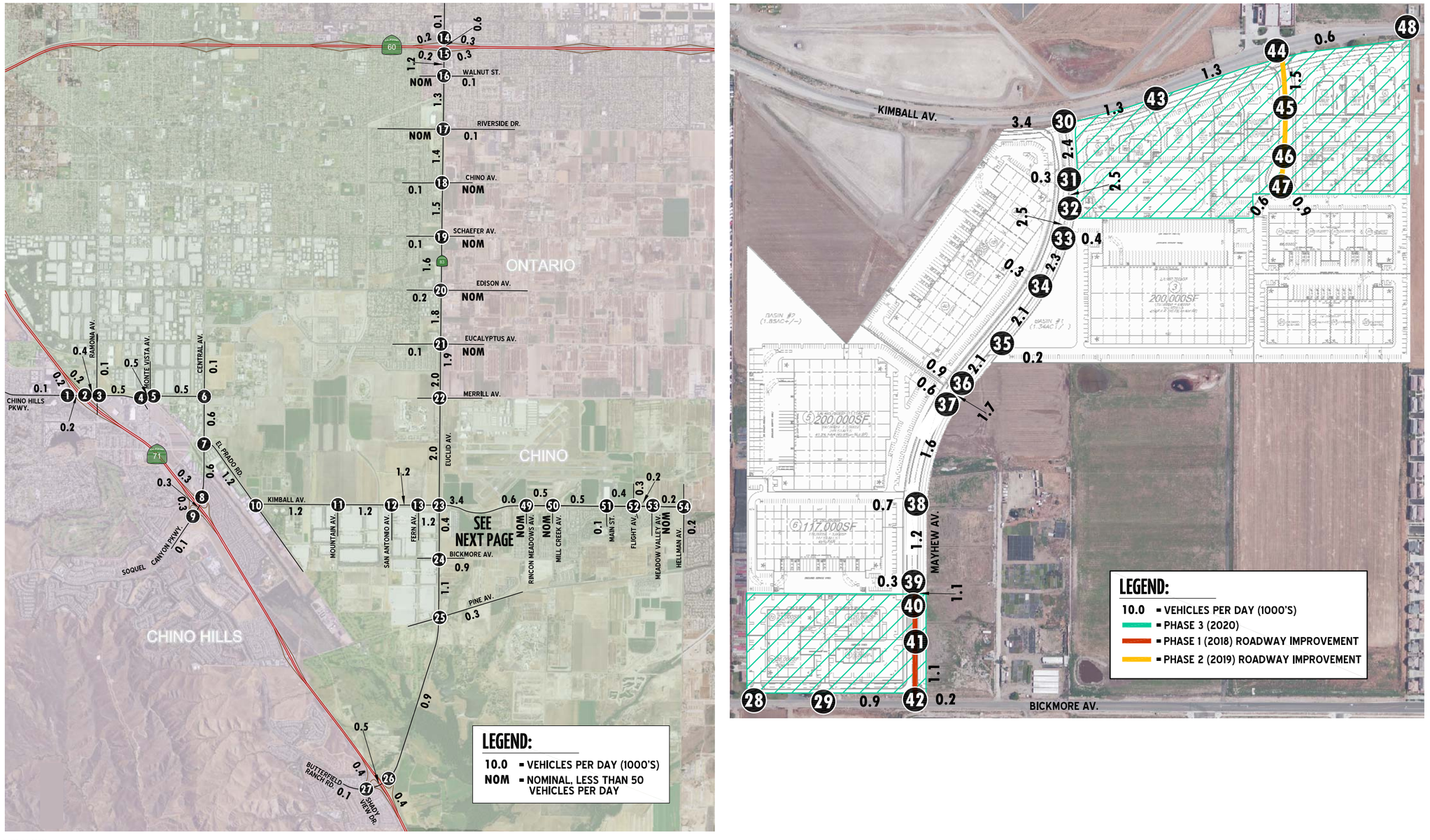


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-8

NOT TO SCALE

PROJECT PEAK HOUR INTERSECTION VOLUMES – PHASE 1

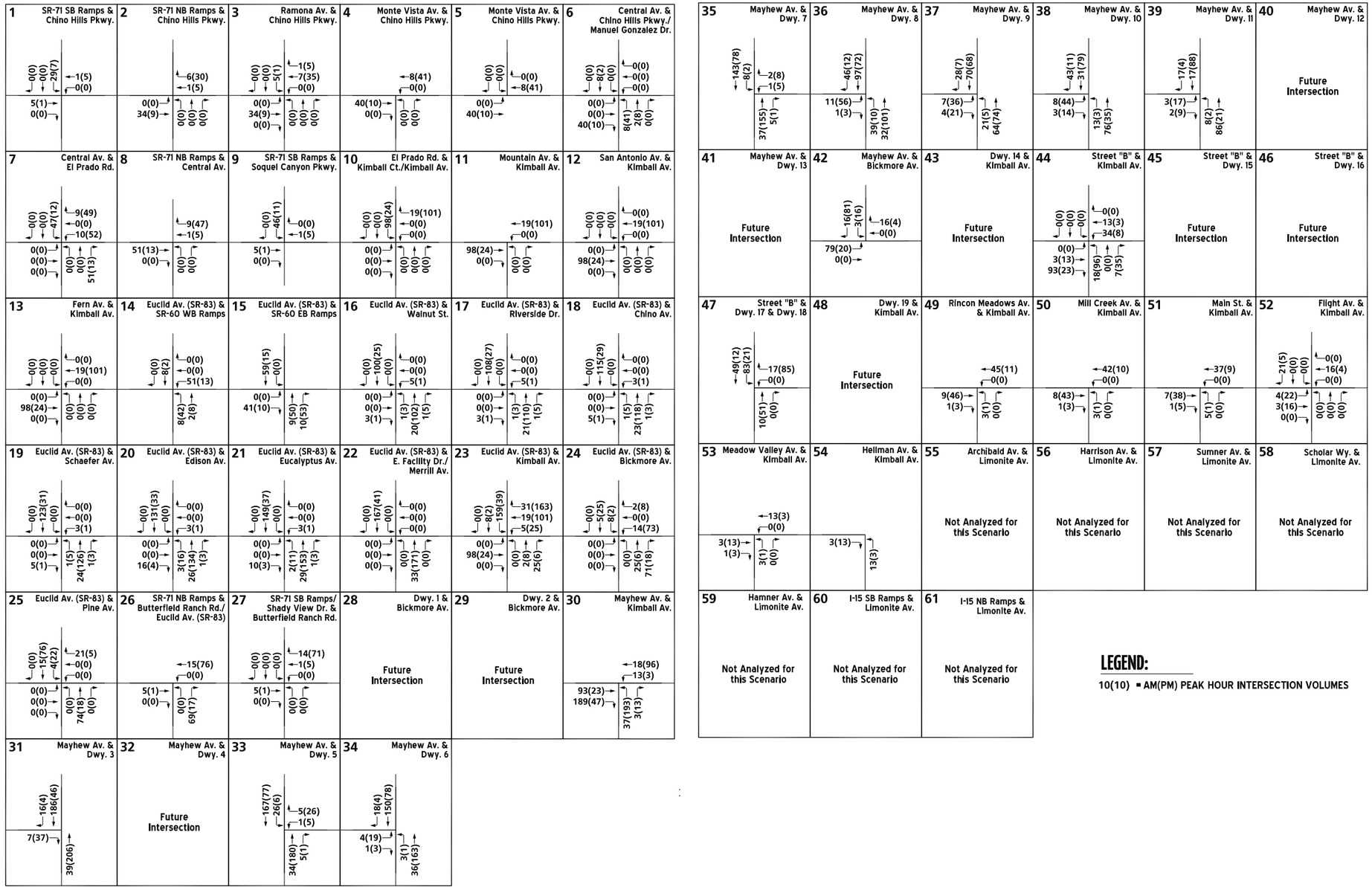


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-9

NOT TO SCALE

PROJECT AVERAGE DAILY TRAFFIC – PHASE 1+2

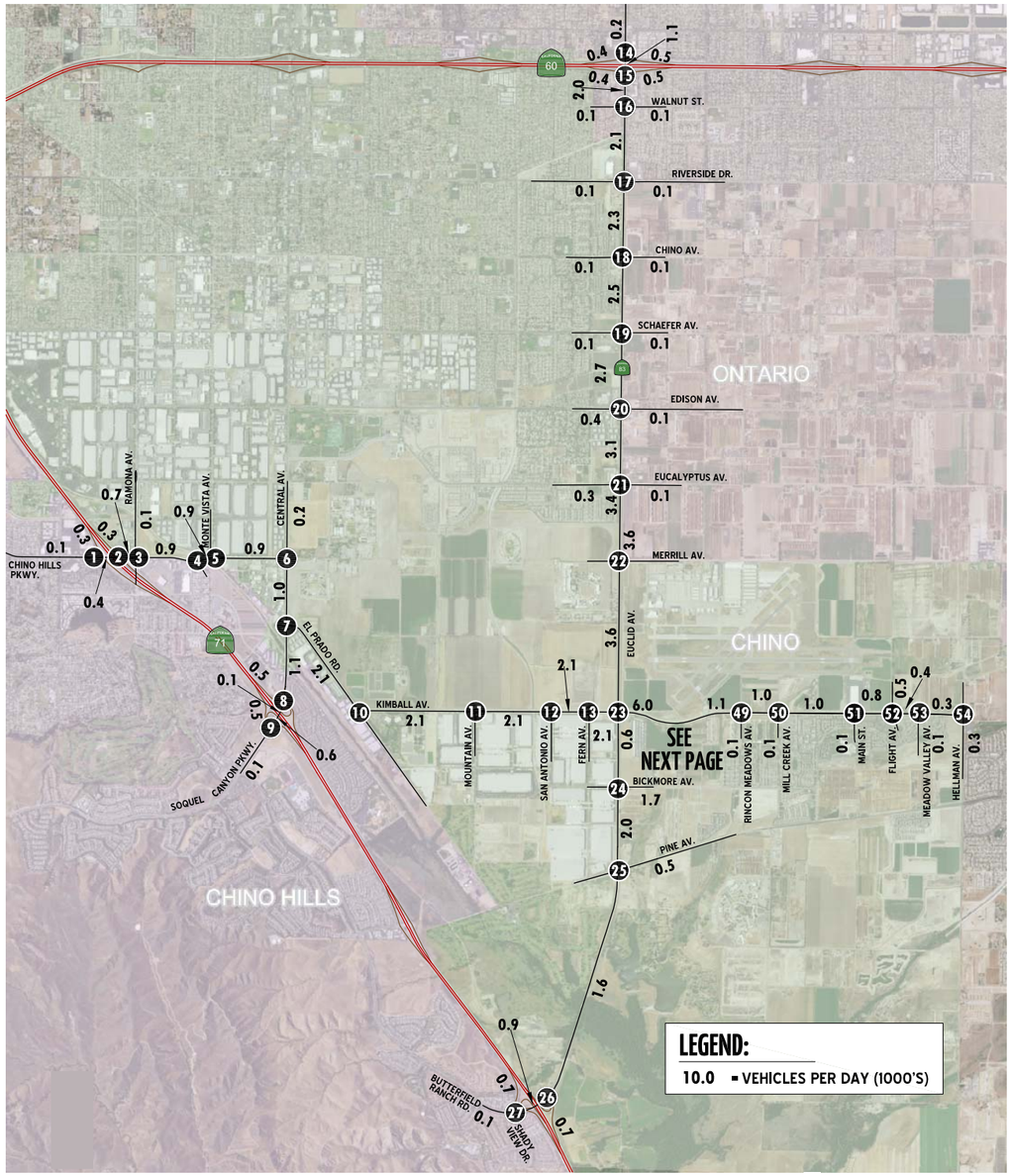


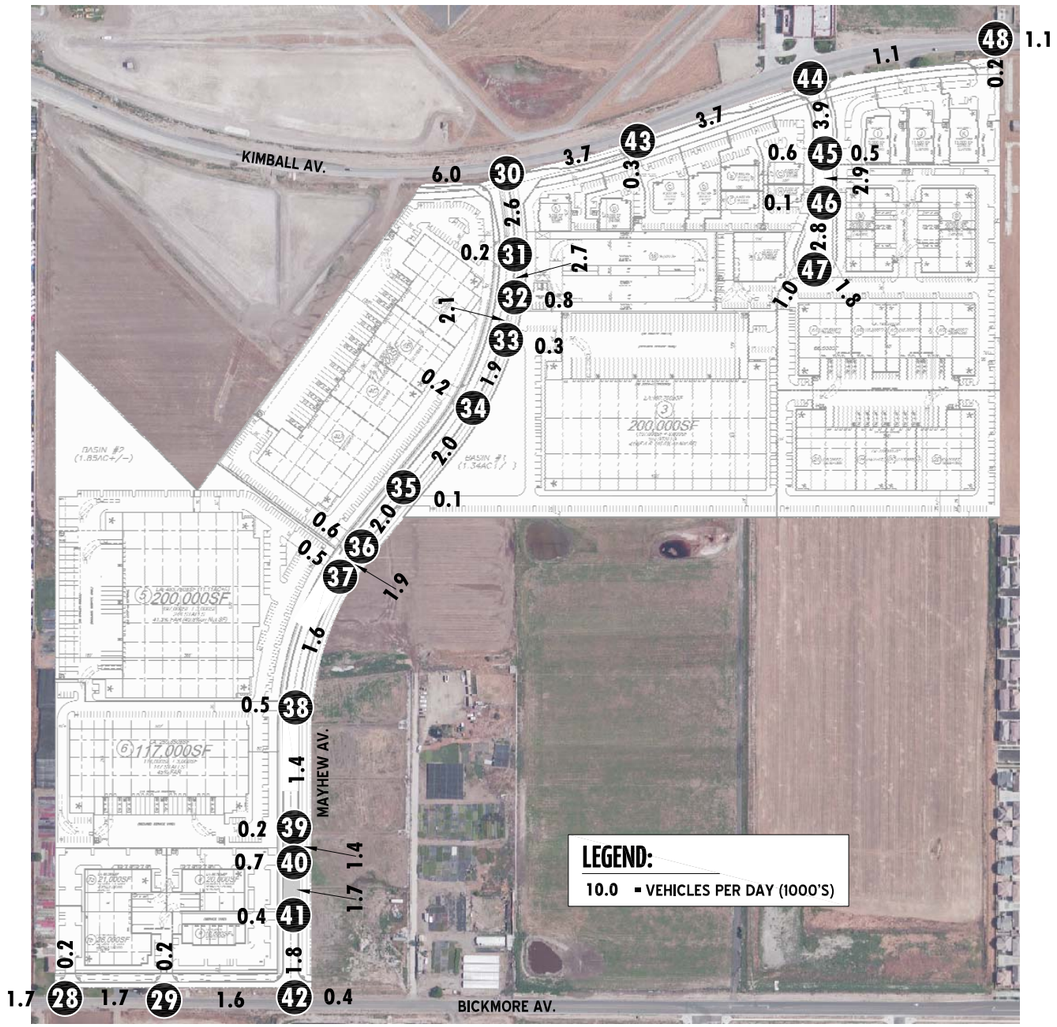
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-10

NOT TO SCALE

PROJECT PEAK HOUR INTERSECTION VOLUMES – PHASE 1+2



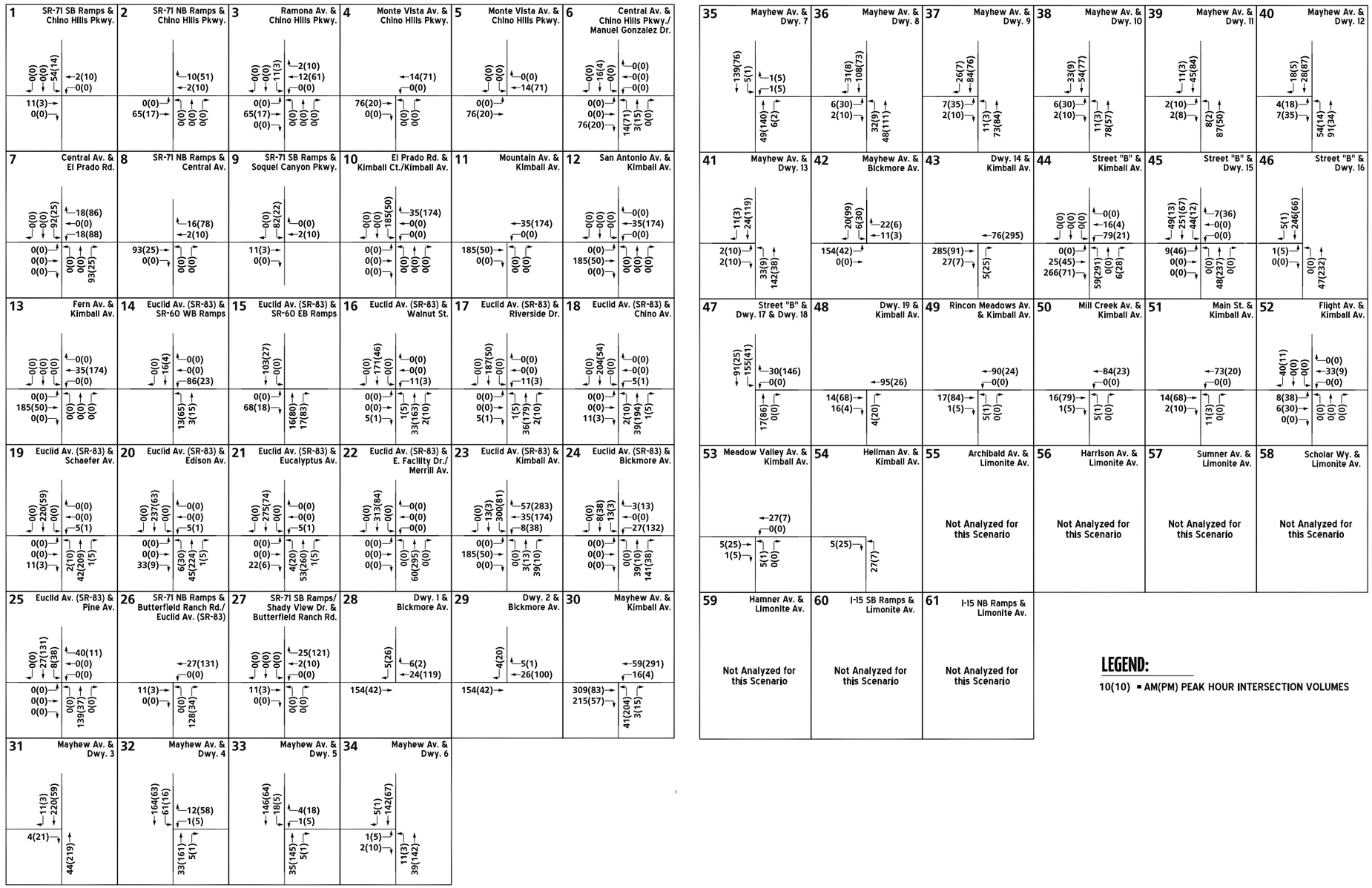


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-11

NOT TO SCALE

PROJECT AVERAGE DAILY TRAFFIC – PROJECT BUILDOUT, INTERIM YEAR

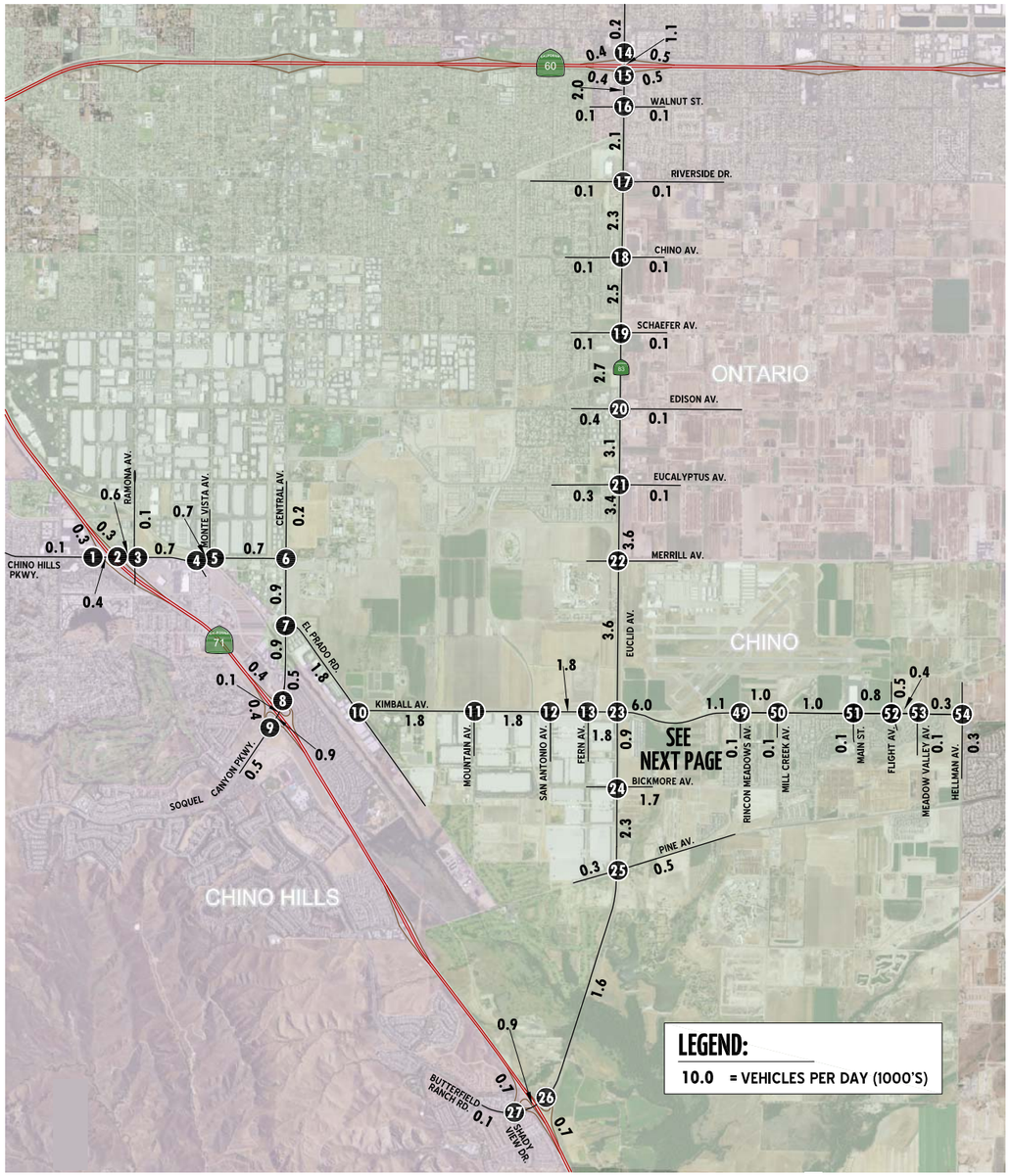


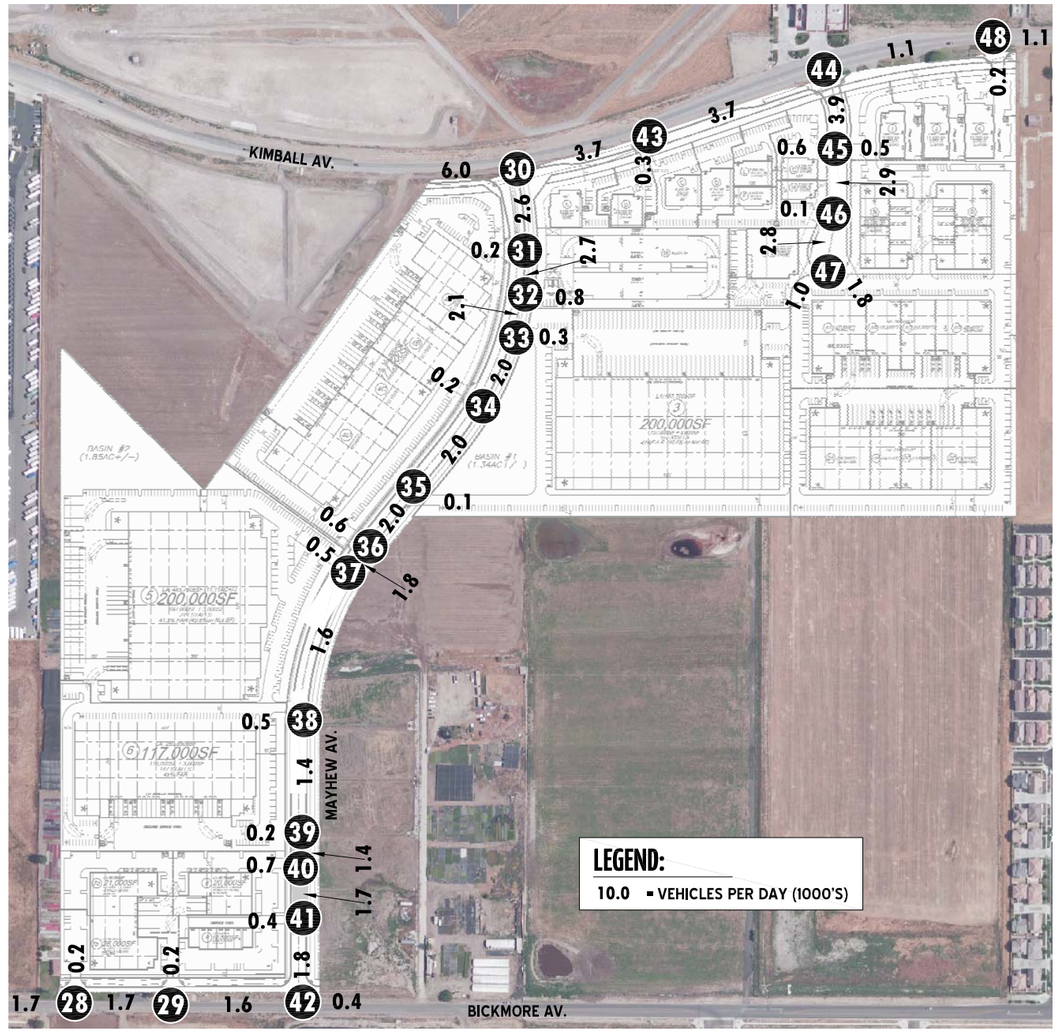
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-12

NOT TO SCALE

PROJECT PEAK HOUR INTERSECTION VOLUMES – PROJECT BUILDOUT, INTERIM YEAR



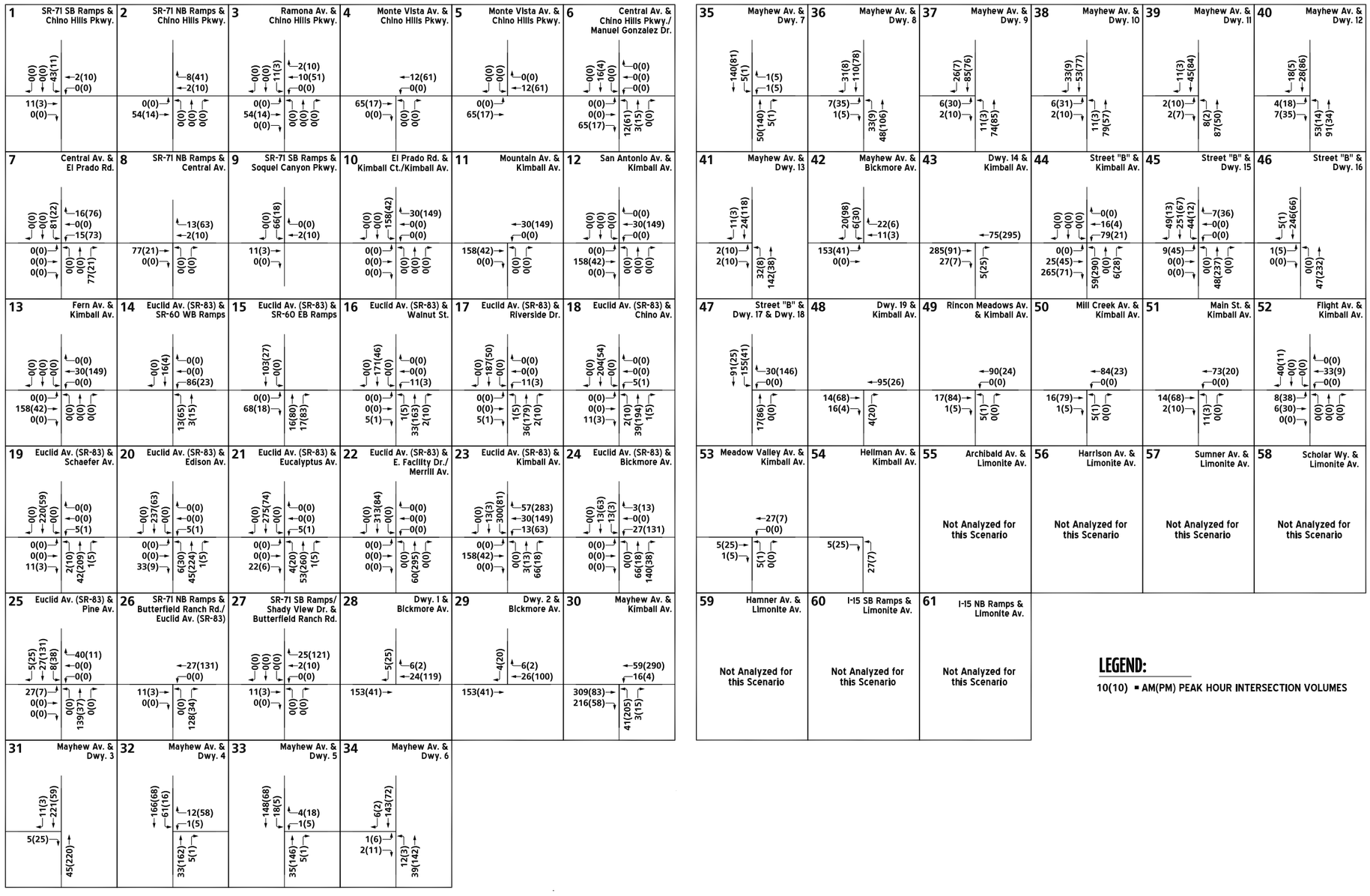


Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-13

**PROJECT AVERAGE DAILY TRAFFIC –
HORIZON YEAR (2040) WITHOUT LIMONITE AVE. EXTENSION**

NOT TO SCALE

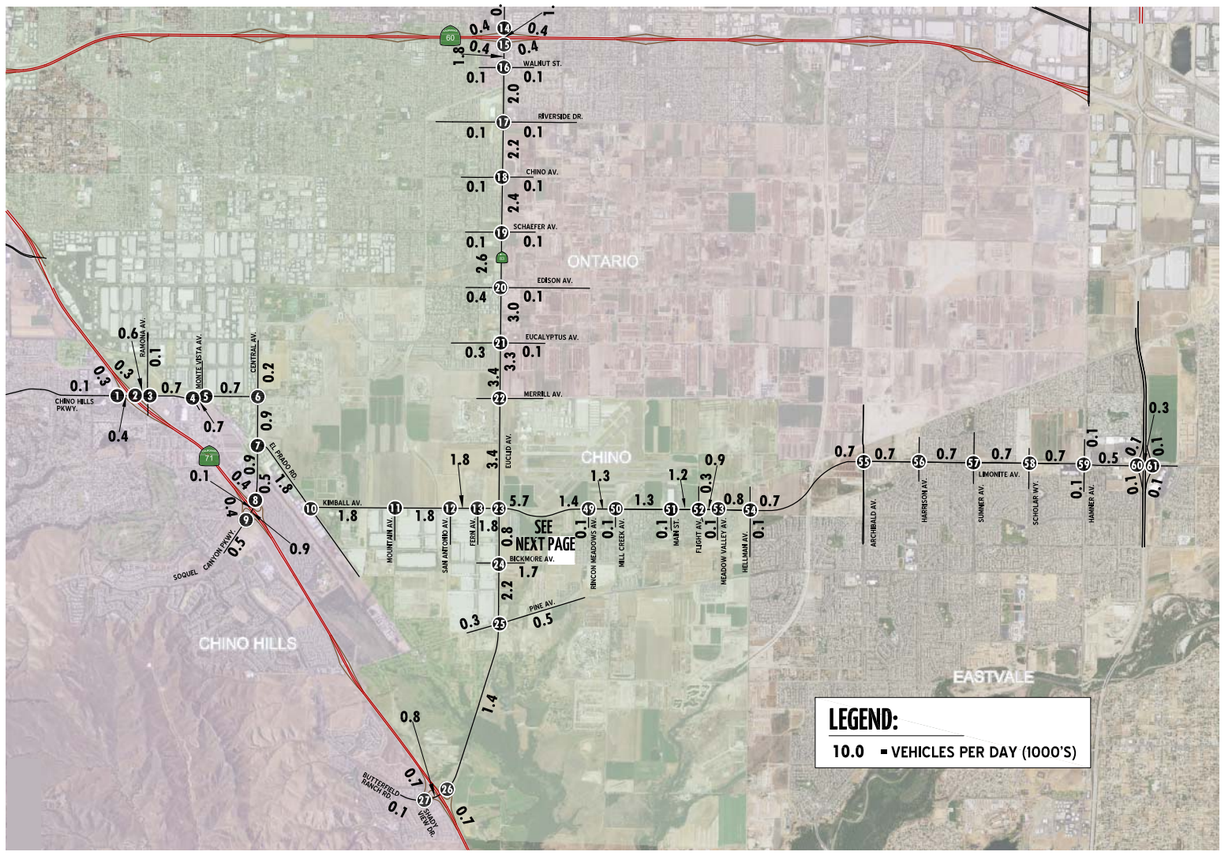


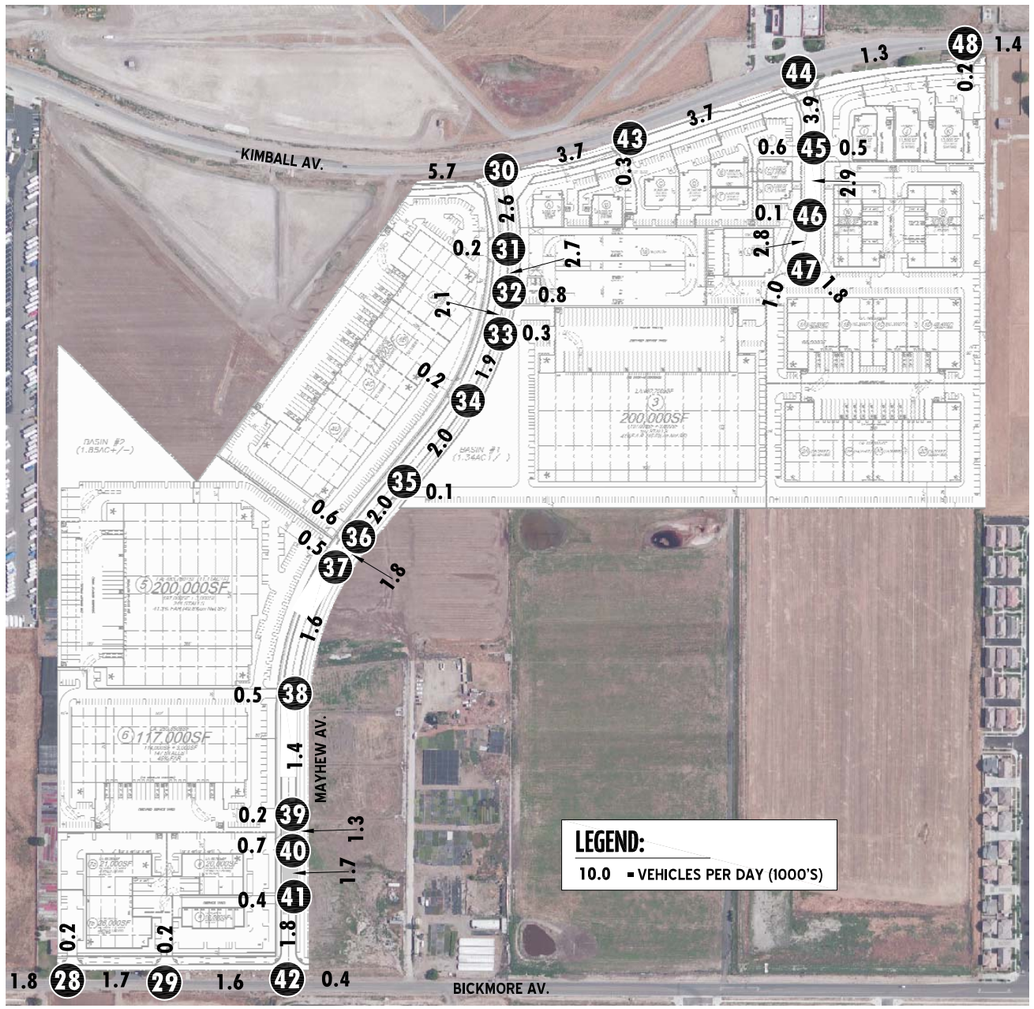
Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-14

NOT TO SCALE

PROJECT PEAK HOUR INTERSECTION VOLUMES – HORIZON YEAR (2040) WITHOUT LIMONITE AVE. EXTENSION

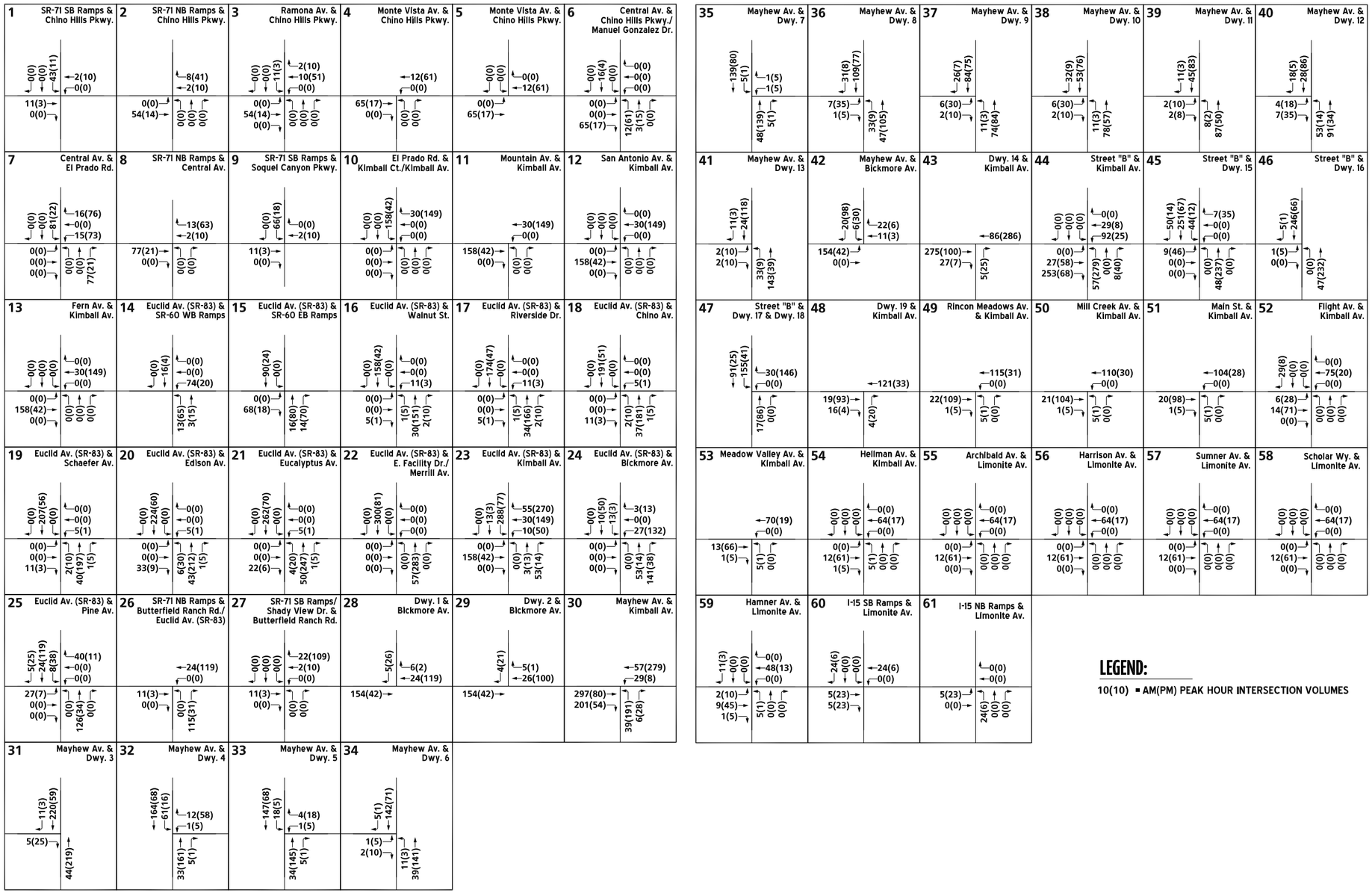




Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-15

**PROJECT AVERAGE DAILY TRAFFIC –
HORIZON YEAR (2040) WITH LIMONITE AVE. EXTENSION**



Source(s): Urban Crossroads (03-04-2019)

Figure 4.11-16

NOT TO SCALE

PROJECT PEAK HOUR INTERSECTION VOLUMES – HORIZON YEAR (2040) WITH LIMONITE AVE. EXTENSION

4.12 UTILITIES AND SERVICE SYSTEMS

This Subsection addresses the topics of water service and supply, wastewater collection and treatment, stormwater, drainage management, and solid waste collection and disposal. The information contained herein is based, in part, on information contained in the Project's *Water Supply Assessment* (dated July 2017) prepared by ProActive for the City of Chino Public Works Department (ProActive, 2017c) and provided as *Technical Appendix K* to this EIR. Other information sources used in this analysis include, but are not limited to, the *City of Chino 2015 Urban Water Management Plan (UWMP)* (Chino, 2016b) and readily available information from the California Department of Resources Recycling, and Recovery (CalRecycle, n.d.). A complete list of references can be found in EIR Section 7.0, *References.*

4.12.1 EXISTING CONDITIONS

A. Water Service

The Project site is located within the City of Chino's water service area. The City of Chino is a member agency of the Inland Empire Utilities Agency (IEUA), a wholesale water distributor. The City of Chino's service area is approximately 29.5 square miles; in 2015, the City provided a combined 13,433 acre-feet of water to 20,249 municipal connections. (Chino, 2016b, p. x, 3)

The Project site is not connected to the City's municipal water system under existing conditions; the Project site receives its water via on-site groundwater wells.

B. Wastewater Service

Wastewater in the Project area is conveyed via City of Chino maintained sewer lines to an IEUA sewer line installed beneath Kimball Avenue which, ultimately, connects to the RP-5 wastewater treatment facility (operated by the IEUA). Under existing conditions, the RP-5 facility has a treatment capacity of approximately 16.3 million gallons of wastewater per day but only treats approximately 9 million gallons of wastewater per day (IEUA, 2018).

The Project site is not connected to the City's sewer conveyance network under existing conditions; wastewater generated on the Project site is treated and disposed on-site via septic systems.

C. Stormwater Conveyance Facilities

Under existing conditions, runoff flows across the site as surface sheet flow. The Project site drains to the south, toward an existing channel located within the planned alignment of Mayhew Avenue between Bickmore Avenue and Pine Avenue (hereafter "Mayhew Channel"). The Mayhew Channel carries runoff from the site to Pine Avenue where it ultimately commingles with natural drainage courses and is discharged into the Prado Dam. The Project site receives minimal run-on from areas to the north (i.e., Chino Airport and Kimball Avenue) because stormwater flows from these areas are captured and conveyed to an existing network of off-site detention basins under existing conditions (ProActive, 2019b, pp. 1-2).

D. Solid Waste Collection and Disposal

Solid waste collection and disposal services are provided to the Project area by the City of Chino through private contract with Waste Management, Inc. Solid waste collected in the City of Chino is disposed at the El Sobrante Landfill. Under existing conditions, the Project site generates minimal solid waste (associated with the existing on-site residences and commercial nursery operations).

The El Sobrante Landfill is located east of I-15 and Temescal Canyon Road and to the south of the City of Corona at 10919 Dawson Canyon Road. In July 2018, the El Sobrante Landfill received approximately 276,721 tons of solid waste (which correlates to approximately 11,069 tons per day). The El Sobrante Landfill is permitted to receive 16,054 tons of solid waste per day and is estimated to reach capacity, at the earliest time, in the year 2045. Future landfill expansion opportunities exist at this site. (CalRecycle, El Sobrante Landfill, n.d.; RCDWR, 2018)

4.12.2 Applicable Environmental Plans, Policies, and Regulations

The following is a brief description of the federal, State, and local environmental laws, regulations, and plans related to utilities and service systems.

A. Federal Plans, Policies, and Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017a)

2. Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. (EPA, 2017b)

B. State Plans, Policies, and Regulations

1. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

2. California Water Code

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake

where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the applicable RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

3. California Toxics Rule (CTR)

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016)

4. Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMP Act) was proposed and adopted to ensure that water planning is conducted at the local level, as the State of California recognized that two water agencies in the same region could have very different impacts from a drought. The UWMP Act requires water agencies to develop Urban Water Management Plans (UWMPs) over a 20-year planning horizon, and further required UWMPs to be updated every five years. UWMPs are exempt from compliance with CEQA. (DWR, 2016, pp. 1-2)

The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands. This part of the California Water Code (CWC) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;
- Efficient water uses;
- Demand management measures; and
- Water shortage contingency planning.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009. This was the Water Conservation Act of 2009, also known as SB X7-7. This Act required agencies to establish water use

targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020. (DWR, 2016, pp. 1-2)

5. California Senate Bill 610

The California Water Code (Water Code) §§ 10910 through 10915 were amended by the enactment of SB 610 in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. (DWR, 2003) For the purposes of SB 610, "project" means any of the following:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project. (DWR, 2003)

6. Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act was established to ensure adequate water supplies are available for future uses. To promote the conservation and efficient use of water, the Act requires local agencies to adopt a water efficient landscape ordinance. The City of Chino's water efficient landscape ordinance is contained in Chapter 20.19 of the Chino Municipal Code.

7. Executive Order B-37-16

Signed on May 9, 2016, EO B-37-16 established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. (DWR, 2017)

8. Executive Order B-40-17

Signed on April 7, 2017, EO B-40-17 ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, state agencies, including the Department of Water Resources (DWR), released a plan to continue making water conservation a way of life. (DWR, 2017)

9. California Solid Waste Integrated Waste Management Act (AB 939, 1989)

The Integrated Waste Management Act (IWMA) established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (CIWMB) and local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal (it should be noted that the CIWMB no longer exists, and its duties have been assumed by CalRecycle). As part of the IWMA, the CIWMB was given a purpose to mandate the reduction of disposed waste. (CalRecycle, 1997a) The IWMA also required:

- The establishment of a task force to coordinate the development of city Source Reduction and Recycling Elements (SRREs) and a countywide siting element. (CalRecycle, 1997a)
- Each city, by July 1, 1991, to prepare, adopt and submit a SRRE to the county which includes the following components: waste characterization; source reduction; recycling; composting; solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste. (CalRecycle, 1997a)
- Each county, by January 1, 1991, to prepare a SRRE for its unincorporated area, with the same components described above, and a countywide siting element, specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction which cannot be reduced or recycled for a 15-year period.
- Each county to prepare, adopt, and submit to the Board an Integrated Waste Management Plan (IWMP), which includes all of the elements described above. (CalRecycle, 1997a)
- Each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities. (CalRecycle, 1997a)
- The CIWMB to review the implementation of each SRRE at least once every two years. (CalRecycle, 1997a)
- The IWMA required the CIWMB, in conjunction with an inspection conducted by a Lead Enforcement Agency (LEA), to conduct at least one inspection per year of each solid waste facility in the state. (CalRecycle, 1997a)

Additionally, the IWMA established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities. (CalRecycle, 1997a)

10. Waste Reuse and Recycling Act (AB 1327)

The Waste Reuse and Recycling Act (WRRA) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The WRRA also required local agencies to adopt a local ordinance by September 1, 1993 or allow the model ordinance to take effect. The WRRA requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued. (CalRecycle, 1997b)

11. Mandatory Commercial Recycling Program (AB 341)

Assembly Bill (AB) 341 (Chapter 476, Statutes of 2011 [Chesbro, AB 341]) directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB-341 was designed to help meet California's recycling goal of 75% by the year 2020. AB 341 requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. (CalRecycle, 2017)

12. 2016 California Green Building Standards Code (CALGreen, Part 11 of Title 24, California Code of Regulations)

The most recent edition of CALGreen became effective January 1, 2017, and is applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California (including residential structures and elementary schools). CALGreen § 5.408.3 requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on-site until the storage site is developed.

C. Local Plans, Policies, and Regulations

1. City of Chino Urban Water Management Plan

The *City of Chino 2015 UWMP*¸ which acts as the urban water management plan (UWMP) for the City, is herein incorporated by reference and is available for public review at the City of Chino Public Works Department located at 13220 Central Avenue, Chino, CA 91710. The Project's Water Supply Assessment (WSA, *Technical Appendix K*) is based, in part, on the *City of Chino 2015 UWMP*. The UWMP includes a water system analysis, identifies improvements to correct existing deficiencies and serve projected future growth, and presents the estimated costs and phasing of the recommended improvements. As concluded in the UWMP, the City anticipates that it will be able to meet projected demand for water within its service boundaries until at least the year 2040 in all types of climate situations, including normal, dry, and multiple consecutive dry weather years (Chino, 2016b, Tables 7-2 through 7-4).

A Water Shortage Contingency Plan is included in the UWMP, which would be implemented by the City in cases of future water deficiencies caused by limitations on supply or the City's delivery system. At the time of long- or short-term drought conditions, or other emergencies, the City would follow regional guidance from the Metropolitan Water District of Southern California (MWD), local guidance from the Inland Empire Utilities Agency (IEUA), and implement its own contingency plan, including considerations for mandatory prohibition, penalties, and consumption reduction methods. Compliance with mandatory water use

reductions would ensure that the City has the ability to meet present and projected demand within its service area during dry years. (Chino, 2016b, pp. 60-69)

2. City of Chino Master Drainage Plan of Drainage

The Project site is located within the boundary of the Storm Drain Master Plan for Subarea 2 of the Chino Agricultural Preserve Area (hereafter "Storm Drain Master Plan"), which corresponds to the boundaries of The Preserve Specific Plan area. The Storm Drain Master Plan was prepared on behalf of the City of Chino to identify master-planned drainage and flood control facilities that are needed to safely convey the peak runoff from a 100-year storm through The Preserve Specific Plan area upon full buildout. The Storm Drain Master Plan identifies a planned storm drain line (Line H) beneath Mayhew Avenue between Kimball Avenue and Pine Avenue; the diameter of the storm drain line would vary between 78 inches and 102 inches. Line "H" is planned to ultimately convey stormwater runoff from the Project area to the Prado Dam (ProActive, 2019b, p. 2).

4.12.3 Basis For Determining Significance

The proposed Project would result in a significant impact associated with utilities and service systems if the Project or any Project-related component would:

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

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017) and address the typical, adverse effects that a development project could have on public utilities and service systems. The CEQA Guidelines revisions of December 2018 were taken into consideration in the substantive evaluation of each threshold.

4.12.4 Impact Analysis

Threshold a:	***Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?***

Wastewater treatment services would be provided to the Project site by IEUA. IEUA is required to operate all of its treatment facilities in accordance with the waste treatment and discharge standards and requirements

set forth by the Santa Ana Regional Water Quality Control Board (RWQCB). The Project would not install or utilize septic systems or alternative wastewater treatment systems; therefore, the Project would have no potential to exceed applicable wastewater treatment requirements established by the RWQCB. Accordingly, impacts would be less than significant.

Threshold b:	***Would the Project require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

The Project would construct an on-site network of water and sewer pipes that would connect to existing water and sewer lines that abut the Project site. The installation of the water and sewer line infrastructure proposed by the Project would result in physical environmental impacts; however, these impacts have already been included in the analyses of construction-related effects presented throughout this EIR. In instances where significant impacts have been identified for the Project's construction phase, mitigation measures are provided in each individual subsection of this EIR to reduce the Project's effects to less-than-significant levels (or, if it is not possible to reduce the Project's impacts to less-than-significant levels, mitigation is provided to minimize impacts to the maximum level feasible). The construction of water and sewer lines necessary to serve the proposed Project would not result in any significant physical effects on the environment that are not already identified and disclosed elsewhere in this this EIR. There are no components of the Project's installation of water of sewer infrastructure facilities that would result in impacts not already disclosed in this EIR and, accordingly, additional mitigation measures beyond those identified throughout this EIR would not be required.

Refer to the response to Threshold "e" for an analysis of the Project's potential effects to regional wastewater treatment facilities.

Threshold c:	***Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

The Project would involve the construction of stormwater drainage system on-site, including storm drain pipes, catch basins, and water quality/detention basins. The construction of stormwater drainage facilities proposed by the Project would result in physical impacts to the surface and subsurface of the Project site, as well as physical impacts within the alignments of Kimball Avenue and the on-site segment of Mayhew Avenue. These impacts have already been included in the analyses of construction-related effects presented throughout this EIR. In instances where significant impacts have been identified for the Project's construction phase, mitigation measures are provided in each individual subsection of this EIR to reduce the Project's effects to less-than-significant levels (or, if it is not possible to reduce the Project's impacts to less-than-significant levels, mitigation is provided to minimize impacts to the maximum level feasible). The construction of stormwater drainage facilities necessary to serve the proposed Project would not result in any significant physical effects on the environment that are not already identified and disclosed elsewhere in this this EIR. There are no components of the Project's installation of stormwater infrastructure facilities that would result in impacts not already disclosed in this EIR and, accordingly, additional mitigation measures beyond those identified throughout this EIR would not be required.

Threshold d:	***Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

A water supply assessment was prepared to assess the effect of the Project on the City's ability to provide adequate water service to customers within the City's service area during normal, dry, and multiple dry years. The Water Supply Assessment, which is provides as *Technical Appendix K* to this EIR, was prepared in accordance with SB 610 and SB 221. As documented in *Technical Appendix K*, the Project is calculated to demand 198,387 gallons of water per day (222 acre-feet per year), including 98,463 gallons per day for indoor use and 99,924 gallons per day for outdoor use (i.e., landscape irrigation). Because the Project site does not receive municipal water service from the City of Chino under existing conditions, the Project's water demand represents a "new" demand placed on the City's water utility. However, as part of development of the Project, all on-site water wells would be taken out of service and the subject property's groundwater rights would be granted to the City. The City would receive groundwater rights of up to 2.0 acre-feet per year for each acre of the Project site that is being converted from agricultural to urban land use. The Project would convert approximately 73 acres from agriculture to non-agriculture use which would result in new water rights totaling up to 146 acre-feet per year being granted to the City, which would offset a majority of the Project's water demand and would further contribute to the City's expected surplus of water supply. In addition, as explained in the City's *2015 UWMP*, the City's long-range water planning is based on expected growth within the City. The growth projections used in the *2015 UWMP* assume buildout of the City's General Plan and all of the Specific Plans within the City, including The Preserve Specific Plan. The Project's land uses are consistent with the land plan for The Preserve Specific Plan; therefore, the water demand from the uses proposed by the Project have already been accounted for by the City's long-range plans. Based on the foregoing information, and other data presented in the *2015 UWMP*, ProActive concluded that the City has adequate existing water entitlements and resources to serve the Project under normal, single-dry year, and multiple-dry year scenarios. (ProActive, 2017c, pp. 6-1 to 6-3) Accordingly, the Project would have no potential to result in the need for new or expanded water entitlements or treatment capacity and impacts would be less than significant.

Threshold e:	***Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

The Project is estimated to generate approximately 72,900 gallons of wastewater per day (using the City's wastewater generation rate of 1,000 gallons per day per acre for light industrial land uses). Wastewater flows generated by the Project would be conveyed via the City's sewer line network to the RP-5 IEUA treatment facility. As of 2018, RP-5 has an excess treatment capacity of approximately 9 million gallons of wastewater per day (IEUA, 2018). Implementation of the proposed Project would utilize approximately 0.8% of the available excess treatment capacity at RP-5. Accordingly, RP-5 has sufficient capacity to treat wastewater generated by the Project in addition to existing commitments. The Project would not create the need for any new or expanded wastewater facility (such as conveyance lines, treatment facilities, or lift stations). Because there is adequate capacity at existing treatment facilities to serve the Project's projected sewer demand, impacts would be less than significant and mitigation is not required.

Threshold f:	***Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Construction and operation of the proposed Project would result in the generation of solid waste requiring disposal at a landfill. Solid waste collected in the City of Chino is disposed at the El Sobrante Landfill.

❑ Construction Impact Analysis

During construction of the proposed Project, solid waste requiring landfill disposal would be required in the form of demolition debris and remnants of unused construction materials.

Approximately 87,000 s.f. of on-site structures would be demolished during Project construction. Using a residential demolition waste generation factor of 50 pounds per square foot (EPA, 2009), demolition of the existing structures on-site would generate approximately 2,175 tons of debris requiring disposal ([87,000 s.f. x 50 lbs/s.f.] ÷ 2,000 lbs/ton = 2,175 tons). California Assembly Bill 939 (AB 939) requires that a minimum of 50% of all solid waste be diverted from landfills (by recycling, reusing, and other waste reduction strategies); therefore, the Project is estimated to generate approximately 1,088 tons of demolition waste. Additional demolition debris (i.e., non-structural remnants of the former dairy farms) would also require disposal; however, the volume of waste is not anticipated to be substantial.

Waste also would be generated by the construction process, primarily consisting of discarded materials and packaging. Based on a proposed building area of 1,313,000 s.f. and a construction waste generation factor of 4.34 pounds per square foot (EPA, 2009), approximately 2,849 tons of waste would be generated over the course of the Project's construction phase ([1,313,000 sq. ft. × 4.34 lbs/sq. ft] ÷ 2,000 lbs/ton = 2,849 tons). AB 939 requires that a minimum of 50% of all solid waste be diverted from landfills consistent with the State's solid waste reduction goals (by recycling, reusing, and other waste reduction strategies); therefore, the Project is estimated to generate approximately 1,425 tons of construction waste.

The Project's combined demolition and construction activities would generate approximately 2,513 tons of solid waste requiring disposal at a landfill. The Project's building construction would occur over a period of approximately 845 working days (295 days for phase 1; 275 days for phase 2; and 230 days for phase 3), which corresponds to approximately three (3) tons of construction waste being generated per day of construction activity.

Non-recyclable demolition debris and construction waste generated by the Project would be disposed the El Sobrante Landfill. The Project's short-term generation of this volume of construction waste is not in excess of State or local disposal hazards, or in excess of the local infrastructure capacity to handle the waste disposal. As described in Subsection 4.12.1D, the El Sobrante Landfill receives well below its maximum permitted daily disposal volume; thus, demolition and construction waste generated by the Project is not anticipated to cause the landfill to exceed its maximum permitted daily disposal volume. Furthermore, the El Sobrante Landfill is not expected to reach its total maximum permitted disposal capacity during the Project's construction period. The El Sobrante Landfill would have sufficient daily capacity to accept solid waste generated by the Project's construction phase; therefore, impacts to landfill capacity associated with the Project's near-term construction activities would be less than significant.

❑ Operational Impact Analysis

Based on a daily waste generation factor of 1.42 pounds of waste per 100 square feet of building area obtained from CalRecycle (CalRecycle, 1997c), long-term operation of the project would generate approximately 9.3 tons of solid waste per day ([1,313,000 sq. ft. × 1.42 lbs/ 100 sq. ft] ÷ 2,000 lbs/ton = 9.3 tons). A minimum of 50% of all solid waste would be required to be recycled pursuant to AB 939, consistent with the State's solid waste reduction goals; therefore, the Project would generate approximately 4.6 tons per day of solid waste requiring disposal at a landfill.

Non-recyclable waste generated by the Project would be disposed the El Sobrante Landfill. The Project's long-term generation of this volume of solid waste is not in excess of State or local disposal standards, or in excess of the local infrastructure capacity to handle the waste disposal. As described in Subsection 4.12.1D, the El Sobrante Landfill receives well below its maximum permitted daily disposal volume; thus, waste generated by the Project's operation is not anticipated to cause the landfill to exceed its maximum permitted daily disposal volume. Because the Project would generate a relatively small amount of solid waste per day as compared to the permitted daily capacities at receiving landfills, impacts to regional landfill facilities during the Project's long-term operational activities would be less than significant.

Threshold g:	***Would the Project comply with federal, state, and local statutes and regulations related to solid waste?***

The California Integrated Waste Management Act (Assembly Bill (AB) 939), signed into law in 1989, established an integrated waste management system that focused on source reduction, recycling, composting, and land disposal of waste. In addition, the bill established a 50% waste reduction requirement for cities and counties by the year 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted. Per the requirements of the Integrated Waste Management Act, the San Bernardino County Board of Supervisors adopted the County of San Bernardino Countywide Integrated Waste Management Plan (San Bernardino County, 2012), which outlines the goals, policies, and programs the County and its cities implement to create an integrated and cost effective waste management system that complies with the provisions of AB 939 and its diversion mandates.

In order to assist the City of Chino and the County of San Bernardino in achieving the mandated goals of the Integrated Waste Management Act, and pursuant to City of Chino Municipal Code § 20.10.060, separate bins would be provided on-site to allow tenants to separate recyclable materials from refuse. Additionally, in accordance with the California Solid Waste Reuse and Recycling Act of 1991 (Cal Pub Res. Code § 42911), the Project is required to provide adequate areas for collecting and loading recyclable materials where solid waste is collected. The collection areas are required to be shown on construction drawings and be in place before occupancy permits are issued. The implementation of these mandatory requirements would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn will aid in the extension of the life of affected disposal sites. The Project would be required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

4.12.5 Cumulative Impact Analysis

The Project would require water, wastewater, and stormwater drainage services and infrastructure, as well as solid waste disposal for building operation. Development of public utility infrastructure is part of an extensive planning process involving utility providers and jurisdictions with discretionary review authority. The coordination process associated with the preparation of infrastructure plans is intended to ensure that adequate public utility services and resources are available to serve both individual development projects and cumulative growth in the region. Each individual development project is subject to review for utility capacity to avoid unanticipated interruptions in service or inadequate supplies. Coordination with the utility providers would allow for the provision of utility services to development projects without interrupting or degrading services to existing customers. The Project and other development projects are subject to connection and service fees to offset increased demand and assist in facility expansion and service improvements (at the time of need). Because the comprehensive utility and service planning and coordination activities described above would ensure that new development projects do not disrupt or

degrade the provision of utility services, cumulatively considerable impacts to utilities and service systems would not occur.

4.12.6 Significance of Impacts Before Mitigation

Threshold a: Less-than-Significant Impact. The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. IEUA would provide wastewater treatment and collection services to the Project, and IEUA is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.

Threshold b: Less-than-Significant Impact. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.

Threshold c: Less-than-Significant Impact. Stormwater would be collected on the Project site by an on-site drainage system. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.

Threshold d: Less-than-Significant Impact. The City of Chino is expected to have sufficient water supplies to service the Project. The Project would not exceed the City's available supply of water during normal years, single-dry years, or multiple-dry years.

Threshold e: Less-than-Significant Impact. The IEUA would provide wastewater treatment services to the Project site via RP-5. This facility has adequate capacity to service the Project and no new or expanded facilities would be needed.

Threshold f: Less-than-Significant Impact. There is adequate capacity available at the El Sobrante Landfill to accept the Project's solid waste during both construction and long-term operation. The proposed Project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure to handle the waste.

Threshold g: Less-than-Significant Impact. The Project would comply with all applicable federal, State, and local statutes and regulations related to solid waste disposal, reduction, and recycling.

4.12.7 Mitigation

Impacts would be less than significant; therefore, mitigation is not required.

5.0 OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The CEQA Guidelines require that an EIR disclose the significant environmental effects of a project which cannot be avoided if the proposed project is implemented (CEQA Guidelines § 15126(b)). As described in detail in Section 4.0, *Environmental Analysis*, of this EIR, the proposed Project is anticipated to result in an impact to the environment that cannot be reduced to below a level of significance after implementation of relevant standard conditions of approval, compliance with applicable regulations, and application of feasible mitigation measures. The significant impacts that cannot be mitigated to a level below significant consists of the following:

- Agriculture and Forestry Resources: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would convert Farmland with substantial agricultural production value to non-agricultural use. The loss of the Farmland on the Project site would be a significant direct and cumulatively-considerable impact in consideration of the past, ongoing, and projected future loss of farmland in the CBDA.
- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. After the application of Project design features, mandatory regulatory requirements, and feasible mitigation measures, long-term operational-related NO_X emissions would still exceed the applicable SCAQMD regional threshold for daily emissions. The Project's NO_X emissions would cumulatively contribute to an existing air quality violation in the SCAB (i.e., NO_X and O_3 concentrations, which do not meet regional attainment status).
- Transportation/Traffic: Significant Direct and Cumulatively Considerable Impact. The addition of Project-related traffic would cause and/or contribute to LOS deficiencies at numerous Study Area intersections and *CMP* facilities during Existing plus Project, Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

The CEQA Guidelines require EIRs to address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines § 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project involves uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources are not justified (e.g., the project results in the wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources, in the form of construction materials and energy resources, would be used in the construction of the proposed Project. The consumption of these natural resources would represent an irreversible change to the environment. However, development of the Project site as proposed would have no measurable adverse effect on the availability of such resources,

including resources that may be non-renewable (e.g., fossil fuels). Additionally, the Project is required by law to comply with the California Building Standards Code (CalGreen), which will minimize the Project's demand for energy, including energy produced from non-renewable sources. A more detailed discussion of energy consumption is provided below in Subsection 5.4.

Implementation of the Project would commit the Project site to a master-planned business park/center for future generations. The land uses proposed by the Project are consistent with the City of Chino General Plan and The Preserve Specific Plan land use designations for the site and would be compatible with the existing and planned future uses that surround the Project site. Although the Project would result in unavoidable physical impacts to agricultural resources, air quality, and transportation/traffic effects, these effects are significant from a regional perspective, as opposed to a local/localized perspective, and the Project and its environmental effects would not compel or commit surrounding properties to land uses other than those that are existing today or those that are planned by the Chino General Plan and The Preserve Specific Plan. For this reason, the Project would not result in a significant, irreversible change to nearby, off-site properties.

EIR Subsection 4.8, *Hazards and Hazardous Materials*, provides an analysis of the proposed Project's potential to transport or handle hazardous materials which, if released into the environment, could result in irreversible damage to the environment. As concluded in the analysis, compliance with federal, state, and local regulations related to hazardous materials would be required of all contractors working on the property during the Project's construction and of all users that occupy the Project's buildings. As such, construction and long-term operation of the proposed Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from upset or accident conditions.

As discussed under Subsection 5.4, the Project would not result in a wasteful, inefficient, or unnecessary consumption of energy. Accordingly, the Project would not result in a significant, irreversible change to the environment related to energy use.

5.3 Growth-Inducing Impacts of the Proposed Project

CEQA requires a discussion of the ways in which the proposed Project could be growth inducing. 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 (CEQA Guidelines § 15126.2(d)). New employees and new residential populations represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers to growth. This typically occurs in suburban or rural environs where population growth results in increased demand for service and commodity markets responding to the new population of residents or employees.

According to regional population projections included in SCAG's *2016 RTP/SCS*, the City of Chino's population is projected to increase 1.5% annually, between 2012 and 2040. Over this same time period, employment in the City is expected to increase 0.62% annually. (Urban Crossroads, 2018e, p. 167) Economic growth would likely take place as a result of the proposed Project's operation as a business center. The Project's employees (short-term construction and long-term operational) would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services needs is expected to be marginal, accommodated by existing goods and service providers, and

highly unlikely to result in any new physical impacts to the environment based on the amount of existing and planned future commercial and retail services available in areas near the Project site. In addition, the Project would create jobs, a majority of which could be filled by the residents of the housing units either already built or planned for development within the City of Chino and nearby areas. Accordingly, because it is anticipated that most of the Project's future employees would already be living in the area, the Project's on-site employment generation would not induce substantial growth in the area.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as SCAG. Significant growth impacts also could occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The area surrounding the Project site is in the process of transitioning from agricultural to non-agricultural uses as planned by the Chino General Plan and The Preserve Specific Plan, with several active residential construction projects to the east of the Project site and an approved (but not constructed) industrial project to the west of the site. Development of the Project site with a business center may place short-term development pressure on the undeveloped parcels that abut the Project site to the southwest and south; however, because the area is mostly built-out under existing conditions (or in the process of developing) and because the few remaining undeveloped properties in the vicinity of the Project site are ultimately planned for development by the Chino General Plan and The Preserve Specific Plan, the amount of additional growth that could occur in the Project area is relatively limited (and the growth that would occur would have been planned for to ensure that adequate infrastructure and public services are available).

Based on the foregoing analysis, the Project would not result in substantial, adverse growth-inducing impacts.

5.4 ENERGY CONSUMPTION

This Subsection is based in part on a technical report prepared by Urban Crossroads, Inc. titled, "Altitude Business Center Energy Analysis, dated May 24, 2018, and appended to this EIR as *Technical Appendix L*. This analysis satisfies the CEQA criteria listed in Appendix F to the CEQA Guidelines as of the publication date of the NOP for this EIR (May 20, 2017), and also the CEQA Guidelines revisions of December 2018 wherein the topic of Energy was added to CEQA Guidelines Appendix G.

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (DOT), the United States Department of Energy (DOE), 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 Public Utilities Commission (PUC) and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and State energy-related laws and plans are summarized below. Project consistency with applicable federal and State regulations is presented below each regulation to determine if the Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

5.4.1 Applicable Federal and State Policies and Requirements

A. Federal Regulations

1. Intermodal Surface Transportation Efficiency

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. (Urban Crossroads, 2018f, p. 19)

Project Consistency: Access to/from the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, 2018f, p. 19)

2. Transportation Equity Act for the 21st Century (TEA-21)

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 wise 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. (Urban Crossroads, 2018f, p. 19)

Project Consistency: The Project site is located in proximity to major transportation corridors with access to the Interstate freeway system. The Project site facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2018f, p. 19)

B. California Regulations

1. Integrated Energy Policy Report

Senate Bill 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 California'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 (Public Resources Code § 25301a). The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the Integrated Energy Policy Report. (Urban Crossroads, 2018f, p. 20)

The *Final 2016 Integrated Energy Policy Report Update (Final 2016 IEPR Update)* was released on February 28, 2017. The report examines how the state is transforming its electricity sector and identifies other improvements that are still needed to achieve the state's energy and climate policy goals. The report covers a broad range of topics, 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 the 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. (CEC, 2017)

Project Consistency: The *Final 2016 IEPR Update* is a State Policy report. An individual project, such as the proposed Project, has no ability to comply with or conflict with the report.

2. 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 a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. (Urban Crossroads, 2018f, p. 21)

Project Consistency: The Project would comply with the energy efficiency building codes, appliance standards, and utility energy efficiency programs applicable to the Project. The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The Project site facilitates access and may reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through the introduction of a mix of commercial and industrial uses on a property designated for a mix of non-residential land uses. The Project, therefore, supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, would not otherwise interfere with, or obstruct implementation of the State of California Energy Plan. (Urban Crossroads, 2018f, p. 21)

3. California Code Title 24, Part 6, Energy Efficiency Standards

California Code Title 24, Part 6 (also referred to as the California Energy Code), was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential buildings. California's building efficiency standards are updated on an approximately three-year cycle. The 2016 Standards for building construction, which went into effect on January 1, 2017 improved upon the former 2013 Standards for residential and nonresidential buildings. (CEC, 2015)

Project Consistency: The proposed Project is required by State law to be designed, constructed, and operated to meet or exceed Title 24 Energy Efficiency Standards. On this basis, the proposed Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards. (Urban Crossroads, 2018f, p. 21)

4. Assembly Bill 1493, Pavley

On September 24, 2009, the California Environmental Protection Agency (CalEPA) Air Resources Board (ARB) adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

Project Consistency: AB 1493 requires registry in consultation with the State ARB, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for use by the State ARB in granting emission reduction standards. (CARB, 2017a) An individual project, such as the proposed Project does not have the ability to comply with or conflict with AB 1493.

5. California Renewable Portfolio Standards (SB 1078)

California Renewable Portfolio Standards (SB 1078) requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

Project Consistency: Energy directly or indirectly supplied to the proposed Project by electric corporations is required by law to comply with SB 1078.

5.4.2 Energy Consumption Analysis

In compliance with CEQA Guidelines Appendix F in effect as of the publication of the NO for this EIR (May 20, 2017), and also in compliance with the CEQA Guidelines revisions of December 2018 wherein the topic of Energy was added to CEQA Guidelines Appendix G, this Subsection provides an analysis of the proposed Project's anticipated energy use to determine if the Project would result in an adverse environmental effect associated with the wasteful, inefficient or unnecessary consumption of energy, or result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

A. Methodology

Information from the CalEEMod (v. 2016.3.2) outputs for the Project's Air Quality Impact Analysis (*Technical Appendix B1*) was utilized in the Project's Energy Analysis (*Technical Appendix L*) and is summarized below. The Energy Analysis presents the calculated energy demands for the Project, including energy required for construction, transportation, and building operation. These outputs are referenced in Appendix 3.1 of the Project's Energy Analysis (*Technical Appendix L*). (Urban Crossroads, 2018f, p. 22)

B. Project Construction Energy Use

1. Construction Equipment Electricity Usage

Southern California Edison's (SCE) general service rate schedule (GS-1) for an industrial land use is $.08 per kilowatt hours (kWh) of electricity, while the typical electricity cost per 1,000 s.f of building construction per month is estimated to be $2.32 per month. Accordingly, construction of each 1,000 s.f. of building area would use 29.0 kWh of electricity per month ($2.32 per 1,000 s.f. per month ÷ $0.08 per kWh = 29.0 kWh per 1,000 s.f. per month). Accordingly, over the Project's 27-month construction period, the

Project would use approximately 1,028,079 kWh of electricity (29.0 kWh per 1,000 s.f. per month × 1,313,000 s.f. of Project building area × 27 months = 1,028,079 kWh of electricity). (Urban Crossroads, 2018f, p. 22)

2. Construction Equipment Fuel Use

Fuel consumed by construction equipment would be the primary energy resource expended over the course of the Project's construction. The aggregate fuel consumption rate for construction equipment is estimated at 18.5 hp-hr-gal., obtained from California Air Resources Board (CARB) 2013 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations of fuel use are based on all Project construction equipment being diesel-powered. Project construction activities would consume an estimated 198,055 gallons of diesel fuel. Refer to Table 4-3 of *Technical Appendix L* for the construction equipment fuel consumption estimates. (Urban Crossroads, 2018f, pp. 23-24)

3. Construction Worker Fuel Use

Urban Crossroads, Inc. estimated that construction worker trips to and from the Project site would travel approximately 3,384,896 miles. According to the Emissions FACtor (EMFAC) model, light duty automobiles ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 27.75 miles per gallon (mpg). Urban Crossroads, Inc. calculated that 121,978 gallons of gasoline would be consumed by construction workers commuting to and from the Project site. Refer to Table 4-4 of *Technical Appendix L*, for the construction worker fuel consumption estimates. (Urban Crossroads, 2018f, p. 25)

4. Construction Vendor/Hauling Fuel Use

The Project's construction vendor trips were calculated to travel 997,654 miles to and from the Project site. Urban Crossroads, Inc., applied a reasonable assumption that 50% of all vendor trips would be from medium-heavy duty trucks (MHD) and 50% would be from heavy-heavy duty trucks (HHD) and that 100% of all hauling trips would be from HHD. According to EMFAC, the aggregated fuel economy of MHD trucks ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 8.5 mpg. And the aggregated fuel economy for HHD trucks is estimated at 5.85 mpg. Based on these numbers, construction hauling and vendor trips to and from the Project site are calculated to consume approximately 156,901 gallons of fuel. Refer to Table 4-5 and 4-6 of *Technical Appendix L* for the construction vendor fuel consumption estimates for MHD and HHD trucks. (Urban Crossroads, 2018f, pp. 25-26)

5. Construction Energy Consumption Summary

The Project's construction phase would consume electrical energy and fuel. Project construction would represent a "single-event" electric energy and fuel demand and, for this reason, would not require any ongoing, permanent commitment of electricity or fuel resources. In summary, the proposed Project's construction process is calculated to consume approximately 1,028,079 kWh of electricity, 121,978 gallons of gasoline, and 354,956 gallons of diesel fuel.

Electricity would be provided to the Project site by Southern California Edison and gasoline and diesel fuel would be supplied by The Gas Company. The Project would not cause or result in the need for additional energy facilities or energy delivery systems. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB

emissions standards, acting to promote equipment fuel efficiencies. Furthermore, the Project would be required to comply with applicable State and local regulations and mitigation measures from this EIR that would preclude unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment – including MM 4.3-5, which would restrict idling on the Project site for more than three (3) consecutive minutes and is more stringent than the State's five (5) minute limit on idling.

As supported by the information presented above and on the preceding pages, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

C. Project Operation Energy Use

1. Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total vehicle miles traveled and estimated fuel economies of vehicles accessing the Project site. Based on the annual vehicle miles traveled and the average vehicle fuel economies (mpg, by vehicle type) of Project traffic, the annual fuel consumption for the Project's operational activities is calculated to be 4,361,939 gallons. Refer to Tables 4-7 through 4-11 in *Technical Appendix L* for the annual fuel consumption for Project vehicles by vehicle classification. (Urban Crossroads, 2018f, p. 32)

2. Facility Energy Demands

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. As a Project design feature, all on-site outdoor cargo handling equipment (CHE) would be powered by non-diesel fueled engines (e.g., electric or natural gas) and all on-site indoor forklifts would be powered by electricity, compressed natural gas, or propane. The Project's facility operational energy demands are calculated at 8,538,029 kBTU/year of natural gas and 6,371,523 kWh/year of electricity. Refer to Table 4-12 in *Technical Appendix L* for the Project's annual energy demand. (Urban Crossroads, 2018f, p. 31)

3. Operational Energy Consumption Summary

The Project's operational phase would consume electricity and fuel resources. Project operation would require ongoing, permanent commitment of electricity or fuel resources. Electricity would be provided to the Project site by Southern California Edison, natural gas would be provided to the Project site by SoCal Gas, and gasoline and diesel fuel would be supplied by regional commercial vendors. The Project would not cause or result in the need for additional energy facilities or energy delivery systems. The Project's estimated annual vehicle miles traveled is not atypical or excessive for its proposed use and scale and the Project would not result in excessive or wasteful vehicle trips. Furthermore, the Project proposes 25 buildings that reflect and incorporate contemporary energy efficient/energy conserving designs and operational programs. The uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total are calculated to be comparable to, or less than, other light industrial projects of similar scale and configuration. The Project could be served by the existing energy transmission and supply network and would not cause or result in the need for additional energy producing or transmission facilities. In addition, the Project would be required to adhere to the current CBSC Title 24 energy efficiency and building standards in effect at the time of building construction. Based on the preceding, the Project's energy demands and energy consumption would not result in adverse environmental impacts associated with the inefficient, wasteful, or otherwise unnecessary use of energy. (Urban Crossroads, 2018f, p. 32)

5.5 EFFECTS FOUND NOT TO BE SIGNIFICANT AS PART OF THE INITIAL STUDY PROCESS

CEQA Guidelines § 15128 requires that an EIR:

> *"…contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."*

An Initial Study was prepared for the proposed Project, which is included as *Technical Appendix A* to this EIR. Through the Initial Study process, the City of Chino determined that the proposed Project could potentially cause adverse effects, and an EIR is required. Five (5) environmental issue areas were determined by the City to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of the five (5) environmental issue areas found not to be significant is presented below, with a more detailed analysis and reference sources provided in the Project's Initial Study contained in *Technical Appendix A.*

A. Land Use/Planning

The Project site consists of approximately 89.1 acres of land, which is used for residential and agricultural/dairy uses under existing conditions. Three residences are located on the Project site, and no residences or communities abut the Project site. The Project site does not provide access to established communities and would not isolate any established communities or residences from neighboring communities. Development and operation of the Project would not physically disrupt or divide the arrangement of an established community.

The Project proposes to develop an approximately 72.9-acre portion of the 89.1-acre Project site as a multi-building business center that would support a variety of tenants and would be consistent with the "Airport Related" land use designation applied to the site by the City's General Plan and The Preserve Specific Plan As part of the City's review of the proposed Master Site Approval and Tentative Parcel Map application, the City of Chino will ensure consistency with applicable policies of the General Plan and The Preserve Specific Plan, and will ensure mandatory conformance with the City's Municipal Code requirements. As such, the Project would not conflict with applicable local land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

Therefore, for the reasons stated above, the Project would result in a less-than-significant impact to Land Use/Planning.

B. Mineral Resources

The Project site is not located within an area known to be underlain by regionally- or locally-important mineral resources or within an area that has the potential to be underlain by regionally- or locally-important mineral resources. Accordingly, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California.

C. Population/Housing

Under existing conditions, the subject property contains three (3) occupied residential structures associated with the on-site dairy and agricultural operations that would be demolished as part of the Project. The removal of these homes would not result in the displacement of substantial numbers of existing housing and would not necessitate the construction of replacement housing elsewhere.

The proposed Project would develop the subject property with a business center in accordance with the land use designations applied to the property by the City of Chino General Plan and The Preserve Specific Plan. Accordingly, the Project would not result in growth that was not already anticipated by the City of Chino General Plan and The Preserve Specific Plan and would not indirectly induce substantial population growth in the local area. Based on the foregoing, the proposed Project would result in less-than-significant impact to Population/Housing.

D. Public Services

1. Fire Protection Services

The Project would be adequately served by CVIFD Station 3 (at the Chino Airport), located immediately north of the Project site, across Kimball Avenue. The Project's proposed development is consistent with The Preserve Specific Plan land use designations for the Project site and, thereby, the findings concluded by The Preserve Specific Plan EIR. Impacts to fire protection services as a result of buildout of The Preserve Specific Plan area were evaluated in The Preserve Specific Plan EIR, which concluded that capital costs associated with increased demands of The Preserve Specific Plan area would be funded via development impact fees (DIF), which were determined to be adequate based on a Draft Financing Plan prepared in support of The Preserve Specific Plan. The Project Applicant would be required to pay DIFs pursuant to Chino Municipal Code Chapter 3.40. Accordingly, the Project would result in a less-than-significant impact related to fire protection services and further analysis of this issue is not required.

2. Police Protection Services

The Project's proposed development is consistent with The Preserve Specific Plan land use designations for the Project site and, therefore, the findings concluded by The Preserve Specific Plan EIR. Impacts to police protection services as a result of buildout of The Preserve Specific Plan area were evaluated in The Preserve Specific Plan EIR, which concluded that capital costs associated with increased demands of The Preserve Specific Plan area would be funded via development impact fees, which were determined to be adequate based on a Draft Financing Plan prepared in support of The Preserve Specific Plan. The Project Applicant would be required to pay DIFs pursuant to Chino Municipal Code Chapter 3.40. Accordingly, the Project would result in a less-than-significant impact related to police protection services and further analysis of this issue is not required.

3. Schools

The Project would not create a direct demand for public school services, as the Project would contain non-residential uses that would not generate any school-aged children requiring public education. Because the proposed Project would not directly generate students and is not expected to indirectly draw a substantial number of students to the area, the proposed Project would not cause or contribute to a need to construct new or physically altered public school facilities. Although the Project would not create a demand for additional public school services, the Project Applicant would be required to contribute development impact fees to the Chino Unified School District, in compliance with California Senate Bill 50 (Greene). Mandatory payment

of school fees would be required prior to the issuance of a building permit. With mandatory payment of fees in accordance with California Senate Bill 50, impacts to public schools would not occur and no additional analysis of this issue is required.

4. Parks

The Project would not create a demand for public park facilities and would not result in the need to modify existing or construct new park facilities. Accordingly, implementation of the proposed Project would not adversely affect any park facility and impacts would be less than significant.

5. Other Public Services

The Project is not expected to result in a demand for other public facilities/services, including libraries, community recreation centers, post offices, and animal shelters. As such, implementation of the proposed Project would not adversely affect other public facilities or require the construction of new or modified public facilities and no impact would occur.

E. Recreation

The Project proposes to develop the Project site with industrial land uses. The Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. The Project also does not propose to construct any new on- or off-site recreation facilities. Accordingly, implementation of the proposed Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park nor result in environmental effects related to the construction or expansion of recreational facilities.

6.0 ALTERNATIVES

CEQA Guidelines § 15126.6(a) indicates the scope of alternatives to a proposed project that must be evaluated:

> *"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. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."*

As discussed in Section 4.0 of this EIR, the proposed Project would result in a significant adverse environmental effect that cannot be mitigated to below a level of significance after the implementation of Project design features, mandatory regulatory requirements, and feasible mitigation measures. The unavoidable significant impact is:

- Agriculture and Forestry Resources: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would convert Farmland with substantial agricultural production value to non-agricultural use. The loss of the Farmland on the Project site would be a significant direct and cumulatively-considerable impact in consideration of the past, ongoing, and projected future loss of farmland in the CBDA.
- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. After the application of Project design features, mandatory regulatory requirements, and feasible mitigation measures, long-term operational-related NO_X emissions would still exceed the applicable SCAQMD regional threshold for daily emissions. The Project's NO_X emissions would cumulatively contribute to an existing air quality violation in the SCAB (i.e., NO_X and O_3 concentrations, which do not meet regional attainment status).
- Transportation/Traffic: Significant Direct and Cumulatively Considerable Impact. The addition of Project-related traffic would cause and/or contribute to LOS deficiencies at numerous Study Area intersections and *CMP* facilities during Existing plus Project, Opening Year (2018, 2019, 2020), and Horizon Year (2040) traffic conditions

6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines § 15126.6(e) requires that an alternative be included that describes what would reasonably be expected to occur on the property in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., "no project" alternative). For projects that do not include revisions to a land use plan, like the proposed Project, the "no project" alternative is considered to be a circumstance under which the project does not proceed and the subject property is retained in its existing condition for the foreseeable future (CEQA Guidelines § 15126(e)(3)(A-B).

The following scenarios are identified by the City of Chino as potential alternatives to implementation of the Project.

6.1.1 No Project Alternative

The No Project Alternative considers no development on the Project site beyond that which occurs under existing conditions. As such, all existing structures would remain on the Project site (including the vacant dairy structures) and use of portions of the Project site for landscape plant nurseries and agriculture would continue for the foreseeable future. Under this alternative, no improvements would be made to the Project site. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the property in its existing condition.

6.1.2 Business Park Alternative

The Business Park Alternative would develop the Project solely with business park land uses. The Business Park Alternative would develop the Project site with multiple buildings that offer a combined 850,000 s.f. of building area on the Project site (0.27 FAR). The business park land uses proposed by this alternative are permitted by The Preserve Specific Plan.

This alternative was selected by the Lead Agency to evaluate the environmental effects of an alternative that eliminates the Project's large warehouse uses in favor of smaller-scale office and industrial uses and, also, reduces to total amount of building area on-site.

6.1.3 High-Cube Warehouse Alternative

The High-Cube Warehouse Alternative would develop the portion of the Project located east of future Mayhew Avenue and abutting Kimball Avenue with 500,000 s.f. of business park land uses and the portion of the Project site located west of future Mayhew Avenue with 700,000 s.f. of high-cube warehouse uses (0.38 FAR across total Project site). The business park land uses proposed by this alternative are permitted by The Preserve Specific Plan; the high-cube warehouse land uses proposed by this alternative are permitted by The Preserve Specific Plan subject to approval of a conditional use permit.

This alternative was selected by the Lead Agency to evaluate an alternative that provides approximately the same amount of building area as the proposed Project but replaces the Project's proposed standard warehouse uses with high-cube warehouse uses (which have more efficient operations than standard warehouses) and focuses the on-site warehouse uses west of Mayhew Avenue to maximize the distance between on-site warehouse uses and existing/planned residential land uses.

6.2 Alternatives Considered and Rejected

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines § 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the proposed Project, CEQA Guidelines § 15126.6(f)(1) notes:

> *"Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…and whether*

the proponent can reasonably acquire, control or otherwise have access to the alternative site…"

In determining an appropriate range of alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and, for a variety of reasons, rejected. Alternatives were rejected because either: 1) they could not accomplish the basic objectives of the Project, 2) they would not have resulted in a reduction of significant adverse environmental impacts, or 3) they were considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected are described below.

6.2.1 ALTERNATIVE SITES

CEQA does not require that an analysis of alternative sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternative site then this alternative should be considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR" (CEQA Guidelines § 15126.6(f)(2)).

The Project site is located within the geographical limits of The Preserve Specific Plan, which over the past decade-plus has been transitioning into an important economic center for the City of Chino. Furthermore, the Project site is designated for "Airport Related" land uses by the Chino General Plan and The Preserve Specific Plan, which are intended to be comprised of industrial and business park land uses that complement the existing Chino Airport. Based on a review of aerial photography, the City of Chino General Plan land use map, and list of approved/pending development proposals within the City of Chino (refer to Figure 4.0-1, *Cumulative Development Location Map*), in the City of Chino, there are no other available, undeveloped properties of similar size to the Project site that also have land use designations and zoning that allow the uses proposed by the Project.

If undeveloped sites in the City of Chino not designated or zoned for industrial land uses are considered, there is not any site in the City that would offer less developmental constraints, environmental constraints, and/or environmental impacts than the proposed Project site. Development of the Project at an alternate location would result in similar impacts as developing the Project at its proposed location, with the potential for greater impacts. In fact, if an alternative site were selected for the Project that was located farther from major arterial roads, like Kimball Avenue and Euclid Avenue, for example, or regional freeways, like SR-60 or SR-71, than the Project site under consideration, the severity of the Project's air quality impacts (and potentially traffic impacts) would increase as miles traveled for vehicles accessing/exiting the site would increase.

For the reasons summarized above, an alternative sites analysis is not required for the Project.

6.3 ALTERATIVE ANALYSIS

The following discussion compares the impacts of each alternative considered by the Lead Agency against the findings of the individual subsections within Section 4.0, *Environmental Analysis*, of this EIR. A conclusion is provided for each topic as to whether the alternative results in one of the following: (1) reduction of elimination of the proposed Project's impact, (2) a greater impact than would occur under the proposed Project, (3) the same impact as the proposed Project, or (4) a new impact that would not occur with

the Project. Table 6-1, *Alternative to the Proposed Project*, at the end of this section compares the impacts of the alternatives against those of the proposed Project and identifies the ability of the alternative to meet the basic objectives of the Project. As described in EIR Subsection 3.2, the proposed Project's basic objectives are:

A. To implement The Preserve Specific Plan by developing Class A building space that meets industry standards for modern, operational design criteria and can accommodate a variety of users.

B. To provide a viable reuse plan for former agricultural property that maximizes feasible development of the site so that the property continues to be economically productive when agricultural activities cease.

C. To diversify the City of Chino economy by developing a large property with a mix of employment-generating land uses with long-term economic viability.

D. To create employment-generating business in the City of Chino thereby reducing the need for members of the local workforce to commute outside the area for employment.

E. To develop employment-generating business in close proximity to regional transportation routes, including designated truck routes, to minimize traffic congestion on surface streets and minimize concomitant air pollution emissions from vehicle sources.

F. To develop a project with an architectural design and operational characteristics that are consistent with the development standards and the design guidelines established by The Preserve Specific Plan and complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.

G. To develop the subject property with land uses that are harmonious with the adjacent Chino Airport.

H. To develop a property that has access to available infrastructure.

6.3.1 No Project Alternative

The No Project Alternative allows decision-makers to compare the environmental impacts of approving the proposed Project to the environmental impacts that would occur if the property were to be left in its existing conditions for the foreseeable future. Under existing conditions, the southern portion of the site, abutting Bickmore Avenue, is occupied by two residential structures, ornamental landscape nurseries, ancillary agricultural structures, and vacant structures associated with a former dairy use. The northeastern portion of the site, which abuts Kimball Avenue, is occupied by two residential structures, a non-operational dairy farm, and ancillary structures/facilities associated with the shuttered dairy farm. The north-central portion of the Project site is comprised of agricultural fields and vacant land that has been subject to weed abatement activities (i.e., discing). A detailed description of the Project site's existing physical conditions was previously provided Section 2.0 of this EIR.

A. Aesthetics

The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. Under the No Project Alternative, the visual character and quality of the site would be maintained in its existing condition, which would be at odds with abutting properties that are in the process of developing with master-planned residential communities and industrial/business parks. Because the No Project Alternative would not complement existing and planned development surrounding the Project site, this Alternative's aesthetics impacts would be greater than the Project's.

B. Agriculture and Forestry Resources

The No Project Alternative would leave the property in its existing condition and the Project site would continue to be used for agricultural activities. The No Project Alternative would not convert any portion of the Project site to non-agricultural use and, as such, this Alternative would avoid the Project's significant and unavoidable impact to agricultural resources.

C. Air Quality

Under the No Project Alternative, existing residential and agricultural uses would remain on the Project site for the foreseeable future and no new sources of air pollution would be introduced on the Project site. The No Project Alternative would generate air pollution from day-to-day agricultural activities on the site as well as tailpipe emissions from employees and residents traveling to and from the Project site; however, the air pollutant emissions from the No Project Alternative would be substantially lower than the emissions that would result from the Project. The No Project Alternative would avoid the Project's significant and unavoidable impact related to NO_X emissions.

D. Biological Resources

The No Project Alternative would leave the property in its existing condition, which would include periodic disturbances related to plowing agricultural fields, discing fallow fields, and other routine, on-site maintenance activities. The No Project Alternative does have the potential to adversely affect sensitive or protected avian species, including the burrowing owl, and/or nests because surveys would not be conducted on-site prior to vegetation activities (such as plowing and discing fields) and protective measures would not be implemented to avoid or minimize impacts to these avian species. The No Project Alternative would result in greater impacts to biological resources than the proposed Project.

E. Cultural Resources & Tribal Cultural Resources

The No Project Alternative would leave the property in its existing condition, which would include periodic disturbances related to plowing agricultural fields, discing fallow fields, and other routine, on-site maintenance activities. Although not expected, the No Project Alternative does have the potential to uncover and adversely affect archaeological and/or tribal cultural resources during routine ground-disturbing activities on-site. In the event that archaeological and/or tribal cultural resources were uncovered on-site, the No Project Alternative would result in greater impacts than the Project because the No Project Alternative would not implement any procedures to protect, study, and preserve artifacts that were discovered.

F. Geology and Soils

The No Project Alternative would leave the property in its existing condition, which would include periodic disturbances related to plowing agricultural fields, discing fallow fields, and other routine, on-site maintenance activities; these ground-disturbing activities have the potential to result in water and/or wind

erosion that would not occur with the Project. The No Project Alternative would not construct any new structures on the Project site; accordingly, there would be no potential for this Alternative to expose people or structures to safety risks associated with geologic hazards.

G. Greenhouse Gas Emissions

Under the No Project Alternative, existing residential and agricultural uses would remain on the Project site for the foreseeable future and no new sources of GHG emissions would be introduced on the Project site. The No Project Alternative would generate GHG emissions from day-to-day agricultural activities on the site as well as tailpipe emissions from employees and residents traveling to and from the Project site; however, the GHG emissions from the No Project Alternative would be substantially lower than the emissions that would result from the Project.

H. Hazards and Hazardous Materials

Under the No Project Alternative, the existing dairy farms, ancillary structures, ornamental landscape nurseries, and residential homes that are present on the Project site remain in place, meaning the existing structures on-site that likely contain asbestos containing materials and lead based paint would remain in place. Likewise, the on-site septic systems would in place and in operation. Because the No Project Alternative would not alter or disturb the existing structures or septic systems on-site, no impact would occur under this Alternative related to the handling and disposal of asbestos containing materials, lead base paint, or septic systems. However, remediation of these potential sources of on-site contamination is a benefit of the proposed Project that would not be realized under this Alternative.

I. Hydrology and Water Quality

No changes to existing hydrology and drainage conditions would occur under the No Project Alternative. No storm water drainage improvements would be constructed and rainfall would be discharged from the site as sheet flow, as occurs under existing conditions. However, under this alternative, the storm water runoff leaving the site would not be filtered and would continue to contain sediment and other potential pollutants, as occurs under existing conditions.

J. Noise

Under the No Project Alternative, existing residential and agricultural uses would remain on the Project site for the foreseeable future and no new sources of noise would be introduced on the Project site. The No Project Alternative would generate minimal noise emissions from day-to-day agricultural activities on the site as well as traffic noise from employees and residents traveling to and from the Project site; however, the noise from the No Project Alternative would be substantially lower than the noise emissions that would result from the Project.

K. Transportation/Traffic

Under the No Project Alternative, no new development would occur on the property and no new traffic would be generated. The No Project Alternative would continue to generate traffic from employees and residents traveling to and from the Project site, as well as any delivery or haul trips associated with on-site agriculture and landscape nursery operations; however, this traffic is minimal and not expected to result in adverse impacts to the local or regional transportation network. The No Project Alternative would result in less traffic than the proposed Project and would avoid the Project's significant and unavoidable traffic impacts.

L. Utilities and Service Systems

No additional domestic water, sewer, or storm water drainage facilities would be needed for the No Project Alternative, and there would be no change in the demand for domestic water or waste water treatment services as compared to existing conditions. Also, this alternative would not result in the Project's increased demand for solid waste collection and disposal. Selection of this alternative would avoid all of the Project's demand placed on utilities and service systems.

M. Conclusion

Implementation of the No Project Alternative would result in no physical environmental impacts beyond those that have historically occurred on the property. All significant effects of the proposed Project would be avoided by the selection of this alternative. Because this alternative would avoid all of the Project's significant environmental impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified as the "environmentally superior alternative" then the EIR shall also identify an environmentally superior alternative among the other alternatives. The High-Cube Warehouse Alternative, as described in Subsection 6.1.3, is identified as the environmentally superior alternative.

The No Project Alternative would fail to meet all of the Project's objectives.

6.3.2 BUSINESS PARK ALTERNATIVE

The Business Park Alternative would develop the Project solely with business park land uses. The Business Park Alternative would develop the Project site with multiple buildings that offer a combined 850,000 s.f. of building area on the Project site. The Business Park Alternative is expected to develop buildings ranging in size from 7,500 s.f. to 50,000 s.f., similar in scale and architectural style and character to the business park uses proposed by the Project. The Business Park Alternative would install similar landscape improvements on-site as the Project (although the total landscape area would increase under this alternative because the total building area would be reduced relative to the Project). The Business Park Alternative would construct similar on- and off-site infrastructure improvements as the Project.

A. Aesthetics

Under the Business Park Alternative, the visual character and quality of the site and the amount of artificial light/glare that would be introduced on the property would be very similar to the proposed Project. As previously described in EIR Subsection 4.1, the Project site is not visible from any State- or locally-designated scenic highway. Accordingly, neither the proposed Project nor this Alternative would negatively impact a scenic highway. Also, neither this Alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. The aesthetic quality and character of the property after development of this Alternative would be mostly similar to that of the proposed Project – less building area (and smaller buildings) would be constructed under this Alternative; but, the building height and building materials would be similar. Neither the proposed Project nor this Alternative would result in significant direct or cumulatively-considerable impact to aesthetics.

B. Agriculture and Forestry Resources

The Business Park Alternative would convert the entire Project site to non-agricultural use and would result in identical impacts to agricultural resources as the proposed Project.

C. Air Quality

The Business Park Alternative would have a shorter construction phase than the Project due to the approximately 30 percent reduction in building area. As such, the aggregate of the air pollutant emissions generated during the construction of the Business Park Alternative would be reduced relative to the Project. However, the daily intensity of construction activities on the subject property would be similar under both this Alternative and the proposed Project. Therefore, the total daily emissions during the construction phase would be similar to the Project. As with the proposed Project, this Alternative also would require mitigation measures to reduce short-term emissions of particulate matter and NO_X to less than significant levels.

Although the Business Park Alternative would construct approximately 30 percent less building area than the Project, this Alternative would generate approximately 10,574 vehicle trips per day (utilizing Institute of Transportation Engineers [ITE] trip generation rate for business park, 12.44 vehicle trips per day per 1,000 s.f. of building area), including 1,374 truck trips per day. For comparison, the Project would generate approximately 7,496 vehicle trips per day, including 1,317 truck trips per day. Therefore, the Business Park Alternative would produce more operational air pollutant emissions than the Project. Long-term operational-related NO_X emissions under the Business Park Alternative would exceed the SCAQMD numerical thresholds for daily emissions, resulting in significant and unavoidable impacts.

The Project would expose nearby sensitive receptors to DPM emissions concentrations that fall below the SCAQMD significance threshold of 10 in one million. Thus, the Project's impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. Although the Business Park Alternative also is expected to result in less than significant impacts related to DPM emissions, the Business Park Alternative would produce slightly more DPM emissions than the Project due to the slight increase in daily truck traffic.

Like the Project, the Business Park Alternative would generate odors during short-term construction activities (e.g., diesel exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to the proposed Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Long-term operation of this Alternative would not create objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

D. Biological Resources

The Business Park Alternative would have the same on-site and off-site development footprint as the Project and would result in identical impacts to biological resources as the Project. The Business Park Alternative would require similar mitigation as the proposed Project and, after mitigation, both the Business Park Alternative and the proposed Project would result in less-than-significant impacts.

E. Cultural Resources & Tribal Cultural Resources

The Business Park Alternative would have the same on-site and off-site development footprint as the Project and would result in identical impacts to cultural and tribal cultural resources as the Project. The Business Park Alternative would require similar mitigation as the proposed Project and, after mitigation, both the Business Park Alternative and the proposed Project would result in less-than-significant impacts.

F. Geology and Soils

This Alternative would disturb the same physical area as the proposed Project and would, therefore, have the same potential for soil erosion during the construction phase as the proposed Project. Soil erosion impacts would be less significant under both the Project and this Alternative due to mandatory compliance with federal, state, and local water quality standards. The Business Park Alternative would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial hazards associated with seismic ground shaking.

G. Greenhouse Gas Emissions

Because the Business Park Alternative would reduce the Project's building area by approximately 30 percent, this Alternative is expected to require less energy to construct and operate than the Project and, therefore, result in a reduction of non-mobile source GHG emissions as compared to the proposed Project. Notwithstanding, the Business Park Alternative would generate approximately 3,078 more daily vehicle trips than the proposed Project and would result in a substantial increase in mobile source GHG emissions. The Business Park Alternative would result in a greater GHG impact than the Project; however, after mandatory compliance with the City of Chino CAP, this Alternative would result in a less-than-significant impact.

H. Hazards and Hazardous Materials

Implementation of both the Business Park Alternative and the Project would not result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under the Business Park Alternative would have the same or similar potential to handle and store hazardous materials as would the proposed Project. With mandatory regulatory compliance, neither the Business Park Alternative nor the proposed Project would be expected to pose a significant hazard to the public or the environment related to the use, handling, storage, and/or transport of hazardous materials.

I. Hydrology and Water Quality

The Business Park Alternative would disturb the same physical area as the proposed Project and neither the proposed Project nor this Alternative would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the proposed Project and the Business Park Alternative would both result in less-than-significant impacts to existing drainage patterns.

In the long-term, potential hydrology and water quality effects on the Project site would be identical under both the Business Park Alternative and the Project. The proposed Project along with this Alternative would be required to implement a long-term WQMP to ensure that storm water runoff leaving the site does not contain substantial pollutant concentrations. Selection of this Alternative would result in similar, less-than-significant, operational impacts as the proposed Project to hydrology and water quality.

J. Noise

This Alternative would generate noise during short-term construction activities and under long-term operation. The types of daily construction activities conducted on- and off-site would be similar under both the Business Park Alternative and the Project, although the length of construction activities on the site would be reduced under this Alternative as less building area would be constructed on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction phase would decrease under this Alternative as compared to the proposed Project. Under long-term operational conditions, on-site noise from Project site operations would be similar to the proposed Project; however, traffic noise would

substantially increase under the Business Park Alternative because this alternative would generate approximately 43 percent more traffic than the Project.

K. Transportation/Traffic

The Business Park Alternative would generate approximately 10,547 vehicle trips on a daily basis with 1,190 AM peak hour trips and 1,071 PM peak hour trips (utilizing the ITE trip generation rate for business park land uses). In comparison, the proposed Project would generate approximately 7,396 vehicle trips on a daily basis with 791 AM peak hour trips and 798 PM peak hour trips. Selection of this Alternative would result in more traffic than the proposed Project and would increase the severity of the Project's direct and cumulatively impacts to study area roadways, intersections, and freeways and would have the potential to result in new impacts that would not occur under the Project. This alternative likely would be required to implement more mitigation than the proposed Project.

L. Utilities and Service Systems

The Business Park Alternative would have a slightly reduced demand for water, sewer, and storm water drainage service/facilities relative to the proposed Project. In addition, this Alternative would result in a slightly reduced demand for solid waste collection and disposal services relative to the proposed Project.

M. Conclusion

The Business Park Alternative would not avoid or lessen the Project's significant and unavoidable impacts and would, actually, increase the severity of the Project's significant and unavoidable air quality and traffic impacts. The Business Park Alternative would slightly reduce the Project's demands for utilities and service systems; but, all other impacts would be similar or identical to the Project.

The Business Park Alternative would meet all of the Project's objectives except for Objective "C." Although the Business Park Alternative would develop the site with employment-generating land uses, this Alternative would develop the entire Project site with a single land use and would not provide a mix of employment-generating uses.

6.3.3 HIGH-CUBE WAREHOUSE ALTERNATIVE

The High-Cube Warehouse Alternative would develop the portion of the Project located east of future Mayhew Avenue and abutting Kimball Avenue with 500,000 s.f. of business park land uses and the portion of the Project site located west of future Mayhew Avenue with 700,000 s.f. of high-cube warehouse uses. Within the High-Cube Warehouse Alternative, business park buildings are expected to range in size from 7,500 s.f. to 50,000 s.f.; the high-cube warehouse component of this alternative could be occupied by at least one and no more than three warehouse buildings. The architectural style and character of the High-Cube Warehouse Alternative would be similar to the Project. The High-Cube Warehouse Alternative also would install similar landscape improvements and on- and off-site infrastructure improvements as the Project.

A. Aesthetics

As previously described in EIR Subsection 4.1, the Project site is not visible from any State- or locally-designated scenic highway. Accordingly, neither the proposed Project nor this Alternative would negatively impact a scenic highway. Also, neither this Alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. The aesthetic quality and character of the property after development of this Alternative would be relatively similar to the Project; however, this

Alternative would place large warehouse buildings (larger than any building proposed by the Project or constructed/approved in the immediate Project vicinity) on the western portion of the site which would conflict with the local visual character.

B. Agriculture and Forestry Resources

The High-Cube Warehouse Alternative would convert the entire Project site to non-agricultural use and would result in identical impacts to agricultural resources as the proposed Project.

C. Air Quality

The High-Cube Warehouse Alternative would have an incrementally shorter construction phase than the Project due to a very slight reduction in building area. As such, the aggregate of the air pollutant emissions generated during the construction of the Business Park Alternative would be slightly reduced relative to the Project. However, the daily intensity of construction activities on the subject property would be similar under both this Alternative and the proposed Project. Therefore, the total daily emissions during the construction phase would be similar to the Project. As with the proposed Project, this Alternative also would require mitigation measures to reduce short-term emissions of particulate matter and NO_X to less than significant levels.

The High-Cube Warehouse Alternative would generate approximately 7,396 vehicle trips per day (using ITE trip generation rates of 12.44 vehicle trips per day per 1,000 s.f. of business park building area and 1.68 vehicle trips per day per 1,000 s.f. of high-cube building area), including 1,256 truck trips per day. For comparison, the Project would generate slightly more daily vehicle traffic: approximately 7,496 vehicle trips per day, including 1,317 truck trips. Therefore, the High-Cube Warehouse Alternative would result in an incremental reduction in operational air pollutant emissions relative to the Project. Long-term operational-related NO_X emissions under the High-Cube Warehouse would exceed the SCAQMD numerical thresholds for daily emissions, resulting in significant and unavoidable impacts.

The Project would expose nearby sensitive receptors to DPM emissions concentrations that fall below the SCAQMD significance threshold of 10 in one million. Thus, the Project's impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. The High-Cube Warehouse Alternative would result in an incremental reduction to the Project's less-than-significant impacts due to this Alternative generating 61 fewer truck trips per day.

Like the Project, the High-Cube Warehouse Alternative would generate odors during short-term construction activities (e.g., diesel exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to the proposed Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Long-term operation of this Alternative would not create objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

D. Biological Resources

The High-Cube Warehouse Alternative would have the same on-site and off-site development footprint as the Project and would result in identical impacts to biological resources as the Project. The High-Cube Warehouse Alternative would require similar mitigation as the proposed Project and, after mitigation, this Alternative and the proposed Project would result in less-than-significant impacts.

E. Cultural Resources & Tribal Cultural Resources

The High-Cube Warehouse Alternative would have the same on-site and off-site development footprint as the Project and would result in identical impacts to cultural and tribal cultural resources as the Project. The High-Cube Warehouse Alternative would require similar mitigation as the proposed Project and, after mitigation, both the proposed Project and this Alternative would result in less-than-significant impacts.

F. Geology and Soils

This Alternative would disturb the same physical area as the proposed Project and would, therefore, have the same potential for soil erosion during the construction phase as the proposed Project. Soil erosion impacts would be less significant under both the Project and this Alternative due to mandatory compliance with federal, state, and local water quality standards. The High-Cube Warehouse Alternative would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial hazards associated with seismic ground shaking.

G. Greenhouse Gas Emissions

The High-Cube Warehouse Alternative would incrementally reduce the Project's GHG emissions due to the slight reduction in building area (requiring less energy – and GHG emission – to construct and operate this Alternative) and the slight reduction in daily vehicle traffic (thereby producing less tailpipe emissions). Like the Project, the High-Cube Warehouse Alternative would be required to comply with the City of Chino CAP and would result in a less-than-significant impact related to GHG emissions.

H. Hazards and Hazardous Materials

Implementation of both the High-Cube Warehouse Alternative and the Project would not result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under the High-Cube Warehouse Alternative would have the same or similar potential to handle and store hazardous materials as would the proposed Project. With mandatory regulatory compliance, neither the High-Cube Warehouse Alternative nor the proposed Project would be expected to pose a significant hazard to the public or the environment related to the use, handling, storage, and/or transport of hazardous materials.

I. Hydrology and Water Quality

The High-Cube Warehouse Alternative would disturb the same physical area as the proposed Project and neither the proposed Project nor this Alternative would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the proposed Project and the High-Cube Warehouse Alternative would both result in less-than-significant impacts to existing drainage patterns.

In the long-term, potential hydrology and water quality effects on the Project site would be identical under both the High-Cube Warehouse Alternative and the Project. The proposed Project along with this Alternative would be required to implement a long-term WQMP to ensure that storm water runoff leaving the site does not contain substantial pollutant concentrations. Selection of this Alternative would result in similar, less-than-significant, operational impacts as the proposed Project to hydrology and water quality.

J. Noise

This Alternative would generate noise during short-term construction activities and under long-term operation. The types of daily construction activities conducted on- and off-site would be similar under both

the High-Cube Warehouse Alternative and the Project, although the length of construction activities on the site would be slightly reduced under this Alternative as less building area would be constructed on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction phase would be incrementally decreased under this Alternative as compared to the proposed Project. Under long-term operational conditions, on-site operational noise and off-site mobile source (i.e., traffic) noise for the High-Cube Warehouse Alternative would be similar to the proposed Project. (Off-site traffic noise would be slightly reduced under this Alternative; however, the magnitude of the reduction would be so small that it would not be perceptible to the human ear.)

K. Transportation/Traffic

The High-Cube Warehouse Alternative would generate approximately 7,396 vehicle trips on a daily basis with 777 AM peak hour trips and 714 PM peak hour trips (utilizing the ITE trip generation rates for business park and high-cube warehouse land uses). In comparison, the proposed Project would generate approximately 7,396 vehicle trips on a daily basis with 791 AM peak hour trips and 798 PM peak hour trips. Selection of this Alternative would incrementally decrease the amount of daily traffic relative to the Project; however, the reduction would be so small that none of the Project's significant and unavoidable traffic impacts would be avoided nor would the level of service or average delay/volume-to-capacity ratio/vehicle density at study area intersections, roadways, or freeway segments be substantially improved. This Alternative would be required to implement the same mitigation as the proposed Project.

L. Utilities and Service Systems

The High-Cube Warehouse Alternative would result in an incremental reduction in the demand for water, sewer, storm water drainage, and solid waste disposal service/facilities relative to the proposed Project due to a slight reduction in building area. Both the High-Cube Warehouse Alternative and the proposed Project would result in less-than-significant impacts to utilities and service systems.

M. Conclusion

The High-Cube Warehouse Alternative would not avoid the Project's significant and unavoidable impacts. The High-Cube Warehouse Alternative would slightly reduce the amount of building area constructed on-site relative to the Project, thereby incrementally reducing the amount of operational air pollutant emissions and traffic; however, the reductions would be marginal and the alternative would be required to implement the same mitigation for air quality and traffic as the proposed Project. The High-Cube Warehouse Alternative would result in an impact to aesthetics that would not occur under the Project (due to a conflict with local visual character). All other impacts would be similar to the Project. The High-Cube Warehouse Alternative is identified as the environmentally superior alternative.

The High-Cube Warehouse Alternative would not meet the Project's Objective "F" (due to a conflict with the local visual character) and would meet Objective "C" less effectively than the Project (due to this alternative offering a narrower range of employment land uses). The High-Cube Warehouse Alternative would meet all other Project objectives.

Table 6-1 Alternatives to the Proposed Project

Environmental Topic	Proposed Project Significance of Impacts After Mitigation	Level of Impact Compared to the Proposed Project		
		No Project Alternative	Business Park Alternative	High-Cube Warehouse Alternative
Aesthetics	Less-than-Significant Impact	Increased	Similar	Increased
Agriculture	Significant and Unavoidable	Avoided	Similar	Similar
Air Quality	Significant and Unavoidable	Avoided	Increased	Reduced, Not Avoided
Biological Resources	Less-than-Significant Impact	Increased	Similar	Similar
Cultural & Tribal Cultural Resources	Less-than-Significant Impact	Increased	Similar	Similar
Geology and Soils	Less-than-Significant Impact	Mixed	Similar	Similar
Greenhouse Gas Emissions	Less-than-Significant Impact	Reduced	Increased	Reduced
Hazards and Hazardous Materials	Less-than-Significant Impact	Reduced	Similar	Similar
Hydrology and Water Quality	Less-than-Significant Impact	Mixed	Similar	Similar
Noise	Less-then-Significant Impact	Reduced	Increased	Reduced
Transportation and Traffic	Significant and Unavoidable	Reduced	Increased	Similar
Utilities Service and Systems	Less-than-Significant Impact	Reduced	Reduced	Similar
Ability to Meet the Basic Objectives of the Project				
Objective A: To implement The Preserve Specific Plan by developing Class A building space that meets industry standards for modern, operational design criteria and can accommodate a variety of users.		No	Yes	Yes
Objective B: To provide a viable reuse plan for former agricultural property that maximizes feasible development of the site so that the property continues to be economically productive when agricultural activities cease.		No	Yes	Yes
Objective C: To diversify the City of Chino economy by developing a large property with a mix of employment-generating land uses with long-term economic viability.		No	No	Yes, but less effectively than Project
Objective D: To create employment-generating business in the City of Chino thereby reducing the need for members of the local workforce to commute outside the area for employment.		No	Yes	Yes
Objective E: To develop employment-generating business in close proximity to regional transportation routes, including designated truck routes, to minimize traffic congestion on surface streets and minimize concomitant air pollution emissions from vehicle sources.		No	Yes	Yes

Table 6-1 Alternatives to the Proposed Project

Environmental Topic	Proposed Project Significance of Impacts After Mitigation	Level of Impact Compared to the Proposed Project		
		No Project Alternative	Business Park Alternative	High-Cube Warehouse Alternative
Objective F: To develop a project with an architectural design and operational characteristics that are consistent with the development standards and the design guidelines established by The Preserve Specific Plan and complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.		No	Yes	No
Objective G: To develop the subject property with land uses that are harmonious with the adjacent Chino Airport.		No	Yes	Yes
Objective H: To develop a property that has access to available infrastructure.		No	Yes	Yes

7.0 REFERENCES

7.1 PERSONS INVOLVED IN THE PREPARATION OF THIS EIR

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7.2 DOCUMENTS INCORPORATED BY REFERENCE IN THIS EIR

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

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7.4 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Altitude Business Centre Project EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices

is available for review at the City of Chino Community Development Department, Planning Division at 13220 Central Avenue Chino, CA 91710.

Appendix A Initial Study for Altitude Business Centre, Notice of Preparation, and Written Comments

Appendix B1 Urban Crossroads, 2018a. *Altitude Business Centre Air Quality Impact Analysis*. May 24, 2018.

Appendix B2 Urban Crossroads, 2018b. *Altitude Business Centre Mobile Source Health Risk Assessment.* May 24, 2018.

Appendix B3 Urban Crossroads, 2019a. *Altitude Business Centre Supplemental Air Quality Assessment.* March 22, 2019.

Appendix B4 Urban Crossroads, 2019b. *Altitude Business Centre Supplemental Air Quality Calculations*. August 19, 2019.

Appendix C M.J. Klinefelter (MJK), 2018. *Biological Resources Assessment and Burrowing Owl Survey Report, Altitude Business Centre*. August 31, 2018.

Appendix D1 Brian F. Smith and Associates (BFSA), 2016a. *Phase I Cultural Resources Survey for the Kimball Business Park Project*. October 25, 2016.

Appendix D2 Brian F. Smith and Associates (BFSA), 2016b. *Paleontological Resource and Monitoring Assessment for the Proposed Kimball Business Park Project in the City of Chino, San Bernardino County, California*. August 31, 2016.

Appendix E LGC Geo-Environmental, Inc. (LGC), 2016. *Geotechnical Investigation and Manure Evaluation for the Proposed 121 Acre Richland/Chino Bickmore Properties Business Center and Residential Development in the City of Chino, San Bernardino County, California.* September 13, 2016.

Appendix F Urban Crossroads, 2018c. *Altitude Business Center Greenhouse Gas Analysis*. May 24, 2018.

Appendix G1 Hillmann Consulting (HMC), 2017a. *Phase I Environmental Site Assessment*. April 10, 2017.

Appendix G2 Hillmann Consulting (HMC), 2017b. *Limited Phase II Subsurface Investigation Report*. June 12, 2017.

Appendix H1 ProActive Engineering Consultants (ProActive), 2019a. *Preliminary Water Quality Management Plan for Tentative Parcel Map 19756.* February 1, 2019.

Appendix H2 ProActive Engineering Consultants (ProActive), 2019b. *Preliminary Drainage Study for Tentative Parcel Map 19756.* March 21, 2019.

Appendix I Urban Crossroads, 2018d. *Altitude Business Centre Noise Impact Analysis*. September 19, 2018.

Appendix J Urban Crossroads, 2019b. *Kimball Business Center (Renamed: Altitude Business Centre) Traffic Impact Analysis*. March 4, 2019.

Appendix K ProActive Engineering Consultants (ProActive), 2017c. *Water Supply Assessment for Richland Properties*. May 5, 2017.

Appendix L Urban Crossroads, 2018e. *Altitude Business Center Energy Analysis*. May 24, 2018.