3.8 Noise

3.8.1 Introduction

This section describes the environmental and regulatory setting for noise for the Project and provides information regarding noise impacts that would result from the Project.

The analysis methods, data sources, significance thresholds, and terminology used are described. The analysis in this section includes impact determinations under CEQA and identifies mitigation measures that would reduce or avoid significant impacts, where feasible, for the elements of the Project including the Housing and Public Safety Element Updates. Details on the location of the Project and a description of Project activities are included in Chapter 2*, Project Description*, of this EIR.

Noise Fundamentals

Noise is commonly defined as unwanted sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is disturbing or annoying.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

Technical acoustical terms used in this section are defined in Table 3.8-1.

Table 3.8-1. Definitions of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound equal to 20 times the logarithm to base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micropascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals in air). Sound pressure level is the quantity that is measured directly by a sound level meter.
Frequency (Hertz [Hz])	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz, and ultrasonic sounds are above 20,000 Hz.

Term	Definition
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA L_{eq}(h).
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, which is obtained by adding 5 dB to sound levels in the evening from 7 p.m. to 10 p.m. and 10 dB to sound levels between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, which is obtained by adding 10 dB to sound levels measured at night between 10 p.m. and 7 a.m.
L_2, L_8, L_{25}. L_{50}, L_{90}, L_{99}	A-weighted noise levels that are exceeded 2%, 8%, 25%, 50%,90%, and 99% of the time during the measurement period.
Maximum Sound Level (L_{max})	The maximum sound level measured during the measurement period.
Minimum Sound Level (L_{min})	The minimum sound level measured during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

Sound Descriptors

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micropascals (µPa). One µPa is approximately one hundred-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this large range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe the sound pressure level (also referred to simply as the sound level) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on human sensitivity to those frequencies. The

A-weighted sound level (expressed in units of dBA) can be computed on the basis of this information.

The A-weighting scale approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Table 3.8-2 describes typical A-weighted sound levels for various noise sources.

Table 3.8-2. Typical A-Weighted Sound Levels

Common Outdoor Noise Source	Sound Level (dBA)	Common Indoor Noise Source
	— 110 —	Rock band
Jet flying at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one excavator produces a sound pressure level of 80 dBA, two excavators would not produce 160 dBA. Rather, they would combine to produce 83 dBA. The cumulative sound level of any number of sources, such as excavators, can be determined using decibel addition.

Noise Descriptors

Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations is utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time varying events. This energy-equivalent sound/ noise descriptor is called L_{eq}. A common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration. The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately plus or minus 1 dBA. Two metrics describe the 24-hour average: day/night noise level (L_{dn}) and Community Noise Equivalent Level (CNEL) (defined in Table 3.8-1). Both include penalties for noise during nighttime hours; CNEL also penalizes noise during the evening. CNEL and L_{dn} are normally within 1 dBA of each other and used interchangeably in this section.

Human Response to Noise

Studies have shown that under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. In the normal environment, the healthy human ear can detect changes of about 2 dBA; however, it is widely accepted that changes of 3 dBA in the normal environment are considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the noise source) resulting in a 3-dB increase in sound would generally be barely detectable by the human ear.

Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors.

Geometric Spreading

Sound from a single source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a "line" source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level (i.e., attenuation) from a line source is 3 dBA per doubling of distance.

Ground Absorption

Usually the noise path between the source and the observer is very close to the ground. The excess noise attenuation from ground absorption occurs due to acoustic energy losses on sound wave reflection. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically "hard" sites (i.e., sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receptor), no excess ground attenuation is assumed because the sound wave is reflected without energy losses. For acoustically absorptive or "soft" sites (i.e., sites with an

absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric Effects

Research by the California Department of Transportation (Caltrans) and others has shown that atmospheric conditions can have a major effect on noise levels. Wind has been shown to be the single most important meteorological factor within approximately 500 feet, whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receptors downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation, with cooler air near the surface, where the sound source tends to be and the warmer air above which acts as a cap, causing a reflection of ground level–generated sound).

Shielding by Natural or Human-Made Features

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 this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and frequency of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor with the specific purpose of reducing noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

Groundborne Vibration Fundamentals

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of velocity or acceleration. Groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment (such as blasting and pile driving), steel-wheeled trains, and heavy trucks on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Groundborne vibration can be described in terms of peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s). For transient vibration sources (single isolated vibration events such as blasting), the human response to vibration varies from barely perceptible at a PPV of 0.04 in/s, to distinctly perceptible at a PPV of 0.25 in/s, and severe at a PPV of 2.0 in/s. For continuous or frequent intermittent vibration sources (such as impact pile driving or vibratory compaction equipment), the human response to vibration varies from barely perceptible at a PPV of 0.01 in/s, to distinctly perceptible at a PPV of 0.04 in/s, and severe at a PPV of 0.4 in/s (Caltrans

2020). If a person is engaged in any type of physical activity, vibration tolerance increases considerably.

3.8.2 Environmental Setting

The City of Riverside (City) is in western Riverside County and is bounded on the north by the Santa Ana River and the cities of Jurupa Valley, Colton, and Rialto (San Bernardino County); on the south by the unincorporated communities of Woodcrest and Mockingbird Canyon; on the north and east by the unincorporated community of Highgrove and the city of Moreno Valley; and on the west by the unincorporated community of Home Gardens and the cities of Norco and Corona. Major noise sources within or surrounding the City include State Route (SR-) 91, SR-60 and Interstate 215. Other transportation-related noise sources throughout the City include local roadways, the Union Pacific Railroad and BNSF Railway, commuter rail lines, and local airports such as Riverside Municipal Airport within the City and March Air Reserve Base and Flabob Airport adjacent to the City. The *Riverside General Plan 2025* (GP 2025) Noise Element identifies the 70, 65, and 60 dBA CNEL contours as they extend out from these transportation facilities into the surrounding land uses.

Other noise sources that may be noticeable within the City include localized noise sources associated with housing, commercial, and industrial development, such as parking lot noise, heating, ventilating, and air conditioning (HVAC) systems operating, and other local noise sources.

In order to quantify the existing ambient noise conditions throughout the City, noise monitoring was conducted at 24 locations within the City and were next to Opportunity Sites throughout the City (identified on Figure 3.8-1). Field measurements were conducted from May 17 through 19, 2021. Long-term (LT) noise monitoring was conducted at four locations, designated LT-1 through LT-4, and short-term (ST) noise monitoring was conducted at 20 locations, designated ST-1 through ST-20. Field measurements were taken at representative land uses throughout the City and in close proximity to the Opportunity Sites and within specific wards. The sound-level meters used for both the LT and ST noise monitoring were field calibrated, using a Larson Davis CAL200 acoustical calibrator, prior to each measurement to ensure accuracy; the calibration was also rechecked at the conclusion of each measurement. Field noise survey sheets and measurement location photos are provided in Appendix NOI-1.

Long-Term Noise Measurements

LT ambient noise measurements were conducted from May 17 through 19, 2021, at four locations throughout the City using Type 2 sound-level meters. LT measurement sites were selected to capture daily noise-level patterns and statistics continuously over 1-hour intervals. Approximately 24-hour days of continuous data were recorded at each location. Table 3.8-3 summarizes the results of the LT noise measurements in terms of the range of hourly measured noise levels and the maximum and minimum measured noise level at each location.

Figure 3.8-1

Short and Long-Term Field Measurements

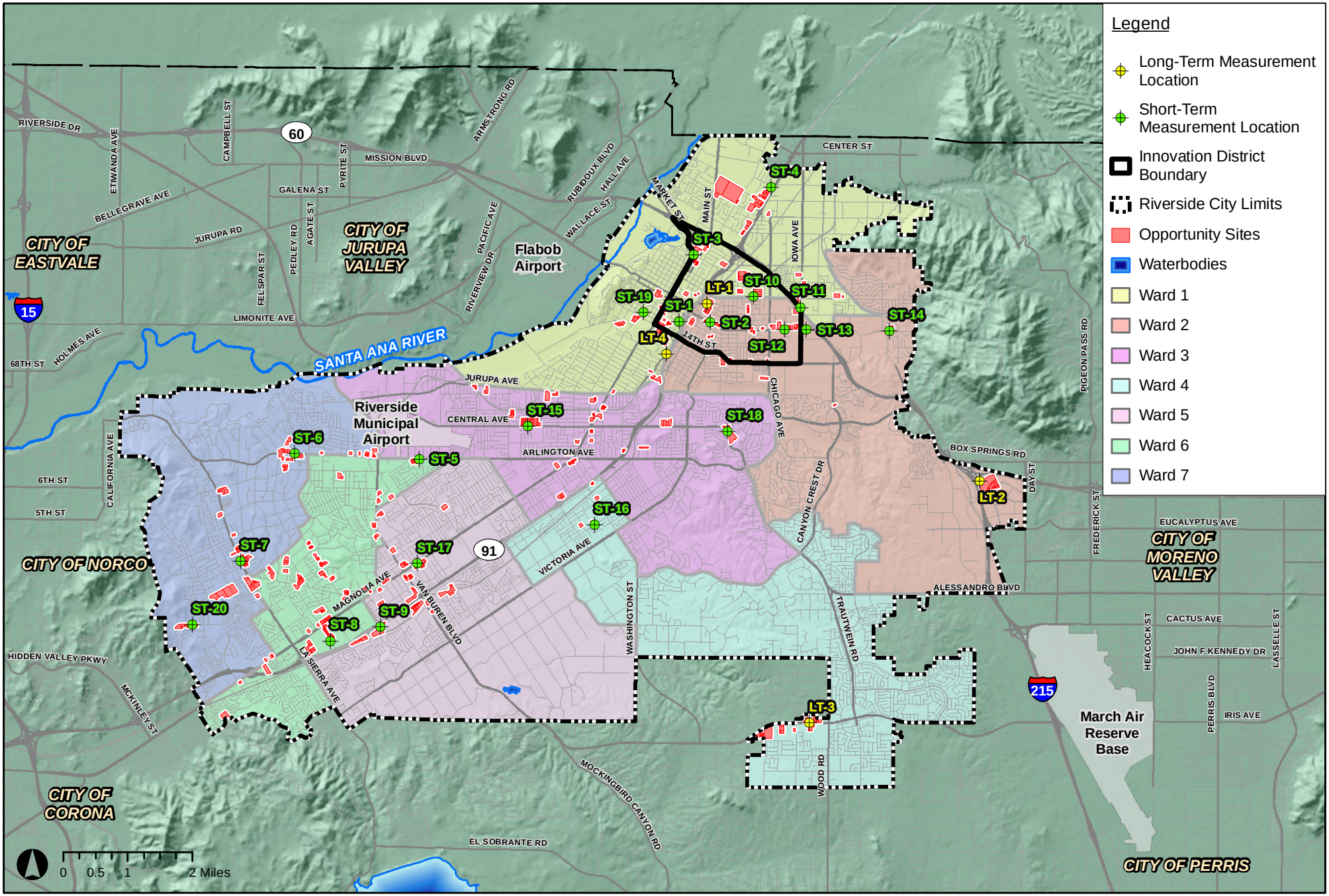


Table 3.8-3. Summary of Noise Measurement Results (Long Term)

Site#	Location/Ward	Start Date	CNEL (dBA)	Range of Hourly L_{eq} Values (average), dBA	Range of L_{max} Values, dBA
LT-1	Near 3450 Commerce St/2	5/17/2021	83.9	60.8–80.1	58.1–106.6
LT-2	Near 2550 Canyon Springs Pkwy/2	5/18/2021	80.4	71.5–75.7	47–98
LT-3	Near 18681 Van Buren Blvd/4	5/18/2021	83.7	71.4–80.1	46.7–104.5
LT-4	Near 4632 Olivewood Ave/1	5/17/2021	80.0	69.7–76.7	68–97.4

Source: ICF field noise measurements (see Appendix NOI-1).
L_{max} = maximum sound level

Short-Term Noise Measurements

ST measurement locations were selected to supplement LT measurements at surrounding land uses. All field measurements were taken with a Larson Davis Model 831 or LxT Type 1 sound-level meter. Each measurement lasted approximately 20 minutes and was conducted with the meter mounted on a tripod at a height of 5 feet above the ground, with a wind screen installed over the measurement microphone to reduce the effects of wind-related interference. Noise metrics—including L_{eq}, minimum sound level (L_{min}), maximum sound level (L_{max}), $L_{1.67}$, $L_{8.33}$, L_{25}, L_{50}, L_{90}, and L_{99} noise descriptors, defined in Table 3.8-1—were recorded subsequent to the conclusion of each measurement. Data from the measurements are shown in Table 3.8-4.

Table 3.8-4. Summary of Noise Measurement Results (Short Term)

Site#	Address/Ward	Date	Time of Day	Hourly L_{eq} Values (average), dBA	L_{max} Values, dBA
ST-1	4080 Lemon St/1	5/17/2021	11:03	67.7	77.1
ST-2	2870 University Ave/2	5/17/2021	11:37	68.6	82.8
ST-3	2727 Main St/1	5/17/2021	09:34	67.3	79.9
ST-4	821 West La Cadena Dr/1	5/17/2021	08:48	69.2	75.9
ST-5	6674 Arlington Ave/6	5/17/2021	12:02	71.3	83.3
ST-6	10249 Arlington Ave/7	5/17/2021	11:20	67.5	84.5
ST-7	5061 La Sierra Ave/7	5/17/2021	09:30	70.6	88.1
ST-8	3625 Polk St/6	5/17/2021	08:05	61.6	74.3
ST-9	10125 Indiana Ave/5	5/17/2021	07:15	72.3	88.3
ST-10	1825 3rd St/1	5/17/2021	12.11	68.5	81.5
ST-11	3375 Iowa Ave/1	5/18/2021	07:56	64.1	80.6
ST-12	1485 University Ave/2	5/18/2021	08:26	59.4	73.5
ST-13	1223 University Ave/2	5/17/2021	13:00	65.8	77.7
ST-14	191 West Big Springs Rd/2	5/17/2021	14:08	58.3	71.9
ST-15	5055 Central Ave/3	5/17/2021	13:05	71.1	94.4
ST-16	7267 Lincoln Ave/4	5/17/2021	13:31	58.6	76.2
ST-17	9328 Magnolia Ave/5	5/17/2021	10:38	62.1	78.0
ST-18	5500 Alessandro Blvd/3	5/17/2021	14:29	71.5	80.3
ST-19	4381 Brookton Ave/1	5/17/2021	10:23	61.3	76.0

Site#	Address/Ward	Date	Time of Day	Hourly L_{eq} Values (average), dBA	L_{max} Values, dBA
ST-20	12010 Raley Dr/7	5/17/2021	08:55	48.8	70.2

Source: ICF field noise measurements (see Appendix NOI-1).

3.8.3 Regulatory Setting

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of noise in this EIR.

Federal

There are no federal noise standards that specifically apply to the Project.

State

California Department of Health Services Noise Standards

The California Department of Health Services has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. These guidelines for land use and noise exposure compatibility are shown in Table 3.8-5. In addition, Section 65302(f) of the California Government Code requires each county and city in the state to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community, (2) recognize Office of Noise Control guidelines, and (3) analyze and quantify current and projected noise levels.

Table 3.8-5. California Department of Health Services Community Noise Exposure (L_{dn} or CNEL)

Land Use	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential: Low-Density, Single-family, Duplex, Mobile Homes	50–60	55–70	70–75	above 75
Residential: Multi-Family	50–65	60–70	70–75	above 75
Transient Lodging: Motels, Hotels	50–65	60–70	70–80	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Auditoriums, Concert Halls, Amphitheaters	--	50–70	--	above 70
Sports Arena, Outdoor Spectator Sports	--	50–75	--	above 75
Playgrounds, Neighborhood Parks	50–70	--	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	--	70–80	above 80
Office Buildings, Business and Professional Commercial	50–70	67–77	above 75	--
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	---

Source: State of California Governor's Office of Planning and Research 2017.

[1] Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
[2] Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
[3] Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
[4] Clearly Unacceptable: New construction or development should generally not be undertaken.

California Department of Transportation

The City has not designated a basic criterion for limiting groundborne vibration. Caltrans provides suggested criteria to address potential building damage as well as human annoyance as a result of construction-related groundborne vibration. Therefore, although the Project would not be subject to Caltrans oversight, guidance published by the agency nonetheless provides criteria that could be useful in establishing vibration thresholds for the Project. Guideline criteria from Caltrans' widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) are provided in Table 3.8-12 and Table 3.8-13.

Local

City of Riverside General Plan

GP 2025 was adopted in November 2007 and considers the continued growth of the City to 2025. GP 2025 serves as the major tool for directing growth within the City and presents a comprehensive plan to accommodate the City's growing needs. GP 2025 is intended to implement the community's vision for what Riverside can be in 2025.

Noise Element

In compliance with California Government Code Section 65302(a) requirements, the Noise Element includes objectives, policies, and guidance with respect to noise and development within the City (Table 3.8-6).

Table 3.8-6. Relevant Riverside County General Plan, GP 2025, and Specific Plan Policies

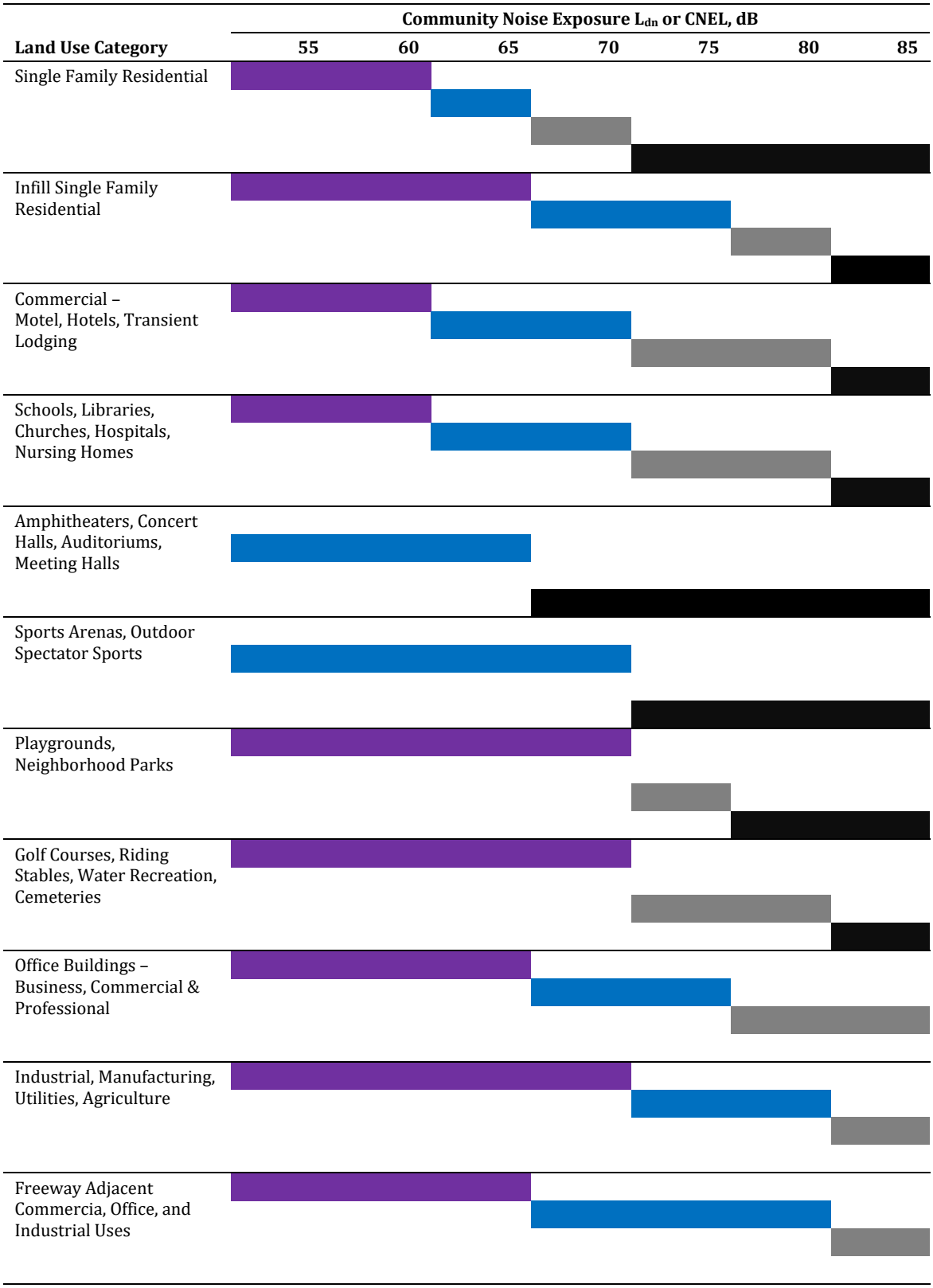
Plan	Policy
Riverside General Plan 2025	
Noise Element Objective N-1: Minimize noise levels from point sources throughout the community and, wherever possible, mitigate the effects of noise to provide a safe and healthful environment.	Policy N–1.1: Continue to enforce noise abatement and control measures particularly within residential neighborhoods. Policy N–1.2: Require the inclusion of noise-reducing design features in development consistent with standards in Figure N–10 (Noise/Land Use Compatibility Criteria), Title 24 California Code of Regulations and Title 7 of the Municipal Code. Policy N–1.3: Enforce the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences and special events are minimized.

Plan	Policy
	Policy N–1.4: Incorporate noise considerations into the site plan review process, particularly with regard to parking and loading areas, ingress/egress points and refuse collection areas. Policy N–1-5: Avoid locating noise-sensitive land uses in existing and anticipated noise-impacted areas.
Objective N–2: Minimize the adverse effects of airport-related noise through proper land use planning.	Policy N–2.1: Ensure that new development can be made compatible with the noise environment by using noise/land use compatibility standards (Figure N–10 – Noise/Land Use Noise Compatibility Criteria) and the airport noise contour maps (found in the Riverside County Airport Land Use Compatibility Plans) as guides to future planning and development decisions. Policy N–2.2: Avoid placing noise-sensitive land uses (e.g., residential uses, hospitals, assisted living facilities, group homes, schools, day care centers, etc.) within the high noise impact areas (over 60 dB CNEL) for Riverside Municipal Airport and Flabob Airport in accordance with the Riverside County Airport Land Use Compatibility Plan.
Specific Plans	
Canyon Springs Business Park Specific Plan	There are no applicable policies relevant to the Project regarding noise.
Downtown Specific Plan	There are no applicable policies relevant to the Project regarding noise.
Hunter Business Park Specific Plan	There are no applicable policies relevant to the Project regarding noise.
La Sierra University Specific Plan	Policy LSU-2.3: As the Specific Plan and its Environmental Impact Report addresses in a comprehensive fashion issues such as land use, traffic, noise, hydrology, earth, air quality, biological resources, public services, cultural resources, aesthetics, infrastructure and grading, a Conditional Use Permit shall not be required for development of uses on the La Sierra University campus which are described in this Specific Plan. Plot plan review by the Planning Commission will be required for significant alteration, expansion and new construction in Subareas 1 and 2.
Magnolia Avenue Specific Plan	There are no applicable policies relevant to the Project regarding noise.
Riverside Marketplace Specific Plan	There are no applicable policies relevant to the Project regarding noise.
University Avenue Specific Plan	There are no applicable policies relevant to the Project regarding noise.

Sources: City of Riverside 1991, 2002, 2005, 2007, 2009, 2017a, 2017b, 2018

Additionally, the Noise Element of GP 2025 City includes a modified version of the California Department of Health Services Community Noise Exposure level table, which is modified for use within the City (Table 3.8-7).

Table 3.8-7. Land Use Compatibility Matrix for Noise Exposure



Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB						
	55	60	65	70	75	80	85
Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
Conditionally Unacceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.						
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
Clearly Unacceptable	New construction or development should generally not be undertaken.						

Source: State of California Governor's Office of Planning and Research 2017.

City of Riverside Municipal Code

Section 7.25.010 regulates exterior sound level limits within the City.

A. Unless a variance has been granted as provided in this title, it shall be unlawful for any person to cause or allow the creation of any noise which exceeds the following:

1. The exterior noise standard of the applicable land use category, up to five decibels, for a cumulative period of more than 30 minutes in any hour; or

2. The exterior noise standard of the applicable land use category, plus five decibels, for a cumulative period of more than 15 minutes in any hour; or

3. The exterior noise standard of the applicable land use category, plus ten decibels, for a cumulative period of more than five minutes in any hour; or

4. The exterior noise standard of the applicable land use category, plus 15 decibels, for the cumulative period of more than one minute in any hour; or

5. The exterior noise standard for the applicable land use category, plus 20 decibels or the maximum measured ambient noise level, for any period of time.

B. If the measured ambient noise level exceeds that permissible within any of the first four noise limit categories, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to encompass the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

C. If possible, the ambient noise level shall be measured at the same location along the property line with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance that the offending noise is inaudible. If the measurement location is on the boundary between two different districts, the noise shall be the arithmetic mean of the two districts.

D. Where the intruding noise source is an air-conditioning unit or refrigeration system which was installed prior to the effective date of this title, the exterior noise level when measured at the property line shall not exceed 60 dBA for units installed before 1-1-80 and 55 dBA for units installed after 1-1-80.

Table 3.8-8. Municipal Code Exterior Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10:00 p.m. to 7:00 a.m.) Day (7:00 a.m. to 10:00 p.m.)	45 dBA 55 dBA
Office/commercial	Any time	65 dBA
Industrial	Any time	70 dBA
Community support	Any time	60 dBA
Public recreation facility	Any time	65 dBA
Nonurban	Any time	70 dBA

Section 7.30.015 regulates interior sound level limits within the City.

A. No person shall operate or cause to be operated, any source of sound indoors which causes the noise level, when measured inside another dwelling unit, school or hospital, to exceed:

1. The interior noise standard for the applicable land category area, up to five decibels, for a cumulative period of more than five minutes in any hour;

2. The interior noise standard for the applicable land use category, plus five decibels, for a cumulative period of more than one minute in any hour;

3. The interior noise standard for the applicable land use category, plus ten decibels or the maximum measured ambient noise level, for any period of time.

B. If the measured interior ambient noise level exceeds that permissible within the first two noise limit categories in this section, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to reflect the interior ambient noise level. In the event the interior ambient noise level exceeds the third noise limit category, the maximum allowable interior noise level under said category shall be increased to reflect the maximum interior ambient noise level.

C. The interior noise standard for various land use districts shall apply, unless otherwise specifically indicated, within structures located in designated zones with windows opened or closed as is typical of the season.

Table 3.8-9. Municipal Code Interior Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	35 dBA 45 dBA
School	7 a.m. to 10 p.m. (while school is in session)	45 dBA
Hospital	Any time	45 dBA

Section 7.35.010 provides general noise regulations within the City.

A. It is unlawful for any person to make, continue, or cause to be made or continued any noise disturbance. The factors which should be considered in determining whether a violation of this section exists, include the following:

1. The sound level of the objectionable noise.

2. The sound level of the ambient noise.

3. The proximity of the noise to dwelling units, hospital, hotels and the like.

4. The zoning of the area.

5. The population density of the area.

6. The time of day or night.

7. The duration of the noise.

8. Whether the noise is recurrent, intermittent, or constant.

9. Whether the noise is produced by a commercial or noncommercial activity.

10. Whether the nature of the noise is usual or unusual.

11. Whether the noise is natural or unnatural.

B. It is unlawful for any person to make, continue, or cause to be made or continued any noise disturbance.

C. Any noise plainly audible through partitions common to two dwelling units within a building shall be prohibited.

Section 7.35.020 provides activities that are exempt within the City.

The following activities shall be exempt from the provisions of this title:

A. *Emergency work*. The provisions of this title shall not apply to the emission of sound for the purpose of alerting persons to the existence of an emergency or in the performance of emergency work.

B. *School events*. Sanctioned school activities conducted on public or private school grounds including but not limited to school athletic and entertainment events are exempted from the provisions of this chapter conducted between the hours of 7:00 a.m. and 11:00 p.m.

C. *Federal or State preempted activities*. The provisions of this Chapter shall not apply to any other activity the noise level of which is regulated by state or federal law.

D. *Minor maintenance to residential property*. The provisions of this title shall not apply to noise sources associated with minor maintenance to property used for residential purposes, provided the activities take place between the hours of 7:00 a.m. and 10:00 p.m.

E. *Right-of-way construction*. The provisions of this title shall not apply to any work performed in the City right-of-ways when, in the opinion of the Public Works Director or his designee, such work will create traffic congestion and/or hazardous or unsafe conditions.

F. *Public health, welfare and safety activities*. The provisions of this title shall not apply to construction maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public and to protect the public health, welfare and safety, including but not limited to, trash collection, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, vacuuming catch basins, repairing of damaged poles, removal of abandoned vehicles, repairing of water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, sidewalks, etc.

G. *Construction.* Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City as required; and provided said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday.

H. *Warning devices.* Warning devices necessary for the protection of public safety, as for example fire, police, and ambulance sirens, including the testing of such devices, are exempted from the provisions of this title.

I. *Agriculture.* Any agricultural activity, operation, or facility, or appurtenances thereof (e.g., wind machines), conducted or maintained for commercial purposes, and in a manner consistent with

proper and accepted customs and standards as allowed under California Civil Code Section 3482 as amended from time to time.

Policy Consistency

As discussed in Chapter 2, *Project Description*, one of the objectives of the Project is to ensure affordable housing is added across the City and not concentrated in areas with limited access to amenities or near sources of pollution. The Housing Element Update includes a guiding principle that seeks to equitably distribute a mix of housing types, including ownership and rental, that is safe and affordable for people of all income levels, backgrounds, and ages and that meets the needs of current and future Riverside residents.

The Project may result in development that may be inconsistent with City policies relating to noise in the Noise Element (City of Riverside 2018), as described in Table 3.8-6. Implementation of Mitigation Measures **MM-NOI-1** through **MM-NOI-5** would help to address policy inconsistencies. These measures require any future development projects enabled by the Project to evaluate for noise within the City for both construction and operations and provide mitigation to reduce impacts from the Project, where necessary.

3.8.4 Methodology and Thresholds of Significance

This noise impact analysis evaluates the temporary noise and groundborne vibration associated with Project implementation, including potential future construction activities and the changes in noise levels in the City that would occur as a result of the Project. The analysis of these impacts was conducted from a general, programmatic level, as much of the Project consists only of policy and regulatory changes and the development projects that would arise from implementation of the updated Housing and Public Safety Elements would require additional analysis. Mitigation measures to reduce or avoid identified significant impacts accompany each impact discussion (presented below), where necessary.

Construction Noise

Construction-related noise was analyzed using data and modeling methodologies from the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), which provides a list of typical construction equipment and reference emission levels. The reference equipment list is provided in Table 3.8-10. While the use of high-impact, noise-producing equipment such as pile driving is not widely anticipated, refence noise levels have been included.[1]

Table 3.8-10. Typical Construction Equipment

Equipment	Typical Noise Level 50 feet from Source, dBA
Air Compressor	80
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83

[1] It should be noted that construction equipment provided in the *Transit Noise and Vibration Impact Assessment Manual* was provided for transit projects; however, these references are still applicable for the purposes of the construction noise analysis as part of this Project.

Equipment	Typical Noise Level 50 feet from Source, dBA
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Rail Saw	90
Rock Drill	95
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	84

Source: FTA 2018

Vibration

Construction-related vibration was analyzed using data and modeling methodologies provided by Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) and the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment Manual* (2018). These guidance manuals provide typical vibration source levels for various types of construction equipment, as well as methods for estimating the propagation of groundborne vibration over distance. Potential vibration impacts are assessed based on peak levels, rather than long-term average level. As the timing and location of the specific development projects that may arise as a result of the Housing Element Update are not known at the time of this analysis, the source-to-

receptor distances have been calculated to identify the thresholds for damage and annoyance included in Table 3.8-11 through Table 3.8-13.[2]

Table 3.8-11. Construction Equipment Reference Vibration Levels

Equipment Item	Reference PPV at 25 Feet (in/s)
Vibratory roller	0.210[1]
Large bulldozer[2]	0.0892
Hoe ram	0.0892
Jack hammer	0.0352
Loaded trucks[3]	0.0892
Small bulldozer[3]	0.0032

[1] Caltrans 2020.
[2] Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.
[3] FTA 2018.

Table 3.8-12. Guidelines Vibration Damage Potential Threshold Criteria

	Maximum PPV (in/s)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020

Table 3.8-13. Guidelines Vibration Annoyance Potential Criteria

	Maximum PPV (in/s)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2020.

The following equations from the guidance manuals were used to estimate the change in PPV levels over distance. For pile driving, the equation is:

$$PPV_{rec} = PPV_{ref} \times (25/D)^{n} \times (E_{equip}/E_{ref})^{0.5}$$

[2] The City has not designated thresholds for vibration; therefore, the Caltrans standards are used. The Caltrans standards are well-documented standards for vibration damage potential and annoyance. These standards are generally related to construction source vibration.

where PPV_{rec} is the PPV at a receiver; PPV_{ref} is the reference PPV at 25 feet from the pile driver (0.65 in/s); D is the distance from the pile driver to the receiver, in feet; n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1); E_{equip} is the rated energy of the actual impact pile driver in foot-pounds; and E_{ref} is 36,000 foot-pounds (rated energy of reference pile driver). (For the purposes of the analysis, it is assumed that the pile driver would be very similar to the reference pile driver and there would, therefore, be no adjustment for E_{equip}.)

For other equipment, including heavy earthmoving equipment (such as excavators, graders, and backhoes) and vibratory rollers, the equation is:

$$PPV_{rec} = PPV_{ref} \times (25/D)^n$$

where PPV_{rec} is the PPV at a receptor; PPV_{ref} is the reference PPV at 25 feet from the equipment; D is the distance from the equipment to the receiver, in feet; and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1).

Operational Noise

Traffic noise was analyzed using a proprietary traffic noise model with calculations based on data from the Federal Highway Administration's Traffic Noise Model Version 2.5 Look-Up Tables (FHWA 2004). The inputs used in the traffic noise modeling included average daily traffic volumes derived from data provided in the traffic impact analysis for the Project (Votsch pers. comm.) in Section 3.12, *Transportation*, traffic speeds based on the posted speed limits, and traffic mix (the percentage of automobiles versus medium trucks and heavy trucks). In this case, the traffic mix was based on a general arterial vehicle mix of 97.4 percent autos, 1.8 percent medium trucks, and 0.8 percent heavy trucks (County of Orange 1984).[3]

Additional noise sources related to the Project were analyzed qualitatively or based on noise measurements of existing or similar facilities, or applicable published noise data.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would be considered to have a significant effect if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies
- Generate excessive groundborne vibration or groundborne noise levels
- Be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels

[3] The typical arterial volumes used for the purposes of this analysis represent an appropriate representation of arterial streets within the City and are derived from the best available data incorporated in the Federal Highway Administration's Traffic Noise Model Version 2.5 Look-Up look up tables.

3.8.5 Impacts and Mitigation Measures

The following discussion addresses a range of potential noise and vibration impacts from a variety of sources including construction, traffic, and stationary noise sources. All identified significant environmental effects have proposed mitigation measures that would be used to reduce impacts to the greatest extent practical; however, impacts would remain significant and unavoidable. These mitigation measures will be implemented for subsequent projects that are carried out within the City.

Impact NOI-1: The Project would generate temporary or permanent increases in ambient noise levels in the vicinity of the Project in excess of standards established in a local general plan or noise ordinance or applicable standards for the City. Implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2 would reduce this impact, but not to less-than-significant levels. The impact would be significant and unavoidable.

Housing Element Update, Zoning Code Amendments, and Environmental Justice Policies

As the Housing Element Update would facilitate the development of up to 31,564 residential dwelling units and 3,181,930 square feet of nonresidential development, or up to 31,175 dwelling units and 1,433,460 square feet over existing conditions, the Project could affect nearby noise-sensitive receivers to noise from construction and operations that may exceed the thresholds identified in the City's Noise Element and/or Municipal Code.

The Housing Element Update includes Environmental Justice Policies to facilitate equitable distribution of housing throughout the City. Due to the Environmental Justice Policies being a policy-level planning effort, these policies would not result in temporary or permanent increases in ambient noise levels directly. Additionally, the Project does not include specific development proposals. Future housing development facilitated by the Project would occur as market conditions allow and at the discretion of individual property owners.

Construction

Future developments facilitated by the Project could result in two types of short-term noise impacts during Project construction. First, construction vehicles would incrementally increase noise levels on access roads. This would include construction worker vehicles and haul trucks traveling to and from proposed development sites. Although there would be a relatively high single-event noise level, which could cause an intermittent noise nuisance (e.g., passing trucks at 50 feet would generate up to 77 dBA), the effect on longer-term ambient noise levels would be transitory and minimal.

The second category of construction noise would be noise generated during onsite Project construction. The City's Municipal Code requires construction to be limited to 7 a.m. through 7 p.m. on weekdays and 8 a.m. to 5 p.m. on Saturdays. Construction activities are prohibited on Sundays and federal holidays. Noise levels associated with typical construction equipment that may be used is included in Section 3.8.4 above. The list of construction equipment is broken down by type of equipment and noise levels at a distance of 50 feet.

The loudest piece of construction equipment is predicted to be up to 88 dBA (jackhammer and crane) at a distance of 50 feet.[4] As shown in Table 3.8-4 above, ambient noise levels measured at Opportunity Sites throughout the City ranged from 49 up to 72 dBA. Noise from sources such as construction equipment attenuates at a rate of 6 dB per doubling of distance. Therefore, construction noise levels would attenuate to below ambient noise levels within 400–3,200 feet from the source (dependent on the ambient measured noise levels referenced in Table 3.8-4). Noise levels would typically reduce at a quicker rate due to intervening structures and general ground and atmospheric absorption.

Section 7.35.020 of the City's Municipal Code exempts noise from construction provided, "a permit has been obtained from the City as required; and provided said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday." Although construction noise is exempt per the Municipal Code, best management practices including but not limited to those listed below could be incorporated to reduce noise levels from construction to the greatest extent practical. Impacts would be less than significant.

Construction Best Management Practices

- To the greatest extent practicable, the quietest available type of construction equipment could be used. Newer equipment is generally quieter than older equipment. Electric-powered equipment is typically quieter than diesel- or gasoline-powered equipment, and hydraulically powered equipment is typically quieter than pneumatically powered equipment.
- All construction equipment, stationary and mobile, would be equipped with properly operating and maintained mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders, air compressors) would be equipped with shrouds and noise-control features that are readily available for that type of equipment.
- All noisy equipment would be operated only when necessary and would be switched off when not in use.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, would be for safety warning purposes only.
- Construction employees would be trained in the proper operation and use of the equipment.
- Storage, staging, parking, and maintenance areas would be away from sensitive receptors. Where this is not possible, the storage of waste materials, earth, and other supplies would be positioned in a manner that will function as a noise barrier to the closest sensitive receivers.
- Stationary noise sources such as generators and compressors would be positioned as far away as possible from noise-sensitive areas.
- Construction equipment would be stored on the individual development site while in use so as to eliminate noise associated with repeated transport of the equipment to and from the site.
- To the extent possible, haul roads would not be designated through noise-sensitive areas.

[4] It should be noted that construction equipment such as rail saws, pile drivers, and rock drills exceed the noise level of 88 dBA referenced. These types of construction equipment are generally not needed for residential construction, but had been included it the table for reference only.

Operations

The Housing Element Update would allow for additional development in the form of up to 31,564 residential units and mixed-use development. The Project also includes general plan amendments, zoning changes, and Specific Plan amendments to facilitate new residential and mixed-use development. As such, the Project could expose nearby noise-sensitive receivers to noise from operations associated with increased traffic and/or stationary operational noise. Operational noise may exceed the thresholds identified in the City's Noise Element and/or Municipal Code.

Operational Traffic

As the Project would facilitate new residential and mixed-use developments within the identified Opportunity Sites, impacts at offsite sensitive receptors due to Project-related traffic is assessed with respect to noise increases (rather than solely based on absolute noise levels). The total number of vehicle trips associated with the build-out of the Project would increase traffic volumes throughout the City along the existing roadway network. Table 3.8-14 identifies the existing, existing plus Project, cumulative (future), and cumulative (future) plus Project traffic noise levels calculated along roadway segments throughout the City.

Table 3.8-14. Estimated Traffic Noise Levels

	Estimated Traffic Noise Levels at 100 feet from Roadway Centerline, dB CNEL					
Roadway/Segment	Existing	Existing Plus Project	Increase Over Existing	Cumulative Base	Cumulative Plus Project	Increase Over Cumulative Base
Alessandro Blvd						
East of Mission Grove Pkwy	68.7	69.6	0.9	70.5	70.5	0
North of Via Vista Dr	69.4	70.4	1.0	70.4	70.4	0
West of Sycamore Canyon Blvd	68.7	69.5	0.8	70.5	70.6	0.1
Arlington Ave						
East of Brockton Ave	62.0	62.4	0.4	64.0	64.1	0.1
California Ave						
East of Adams St	60.3	60.9	0.6	62.4	62.6	0.2
East of Van Buren Blvd	60.2	60.8	0.6	62.3	62.5	0.2
Chicago Ave						
North of Spruce St	60.7	62.0	1.3	62.9	63.1	0.2
Indiana Ave						
East of Harrison St	58.3	58.6	0.3	60.7	60.9	0.2
Jackson St						
North of Indiana Ave	59.1	59.7	0.6	60.7	61.2	0.5
La Sierra Ave						
Magnolia Ave to Collett Ave	63.5	64	0.5	64.9	65.0	0.1
North of Cypress Ave	61.5	61.5	0	63.5	63.6	0.1

Roadway/Segment	Estimated Traffic Noise Levels at 100 feet from Roadway Centerline, dB CNEL					
	Existing	Existing Plus Project	Increase Over Existing	Cumulative Base	Cumulative Plus Project	Increase Over Cumulative Base
North of Pierce St	63.8	64.5	0.7	65.9	66.2	0.3
North of SR-91	65.2	65.7	0.5	66.4	66.6	0.2
Lincoln Ave						
West of Monroe St	58.5	59.2	0.7	59.0	59.3	0.3
Magnolia Avenue						
East of Harrison St	63.0	63.9	0.9	64.2	64.6	0.4
East of Jackson St	61.3	62.1	0.8	63.7	63.9	0.2
South of Jurupa Ave	61.4	61.9	0.5	62	62.3	0.3
SR-91 westbound off-ramp to SR-91 westbound on-ramp	62.3	62.4	0.1	62.8	62.9	0.1
West of Tyler St	62.6	63.2	0.6	63.9	64.2	0.3
Martin Luther King Blvd						
East of Iowa Ave	64.8	65.3	0.5	66.8	66.8	0
East of Kansas Ave	64.9	65.0	0.1	67.1	67.1	0
Pierce St						
West of La Sierra Ave	56.8	57.4	0.6	59.3	59.6	0.3
Riverwalk Pkwy						
Sierra Vista Ave to Raley Dr	62.7	62.9	0.2	62.8	63.0	0.2
Trautwein Rd						
South of Alessandro Blvd	66.1	66.5	0.4	67.6	67.6	0
Tyler St						
North of Magnolia Ave	61.0	61.6	0.6	62.4	62.6	0.2
North of SR-91	62.7	63.0	0.3	63.5	63.7	0.2
Van Buren Blvd						
North of SR-91	64.1	64.7	0.6	66.0	66.2	0.2
South of Cleveland Ave	64.2	64.3	0.1	65.6	65.7	0.1
West of Washington St	63.5	63.6	0.1	64.3	64.4	0.1
West of Wood Rd	64.4	64.8	0.4	64.8	64.9	0.1
North of Arlington Ave	65.3	65.5	0.2	66.4	66.4	0
North of Colorado Ave	63.9	64.2	0.3	65.5	65.6	0.1
North of Jurupa Ave	66.4	66.6	0.2	67.5	67.5	0
Victoria Ave						
West of Van Buren Blvd	56.9	57.2	0.3	59.7	59.9	0.2

Source: Votsch pers. comm.

As shown, the changes in traffic noise under existing conditions plus the Project would range from 0 dB (no increase over the existing conditions) to 1.3 dB (increase over the existing conditions). The

cumulative plus Project conditions show a similar change, ranging from a 0-dB increase up to 0.5 dB over the cumulative base condition. Noise levels calculated in Table 3.8-14 are considered conservative, as they do not account for any shielding from intervening structures or walls, which would further reduce traffic noise levels. As shown, many of the roadway segments analyzed currently exceed the 60 dBA and 65 dBA CNEL thresholds for the single-family residential and infill single-family residential referenced in the City's Land Use Compatibility Matrix for Noise Exposure. The largest increase would be on the order of 1.3 dB over existing and 0.5 dB over the cumulative base. While noise levels of this magnitude would not likely be discernable, many of the Opportunity Sites within the City currently exceed the relevant thresholds outlined by GP 2025. As a result, mitigation (in the form of Mitigation Measure **MM-NOI-1**) would be necessary in order to reduce the impacts to the greatest extent practical. However, even with the inclusion of Mitigation Measure **MM-NOI-1**, impacts would remain significant and unavoidable.

Operational Stationary Noise

As discussed above, the Project would facilitate the addition of new residential units and mixed-use development throughout the City. The City has identified Opportunity Sites (Figure 3-8.1) throughout the City that could be redeveloped as part of future developments to increase housing stock to meet the City's Regional Housing Needs Assessment obligation.

New residential and mixed-use development would likely result in the installation of HVAC systems. As the Project does not include specific development proposals, locations of HVAC systems are not known; however, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At a distance of 50 feet (assuming a 6-dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. As the location of HVAC systems is not known, it is possible that HVAC systems may exceed both the daytime and/or nighttime sound level limits included in the City's Municipal Code. Therefore, impacts associated with stationary noise sources could be significant and would require mitigation. Mitigation (in the form of Mitigation Measure **MM-NOI-2**) would be required to reduce impacts to the greatest extent practical. However, even with the inclusion of Mitigation Measure **MM-NOI-2**, impacts would remain significant and unavoidable.

New residential and mixed-use development facilitated by the Project would result in other stationary noise sources such as landscaping activities and anti-theft car alarms, among others. These noise sources would be temporary and periodic and would generally not increase noise levels at existing nearby noise-sensitive receptors.

Many of the Opportunity Sites are throughout the City in areas where noise levels exceed compatibility thresholds outlined in GP 2025. The exceedance of the noise compatibility thresholds would be dependent on the location of the Opportunity Site and the surrounding noise source, such as large transportation facilities, the existing rail line(s) that traverse the City, and/or large arterial roadway networks. These Opportunity Sites could expose future developments to noise levels in excess of the standards laid out in the City's Land Use Compatibility Matrix for Noise Exposure. As noise levels could exceed thresholds, adherence to the City's Land Use Compatibility Matrix for Noise Exposure thresholds would be required.

As discussed above, the adoption of the proposed Housing Element and associated policies could potentially result in impacts from traffic noise and stationary noise sources associated with new housing within the City.

The proposed Environmental Justice Policy N-EJ-1.0 provides a directive to "focus on environmental justice communities, reduce noise pollution by enforcing noise reduction and control measures within and adjacent to residential neighborhoods." Inclusion of Mitigation Measures **MM-NOI-1** and **MM-NOI-2** would help to reduce noise pollution.

In summary, with the inclusion of mitigation measures listed below, impacts from construction would be less than significant; however, impacts from operations would be significant and unavoidable even with mitigation incorporated.

Public Safety Element Update and Environmental Justice Policies

While the Public Safety Element Update would not result in specific development, certain implementation actions could facilitate new construction and operation activities that may expose noise-sensitive receivers to noise from construction and operations that may exceed the thresholds identified in the City's Noise Element and/or Municipal Code, such as fire control measures like brush-clearance activities to reduce the risk of wildland fires within the Fire Hazard Area.

Construction

Future development facilitated as part of the Public Safety Element Update could have the same types of short-term noise impacts as discussed above during Project construction. These would include construction worker vehicles and haul trucks traveling to and from individual development sites and noise generated during onsite construction. As discussed above, the City's Municipal Code requires construction to adhere to specified periods permitted by the City's Municipal Code. Noise levels associated with typical construction equipment that may be used is included in Section 3.8.4 above, and construction noise levels would be similar to those estimated in Table 3.8-10. Best management practices as discussed above could be included to reduce construction noise to the greatest extent practical. As such, impacts would be less than significant.

Operations

As the Public Safety Element Update would allow for additional development through actions, the Project could affect nearby noise-sensitive receivers through operational noise associated with new emergency vehicle traffic and/or stationary operational noise. Operational noise may exceed the thresholds identified in the City's Noise Element and/or Municipal Code.

Operational Stationary Noise

As discussed above, the actions to implement Public Safety Element policies could occur throughout the City. The City has identified the development of police headquarters in the Downtown area. Development of this type of land use would likely result in the installation of HVAC systems. As the Project does not specifically propose new development, locations of HVAC systems are not known; however, as discussed above, noise from HVAC systems could be as loud as 77 dBA at a distance of 1 foot. At a distance of 50 feet (assuming a 6-dB reduction for doubling of distance), HVAC system noise would reduce to 44 dBA. As the location of HVAC systems is not known, it is possible that HVAC systems may exceed the daytime and/or nighttime sound level limits included in the City's Municipal Code. As the development of any additional facilities associated with the Public Safety Element (police headquarters) would be subject to project-specific CEQA analysis, impacts would be less than significant.

While the Public Safety Element Update would not directly develop new public safety services, such as police stations, Action PS-4.1-5 would direct the location of new facilities such as a new police headquarters. The development of a new police headquarters could expose nearby noise-sensitive receptors to increased noise levels associated with sirens. The City's Municipal Code Section 7.35.020 (H) exempts noise from warning devices necessary for public safety, including fire and police sirens. As such, noise from new sources such as sirens would be exempt. Impacts would be less than significant.

Mitigation Measures

The potential impacts of the Project described in this section would be reduced with implementation of the following mitigation measures.

MM-NOI-1: Prepare a focused noise study and implement findings to reduce traffic noise.

For Opportunity Site projects that would exceed the 60 or 65 dBA CNEL threshold (based on the noise contour maps included in GP 2025), the applicant shall prepare a detailed analysis and implement mitigation to comply with the applicable City standards outlined in GP 2025. This could include but would not be limited to actions such as:

- Installation of soundwalls to break the line of sight from noise sources such as traffic noise
- Installation of noise-reducing insulation
- Installation of windows with sound transmission class (STC) ratings appropriate to reduce exterior-to-interior noise transmission
- Installation of HVAC systems

MM-NOI-2: For any development where stationary noise sources may exceed interior or exterior noise standards, prepare a focused noise study and implement findings to reduce HVAC noise.

The applicant shall design HVAC systems for Opportunity Sites to comply with the applicable City Municipal Code standards. This could include but would not be limited to actions such as:

- Preparation of a focused noise study to analyze HVAC noise, which shall identify a location for HVAC systems at appropriate distances so as to not exceed a noise level of 55 dBA L_{eq} (exterior) and 45 dBA L_{eq} (interior) between the hours of 7:00 a.m. and 10:00 p.m. and 45 dBA L_{eq} (exterior) and 35 dBA L_{eq} (interior) between the hours of 10:00 p.m. and 7:00 a.m. at the closest noise-sensitive land use. Design features that could be used to comply with the relevant threshold could include but are not limited to:
    - Locating HVAC systems far enough from residences so as to allow noise to attenuate to below the relevant standards
    - Installing housings or structural parapets around HVAC systems
    - Installing noise-reducing insulation
    - Installing windows with STC ratings appropriate to reduce exterior-to-interior noise transmission

Impact NOI-2: The Project could generate excessive groundborne vibration or groundborne noise levels. Implementation of Mitigation Measure MM-NOI-3 would reduce this impact, but not to less-than-significant levels. The impact would be significant and unavoidable.

Housing Element Update, Zoning Code Amendments, and Environmental Justice Policies

Construction

Heavy construction equipment has the potential to produce groundborne vibration levels that are perceptible to people in the surrounding area.

Referring to the equipment provided above in Table 3.8-10, various pieces of heavy equipment such as graders, bulldozers, and excavators would be used at individual development sites. Based on data published by Caltrans (Caltrans 2020), this type of equipment typically produces PPV vibration levels of 0.089 in/s at a distance of 25 feet.

Using the equation (see *Vibration* in Section 3.8.4) to calculate vibration transmission loss, it was determined that heavy construction equipment (e.g., graders, excavators) would generate groundborne vibration levels that would attenuate to levels referenced in Table 3.8-15.

Table 3.8-15. Attenuated Vibration Levels at Distance

Equipment Item	Reference PPV at 25 Feet (in/s)	PPV at 50 Feet (in/s)	PPV at 100 Feet (in/s)	PPV at 200 Feet (in/s)
Large bulldozer	0.0891	0.042	0.019	0.009

As outlined in Table 3.8-12, the threshold for extremely fragile historic buildings is 0.12 PPV for transient vibration sources and 0.08 PPV for frequent intermittent sources for damage. The thresholds for annoyance criteria (Table 3.8-13) show that vibration would be barely perceptible at levels of 0.01 PPV for frequent intermittent sources and 0.04 PPV for transient vibration sources. Vibration levels could potentially exceed the damage threshold of 0.08 PPV if construction occurred within 25 feet of extremely fragile buildings and would be barely perceptible within a distance of approximately 200 feet. It should be noted that the use of high-impact construction equipment such as during pile driving would increase the distance to the reference damage levels; however, as pile driving is generally not used for residential development, it is assumed that this type of high-impact vibration equipment would not be used. As the location of construction is not known at this time, construction vibration levels cannot be calculated at specific vibration-sensitive land uses. Therefore, impacts from vibration could be significant. As such, mitigation (in the form of Mitigation Measure **MM-NOI-3**) would be necessary. Even with the inclusion of Mitigation Measure **MM-NOI-3**, impacts would remain significant and unavoidable.

Operations

The Housing Element Update would potentially add vehicles such as automobiles and could result in a small increase in trucks accessing the local roadway network. Based on the FTA and Caltrans guidance, loaded trucks would produce a PPV of no more than 0.089 PPV at a distance of 25 feet. As the threshold for damage for transient sources (Table 3.8-12) is 0.12 PPV for extremely fragile

Figure 3.8-2

Riverside Municipal and Flabob Airport Noise Contours

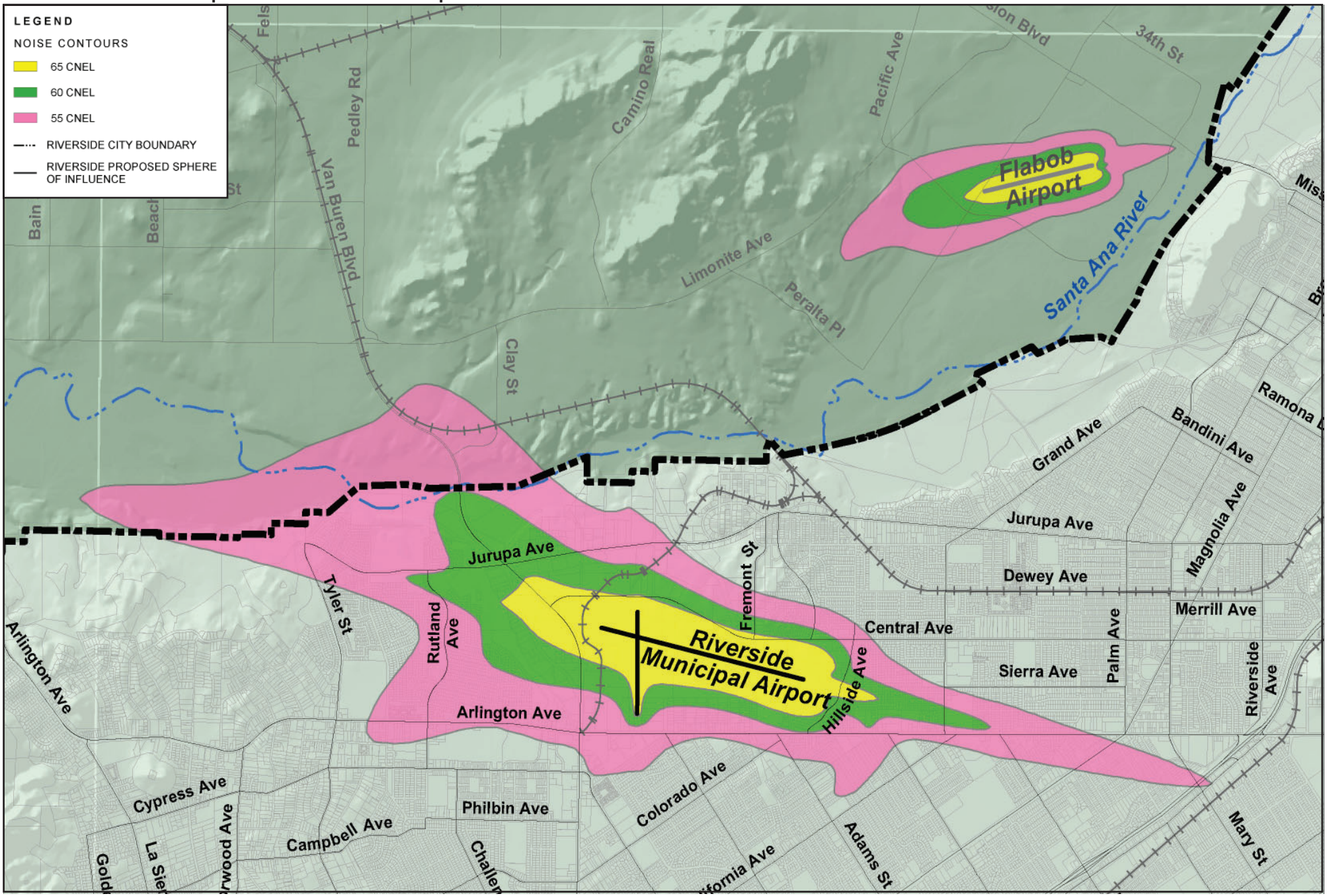
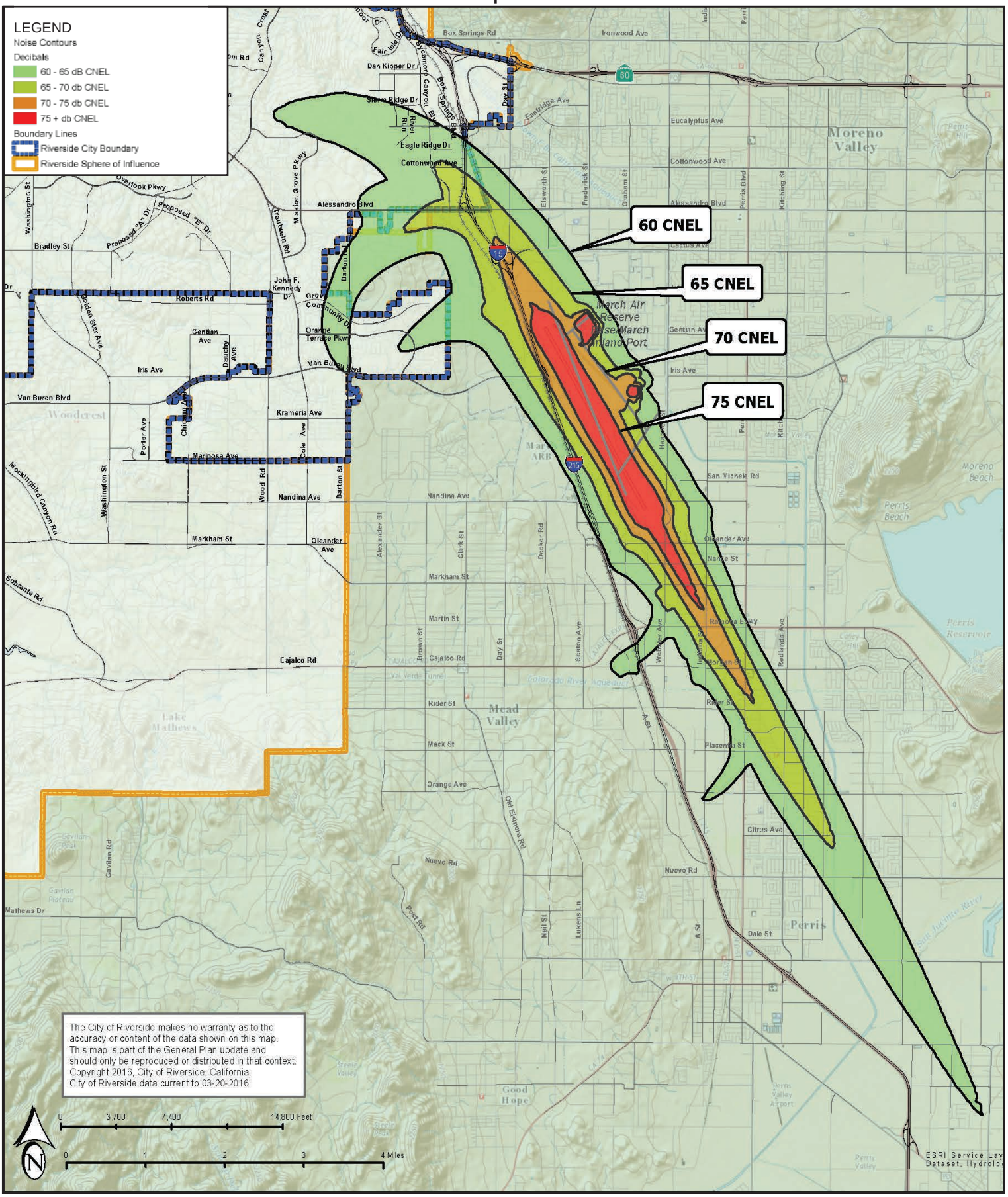


Figure 3.8-3

March Air Reserve Base/Inland Port Airport Noise Contours



buildings, damage associated with a truck pass-by would not result in potential damage to nearby structures. Additionally, a vibration level of 0.04 PPV is considered a barely perceptible threshold of perception (Table 3.8-13). Vibration would not be noticeable outside of 50 feet from the roadway. Therefore, as there is no operational component related to the Housing Element Update that would result in significant sources of vibration, impacts would be less than significant.

Public Safety Element Update and Environmental Justice Policies

While the Public Safety Element Update would not result in specific development, certain implementing actions could facilitate new construction and operations that may expose sensitive receivers to vibration from construction and operations that may exceed the thresholds identified in the City's Noise Element and/or Municipal Code.

Construction

Future developments facilitated as part of the Public Safety Element Update could have the same types of vibration impacts as discussed above during Project construction. Vibration levels associated with typical construction equipment that may be used are included in Table 3.8-10 above. As such, inclusion of Mitigation Measure **MM-NOI-3** would reduce noise impacts to less-than-significant levels.

Operations

The Public Safety Update would potentially add vehicles such as automobiles and some trucks to the local roadway network. These types of vehicles do not produce noticeable levels of vibration. Therefore, as there is no operational component related to the Public Safety Element Update that would result in significant sources of vibration, impacts would be less than significant.

Mitigation Measures

The potential impacts of the Project described in this section would be reduced with implementation of the following mitigation measure.

MM-NOI-3: Reduce construction-generated groundborne vibration to the extent possible.

The City of Riverside Community & Economic Development Department, Planning Division shall, to the extent possible, require that heavy construction equipment (representative equipment such as large bulldozers) is not operated within 25 feet of onsite or offsite sensitive receptors (including, but not limited to, single- and multi-family residences, institutional or care facilities, etc.). If construction is anticipated within 25 feet of onsite or offsite sensitive receptors, the City shall require pre- and post-construction surveys to confirm that vibration did not result in damage to surrounding structures. Additionally, the City shall require vibration monitoring at the structure to determine if vibration levels exceed the 0.08 PPV threshold at the structure. Should an exceedance be identified, construction would be halted and additional measures would be implemented in order to reduce vibration levels. These additional measures could include, but are not limited to:

- Using smaller or less vibration-intensive equipment
- Maximizing the distance from the vibration source

Impact NOI-3: The Project would be in the vicinity of a private airstrip and an airport land use plan, and within 2 miles of a public airport or public use airport but would not expose people residing or working in the City to excessive noise levels. Impacts would be less than significant.

Housing Element Update, Zoning Code Amendments, and Environmental Justice Policies

Airports within the City include Riverside Municipal Airport. Additionally, Flabob Airport and March Reserve Airforce Base are approximately 0.75 mile north/northwest and 1.4 miles southeast, respectively. Flight paths associated with the noise contours are included on Figures 3.8-2 and 3.8-3. Noise from aircraft on departure or approach to any of these airports would be audible at many of the Opportunity Sites identified throughout the City. None of the Opportunity Sites identified would be within the 60 or 65 dBA CNEL contour for any of the surrounding airports. A few of the Opportunity Sites would be within the 55 dBA CNEL contour. Policy N-2.2 and Policy N-3.1 of the City's current Noise Element direct that development of noise-sensitive land uses (including residences) should not occur within the 65 dBA CNEL contour of the surrounding airports, including the three mentioned above. As no Opportunity Sites are planned within the 60 or 65 dBA CNEL contours, impacts on the proposed land uses as facilitated by the Project would be less than significant.

Public Safety Element Update and Environmental Justice Policies

As discussed above, the airports surrounding and within the City are March Reserve Airforce Base, Flabob Airport, and Riverside Municipal Airport. As the Public Safety Element Update would not result in the development of noise-sensitive land uses, no impacts would occur.

3.9 Population and Housing

3.9.1 Introduction

This section describes the environmental and regulatory setting for population and housing for the Project and provides information regarding general neighborhood population and housing characteristics and projected population growth for the City of Riverside (City). An analysis of potential population, housing, and employment impacts that could occur with implementation of the Project is presented. Data presented were obtained from the U.S. Census Bureau, California Department of Finance (DOF), and Southern California Association of Governments (SCAG). The analysis methods, data sources, significance thresholds, and terminology used are described. Details on the location of the Project and a description of Project activities are included in Chapter 2*, Project Description*, of this EIR.

On March 4, 2020, California Governor Gavin Newsom declared a state of emergency in California due to the Coronavirus' (COVID-19's) public health threat. On March 8, 2020, the County of Riverside Public Health Officer declared a local health emergency in Riverside County due to the public health threat of COVID-19. On March 13, 2020, the Riverside City Council proclaimed a Local Emergency, as defined by Government Code §8558(c), in the City due to the COVID-19 pandemic. Given these recent COVID-19-related events, which could potentially result in a significant and sustained recession, it is likely that the growth forecasts presented in this analysis are overstated.

3.9.2 Environmental Setting

The City's demographics are examined in the context of existing and projected population for the Riverside County region and the City. The City is a major economic hub in Southern California. The City is currently ranked as the twelfth largest city in California and the seventh largest city in Southern California.

Riverside is the center of and largest city in the region known as the Inland Empire. SCAG's 2020–2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), referred to as *Connect SoCal* (adopted May 7, 2020), population, housing, and employment growth forecast for 2045 is shown in Table 3.9-1. The projections estimate that Riverside will continue to steadily grow.

Table 3.9-1. Population, Housing, and Employment Projections for Riverside

	City of Riverside	
Type	2018	2045
Population	325,860	395,800
Housing Units	100,515	115,100
Employment	148,353	188,700

Source: SCAG 2020a.

Population

Population in Riverside has steadily grown with approximately 40,000 new residents added each decade since the 1960s. The City is anticipated to continue increasing in population. According to

the *Riverside General Plan 2025* (GP 2025) EIR, the City projected a population of 383,077 by 2025. Of that total, GP 2025 projects a population of 346,867 within current incorporated boundaries of Riverside and 36,209 residents within the City's Sphere of Influence. In past decades, migration patterns—in part due to the relative affordability of housing compared to coastal population centers—fueled population growth in Riverside.

Table 3.9-2 shows population growth trends in the City and Riverside County as reported by DOF. Population has consistently increased in the City and Riverside County. The City's population increased from 303,871 persons in 2010 to 328,155 persons in 2020, which is an approximate 8-percent increase. Riverside County population increased by approximately 11.5 percent from 2010 to 2020.

Table 3.9-2. Population Growth Trends in the City and Riverside County

	City of Riverside		Riverside County	
Year	Population	Percent Change	Population	Percent Change
2010	303,871	N/A	2,189,641	N/A
2011	307,661	1.2%	2,216,250	1.2%
2012	311,038	1.1%	2,244,472	1.3%
2013	314,191	1.0%	2,268,660	1.1%
2014	315,923	0.6%	2,290,907	1.0%
2015	318,387	0.8%	2,315,706	1.1%
2016	320,962	0.8%	2,343,785	1.2%
2017	323,583	0.8%	2,376,580	1.4%
2018	325,417	0.6%	2,400,762	1.0%
2019	326,427	0.3%	2,422,146	0.9%
2020	328,155	0.5%	2,442,304	0.8%
Total Change (2010 to 2020)		7.9%		11.5%

Source: DOF 2020.

Age

Resident age characteristics in Riverside affect housing needs. Riverside's central location and the presence of four major colleges and universities result in young adults making up a significant percentage of the population. As seen in Table 3.9-3, the median age in the City in 2019 was 31.6. Riverside's largest groups of age demographics are 45–64 and under 14, with young adults aged 15–24 making up the third largest age group. From 2010 to 2019, young adults aged 15–24 increased by 8.6 percent and young adults aged 25–34 increased by 24.7 percent in the City. Much like the broader region, the percentage of middle-aged adults aged 45 to 64 and older adults (65+) substantially increased. The only two age groups that showed decreases in population between 2010 and 2019 were adolescents under 14 and adults aged 35 to 44. These changes in age structure represent a substantial change in the age composition of Riverside toward an aging population.

Table 3.9-3. Population for the City and Riverside County

	City of Riverside			Riverside County		
Characteristic	Population 2010	Population 2019	Percent Change	Population 2010	Population 2019	Percent Change
Male	149,800	162,664	8.6%	1,050,949	1,200,960	14.3%
Female	150,753	163,750	8.6%	1,058,515	1,210,479	14.4%
Under 14	68,502	64,057	-6.5%	500,607	505,816	1.0%
15–24	58,332	60,099	3.0%	324,443	345,754	6.6%
25–34	44,476	55,445	24.7%	273,040	334,925	22.7%
35–44	41,366	40,432	-2.3%	294,449	308,273	4.7%
45–64	62,871	71,566	13.8%	472,002	576,096	22.1%
65+	25,006	34,815	39.2%	244,923	340,575	39.1%
Median age (years)	29.8	31.6	6.0%	33.4	35.6	6.6%

Source: U.S. Census Bureau 2010, 2019.

Regional and Local Race/Ethnicity Distribution

Like much of Southern California, Riverside's population is becoming more diverse in race and ethnicity. In 2001, the City adopted the "Building a More Inclusive Riverside Community" statement. This statement affirms the opportunities and challenges of building an inclusive community and the responsibilities of residents, businesses, institutions, and policymakers in Riverside's future.

According to the U.S. Census Bureau's 2019 American Community Survey (ACS), 53.7 percent of the population of the City is Hispanic, 29.8 percent is White, 7.4 percent is Asian, and 5.8 percent is African American. These patterns reflect the characteristics in Riverside County and those of central cities in the region.

Table 3.9-4. Race/Ethnicity Distribution for the City and Riverside County

	City of Riverside		Riverside County	
Ethnicity/Race	Population	Percent	Population	Percent
Hispanic/Latino	175,311	53.7%	1,179,478	48.9%
White	97,325	29.8%	851,702	35.3%
Black or African American	18,825	5.8%	147,160	6.1%
American Indian/Alaska Native	10,89	0.3%	10,362	0.4%
Asian	24,090	7.4%	152,347	6.3%
Native Hawaiian/Other Pacific	734	0.2%	6,471	0.3%
Some other race	990	0.3%	5,936	0.2%
Two or more races	8,050	2.5%	57,983	2.4%

Source: U.S. Census Bureau 2019.

Environmental Justice Communities

In 2012, the State Legislature passed, and Governor Brown signed into law, Senate Bill (SB) 535, which provides the framework for how the Cap-and-Trade program's auction proceeds are appropriated and expended. SB 535 directed the California Environmental Protection Agency to identify environmental justice communities for purposes of the Greenhouse Gas Reduction Fund

programs based on geographic, socioeconomic, public health, and environmental hazard criteria. These communities may include, but are not limited to:

- Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation
- Areas with concentrations of people that are of low-income, high unemployment, low levels of home ownership, high rent burden, sensitive populations, or low levels of educational attainment

The California Environmental Protection Agency uses the CalEnviroScreen methodology to identify SB 535 environmental justice communities. As seen on Figure 3.9-1, there are environmental justice communities within the City and its Sphere of Influence. Environmental justice communities are generally located in the northern and central portions of the City.

Housing

The City offers an attractive housing market primarily for its relative affordability, central location, job opportunities, and the presence of four major colleges. According to Table 3.9-5, the rate of housing production in the City increased consistently from 2010 to 2020. Many homeowners and renters are leaving coastal cities to relocate in San Bernardino and Riverside Counties in search of more affordable housing. Comparing Table 3.9-2 and Table 3.9-5, population and housing growth trends have both steadily increased.

Table 3.9-5. Housing Growth Trends in the City and Riverside County

	City of Riverside		Riverside County	
Year	Housing Units	Percent Change	Housing Units	Percent Change
2010	98,444	N/A	800,707	N/A
2011	98,620	0.2%	804,913	0.5%
2012	98,761	0.1%	807,970	0.4%
2013	99,152	0.4%	812,234	0.5%
2014	99,254	0.1%	817,008	0.6%
2015	99,501	0.2%	822,911	0.7%
2016	99,859	0.4%	828,383	0.7%
2017	100,113	0.3%	834,652	0.8%
2018	100,515	0.4%	840,904	0.7%
2019	100,760	0.2%	847,851	0.8%
2020	101,414	0.6%	856,124	1.0%
Total Change (2010 to 2020)	2,970	3.01%	55,417	6.9%

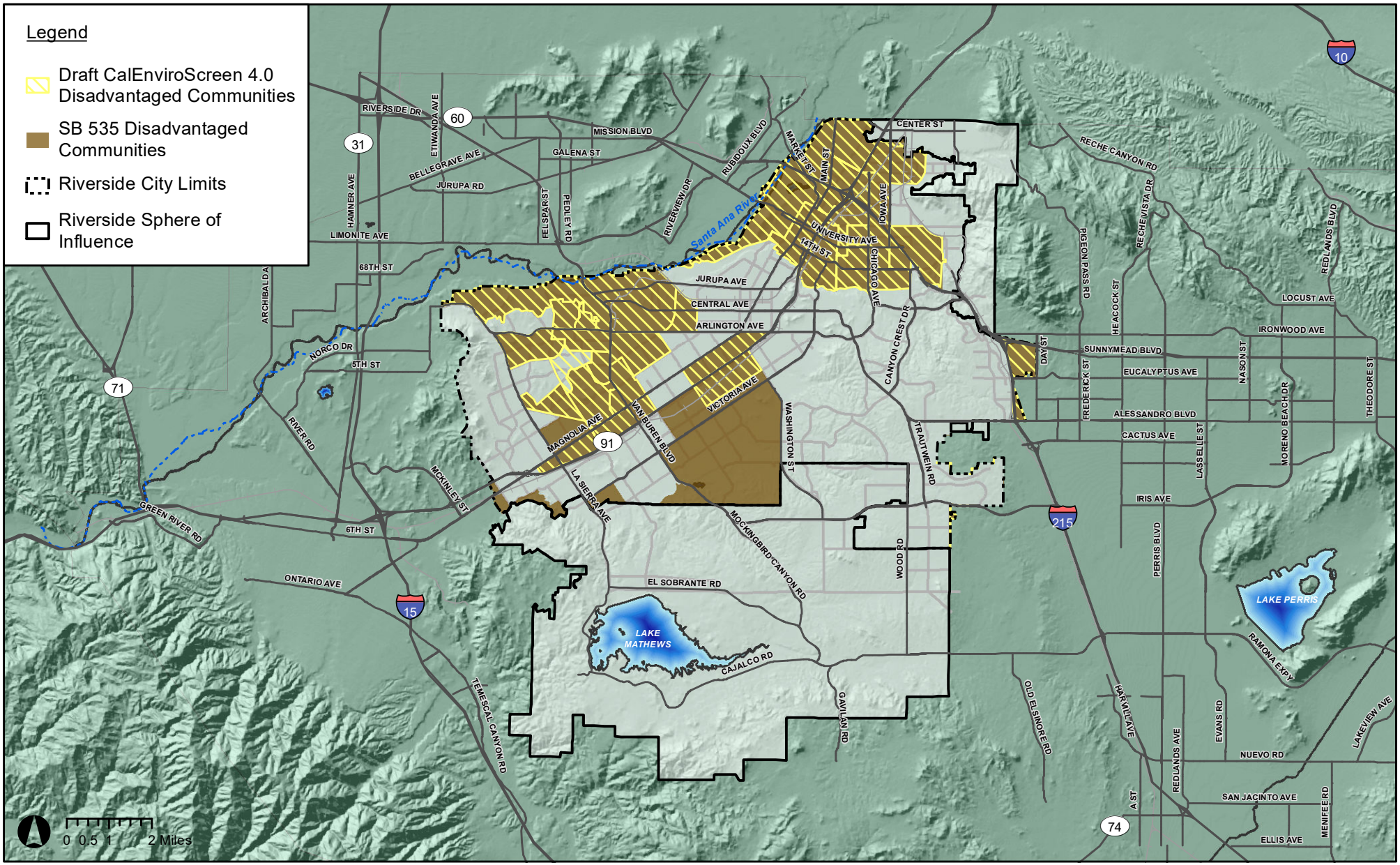
Source: DOF 2020.

Existing Housing Units

Table 3.9-6 shows the housing unit types in the City and Riverside County. As is the case with most inland communities, single-family homes compose the majority (68 percent) of Riverside's housing stock. Within this general category, single-family homes can range from smaller detached homes or attached products with two to four units to larger estate homes. According to 2020 data, most

Figure 3.9-1

Environmental Justice Communities



housing units in the City (64 percent) and Riverside County (68 percent) are single-family detached units.

Table 3.9-6. Housing Units in the City and Riverside County by Type (2020)

	City of Riverside		Riverside County	
Type	Number of Units	Percent	Number of Units	Percent
Single-family detached	64,645	64%	585,544	68%
Single-family attached	3,915	4%	52,844	6%
Multi-family (2–4 units)	6,406	6%	39,044	5%
Multi-family (5 units or more)	24,221	24%	98,023	11%
Mobile homes	2,227	2%	80,669	9%
Total	101,414	100%	856,124	100%
	Household Size= 3.28		Household Size= 3.23	

Source: DOF 2020.

Housing Profile

According to DOF, in 2020 the City has more units occupied compared to Riverside County, as shown in Table 3.9-7. As rent has increased in Riverside County, the vacancy rate—which denotes housing property that is available to be rented or purchased—has dropped substantially. Rental vacancy rates at the county level consistently dropped until reaching a 9-year low of 12.8 percent in 2019. The City saw an even greater drop in vacancy, falling from 6.6 percent in 2010 to 4.9 percent in 2020. This is far below the national vacancy rate of 11.0 percent.

Recent reports in national and local press have highlighted poor upkeep and lack of responsiveness by investor landlords to their tenants. Additionally, the rise in prevalence of bulk rental properties may continue to push rental prices to rise faster than salaries. Low vacancy rates make it more challenging for individuals and families to purchase homes.

Table 3.9-7. Vacancy Rate in the City and Riverside County

Year	City of Riverside Vacancy Rate	Riverside County Vacancy Rate
2010	6.6%	14.3%
2011	6.5%	14.3%
2012	6.4%	14.1%
2013	5.8%	13.7%
2014	5.7%	13.6%
2015	5.7%	13.6%
2016	5.4%	13.3%
2017	5.3%	13.1%
2018	5.0%	12.9%
2019	4.9%	12.8%
2020	4.9%	12.8%

Source: DOF 2020.

Employment

Employment Trends

The City is home to major industries including advanced manufacturing, health and medical services, education, and retail and professional firms. As the region's largest city, and as the Riverside County seat, the City is the location of legal and government services.

To assess California's economic health, the California Employment Development Department provides labor market statistics for the state and different geographic regions of California. Table 3.9-8 illustrates employment trends from 2010 to 2020 for both the City and Riverside County. Both experienced yearly increases in employment from 2010 until 2019, during which time the City gained 26,900 jobs and Riverside County gained 219,600 jobs.

Table 3.9-8. Employment Growth Trends in the City and Riverside County

	City of Riverside		Riverside County	
Type	Employed Persons	Percent Change	Employed Persons	Percent Change
2010	122,000	N/A	839,100	N/A
2011	122,900	0.7%	846,300	0.9%
2012	125,800	2.4%	868,800	2.7%
2013	129,400	2.9%	893,500	2.8%
2014	133,100	2.9%	925,500	3.6%
2015	138,000	3.7%	963,800	4.1%
2016	140,700	2.0%	987,200	2.4%
2017	143,900	2.3%	1,014,900	2.8%
2018	147,000	2.2%	1,041,500	2.6%
2019	148,900	1.3%	1,058,700	1.7%
2020	140,300	-5.8%	997,700	-5.8%

Source: EDD 2021.

Since 2010, there has been a steady increase in employment within the City and Riverside County, with the largest increase in 2015 for both the City (3.7 percent) and Riverside County (4.1 percent). In 2020, there was an employment decline of -5.8 percent in both, which is correlated to the impact of the COVID-19 pandemic and impacts on the economy and job sectors.

Existing Employment

Table 3.9-9 shows the breakdown of the City's employment by occupation and industry. According to the data, the largest industry sector in 2019 was educational services, and health care and social assistance, which accounted for approximately 23.88 percent of civilian jobs. According to the ACS, the City had an employed civilian labor force (16 years and older) of 151,989 persons in 2019 with a margin of error of ±1,638 persons.

Table 3.9-9. City of Riverside Employment by Industry 2020

Industry	Number	Percent
Agriculture, forestry, fishing and hunting, and mining	944	0.6%
Construction	12,848	8.5%
Manufacturing	16,527	10.9%
Wholesale	4,228	2.8%
Retail Trade	18,001	11.8%
Transportation and warehousing, and utilities	9,870	6.5%
Information	1,711	1.1%
Finance and insurance, and real estate and rental and leasing	6,571	4.3%
Professional, scientific, and management, and administrative and waste management services	14,620	9.6%
Educational services, and health care and social assistance	36,171	23.8%
Arts, entertainment, and recreation, and accommodation and food services	15,446	10.2%
Other services, except public administration	7,974	5.2%
Public administration	7,078	4.7%
Total civilian employed population 16 years and over	151,989	100%

Source: U.S. Census Bureau 2019.

3.9.3 Regulatory Setting

State

California Housing Element Law

California law recognizes the vital role that local governments play in the supply and affordability of housing. Each governing body of a local government is required to adopt a comprehensive, long-term general plan for its physical development. The housing element is one of the seven mandated elements of the general plan.

Housing element law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law acknowledges that, for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, housing policy in the state rests largely upon the effective implementation of local general plans and local housing elements. Housing element law also requires the Department of Housing and Community Development review local housing elements for compliance and to report its written findings to the local government.

Assembly Bill 1233 (2005)

Assembly Bill (AB) 1233 amended the state housing law to promote the effective and timely implementation of local housing elements. If a local government fails to implement programs in its housing element to identify adequate housing sites or fails to adopt an adequate housing element, this bill requires them to zone or rezone adequate sites by the first year of the new planning period.

The rezoning of sites is intended to address any portion of the Regional Housing Needs Assessment (RHNA) obligation that was not met because a jurisdiction failed to identify or make available adequate sites in the previous planning period. Specifically, AB 1233 applies to local governments that:

- Failed to adopt an updated housing element for the prior planning period
- Adopted a housing element that the California Department of Housing and Community Development found non-compliant due to failure to substantially comply with the adequate site requirement
- Failed to implement the adequate sites programs to make sites available within the planning period
- Failed to identify or make available adequate sites to accommodate a portion of the regional housing need

Where a local government failed to identify or make adequate sites available in the prior planning period, they must zone or rezone adequate sites to address the unaccommodated housing need within the first year of the new planning period. In addition to demonstrating adequate sites for the new planning period, the updated housing element must identify the unaccommodated housing need by income level. To determine the unaccommodated need, jurisdictions may take the following steps:

- Subtract the number of units approved or constructed (by income) since the beginning of the previous planning period's RHNA baseline date.
- Subtract the number of units that could be accommodated on any appropriately zoned sites specifically identified in the element adopted for the previous planning period (not counted above).
- Subtract the number of units accommodated on sites that have been rezoned for residential development pursuant to the site identification programs in the element adopted for the prior planning period.
- Subtract the number of units accommodated on sites rezoned for residential development independent of the sites rezoned in conjunction with the element's site identification programs as described above.

California's Sustainable Communities and Climate Protection Act (Senate Bill 375 [2008])

SB 375 aligns land use and transportation planning to link development with transit-accessible places and reduce car dependency. SB 375 is the land use component of California's wider strategy to reduce greenhouse gas emissions, codified by the 2006 Global Warming Solutions Act (AB 32). AB 32 enabled the state to regulate emission sources and set the aggressive goal of reducing emissions to 1990 levels by 2020. SB 375 requires California Metropolitan Planning Organizations (MPOs) to create an SCS as part of the federally mandated RTP. SCSs lay out the locations and types of development needed to lower vehicle miles traveled and meet greenhouse gas emission reduction targets.

SB 375 affects housing-related planning and policy in California in three main ways. First, SB 375 requires the MPOs to develop an SCS, as part of their federally mandated RTP. The SCS must lay out

plans for development patterns that would accommodate projected growth, while reducing vehicle miles traveled and thus greenhouse gas emissions. Second, SB 375 aligns the existing RHNA planning process with the SCS, in an effort to encourage local governments to plan for housing development consistent with the SCS. Third, SB 375 allows for streamlining of the CEQA review process for SCS-consistent development projects.

Alignment of Housing and Regional Transportation Plans

SB 375 promotes consistency between RTPs and regional housing policy. It requires the RTP to plan for the RHNA, and the RHNA to be consistent with the RTP's projected development pattern. SB 375 also aligned the RHNA with the regional transportation planning process and created an 8-year planning period for cities within MPOs. Allocation of housing share to various cities and counties must be consistent with the SCS.

Implementation of Housing Element

SB 375 extended the time for a local government to review and revise housing elements (i.e., the RHNA planning process) from 5 years to 8 years in certain areas within the state, including nonattainment regions[1] covered by an MPO. SB 375 requires the development of an 8-year program that includes a schedule of actions, with timetables for each action, during the program period. If the local agency fails to submit a valid housing element, it is subject to a 4-year review cycle.

Rezoning

If a local government does not identify enough sites to accommodate its housing need, it must adopt a program to make adequate sites available, including a program for rezoning sites to provide lower-income housing. Pre-SB 375 housing law, cities asserted they were only required to identify actions that would be undertaken to make sites available to accommodate various housing needs—that they were not mandated to actually adopt the rezonings included in the housing element programs. SB 375, however, provides that communities preparing an 8-year housing element must complete all required rezonings if the available housing sites inventory does not identify adequate sites to accommodate the RHNA obligation. The planned rezonings must include "minimum density and development standards" for all sites, and, for sites designated for very low- and low-income housing, rezonings must provide for "by right" zoning at certain minimum densities, with no discretionary approvals allowed except design review and subdivision map approval. CEQA review cannot be required unless a subdivision map is needed. The programmed rezonings must be completed within certain timeframes.

California Housing Crisis Act of 2019 (SB 330)

SB 330 was signed by Governor Newsom in 2019 as a means to combat the state's growing housing crisis. It applies to all urbanized areas or urban clusters as defined by the U.S. Census Bureau

[1] A "nonattainment area" means any geographic region of the United States that has been designated by the Environmental Protection Agency as a nonattainment area under Section 107 of the Clean Air Act for any pollutants for which National Ambient Air Quality Standards exist (23 Code of Federal Regulations 450.104). An MPO in a nonattainment region is required to adopt its RTP every 4 years. The SCS will be adopted as part of its RTP. An MPO that is not in a nonattainment region is required to adopt its RTP not less than every 5 years. SB 375 allows such an MPO to elect to adopt the RTP every 4 years. The purpose of such an election would be to take advantage of the provisions of SB 375 that allow for an 8-year planning period for a housing element (Government Coode 65080(b)(2)(L)).

(California Legislative Information 2019). The legislation's goal is to increase California's housing stock by 3.5 million new units by 2025. To streamline residential development, a new preliminary application process is established, which includes basic information regarding a project such as:

- Site characteristics
- Project plans
- Certain environmental concerns
- Facts related to any potential density bonus
- Certain coastal zone–specific concerns
- Number of units to be demolished
- Location of recorded public easements

SB 330 further streamlines housing development by reducing the amount of hearings (e.g., workshops, planning commission meetings, city council meetings, subcommittee meetings) to five or fewer for a qualifying project. A shortened approval time of 90 days instead of 120 days from the EIR certification time is included in the bill to also streamline development processes.

Under SB 330, where housing is an allowed use, public agencies may not change a land use designation to remove housing as an allowed use or reduce the intensity of residential uses unless concurrent action is taken to change the standards applicable to other parcels to ensure there is no net loss in residential capacity. Local jurisdictions are no longer able to impose new development standards that would reduce the zoned capacity for housing or adopt new design standards that are not objective. Specifically, an objective standard involves no personal or subjective judgment by a public official and is uniformly verifiable by reference to criteria that are available to the applicant at the time of application. Per SB 330, a design review process is required to include objective development standards, as defined above. Demolition of existing low-income units is only allowed if certain conditions related to affordability and tenant protections are met. Local governments are no longer able to limit the annual number of land use approvals or permits necessary for the approval and construction of housing, create caps on the amount of constructed housing units, or limit the population size of their city.

Assembly Bill 1397

California's AB 1397 made a number of changes to housing element law by revising what could be included in a local government's inventory of land suitable for residential development. AB 1397 changed the definition of land suitable for residential development to increase the number of multi-family sites. Identified sites must be "available" and "suitable" for residential development and have a "realistic and demonstrated potential" for redevelopment during the planning period. In addition, AB 1397 requires housing element inventory sites to be 0.5 acre to 10 acres, have sufficient infrastructure, or be included in a program to provide such infrastructure, to support and be accessible for housing development. The local government must specify the realistic unit count for each site and whether it can accommodate housing at various income levels.

Senate Bill 166

SB 166 (2017) requires a local government to ensure that its housing element inventory can accommodate its share of the regional housing need throughout the planning period. It prohibits

them from reducing, requiring, or permitting the reduction of the residential density to a lower residential density than what was used by the California Department of Housing and Community Development for certification of the housing element, unless the city or county makes written findings supported by substantial evidence that the reduction is consistent with the adopted general plan, including the housing element. In such cases, any remaining sites identified in the housing element update must be adequate to accommodate the jurisdiction's share of the regional housing need. A local government may reduce the residential density for a parcel only if it identifies sufficient sites remaining within the housing element as replacement sites, so that there is no net loss of residential unit capacity.

Regional

Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy

In September 2020, SCAG adopted the 2020–2045 RTP/SCS (referred to as *Connect SoCal*), which includes goals to increase mobility and enhance sustainability for the region's residents and visitors. The RTP/SCS encompasses three principles to improve the region's future: mobility, economy, and sustainability. As previously discussed, the RTP/SCS includes population, housing, and employment growth projections for 2045. These growth projections are used in SCAG's transportation modeling and shape SCAG's regional planning efforts, as outlined in the RTP/SCS. The RTP/SCS minimizes increases in regional traffic congestion by focusing growth, density, and land use intensity within existing urbanized area as the general land use growth pattern for the region while enhancing the existing transportation system and integrating land use into transportation planning. The RTP/SCS recommends local governments accommodate future growth within existing urbanized areas to reduce vehicle miles traveled, congestion, and greenhouse gas emissions.

Southern California Association of Governments' Regional Housing Needs Assessment

The RHNA is a key tool to plan for growth. Communities have to plan, consider, and decide how they will address this need through the process of completing the housing elements of their general plans. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate growth, so that they can grow in ways that enhance quality of life; improve access to jobs, transportation, and housing; and do not adversely affect the environment.

The RHNA is completed periodically by SCAG and its counterparts in other parts of the state, as mandated by state law. It consists of two measurements to meet the housing needs: existing need and future need. The existing need assessment examines variables from the most recent Census to measure ways in which the housing market is not meeting the needs of current residents. These variables include the number of low-income households paying more than 30 percent of their income for housing, as well as severe overcrowding (defined as housing units with more than 1.5 occupants per bedroom). The future need for housing is determined primarily by the forecasted growth in households in a community. Each new household, created by a child moving out of a parent's home, by a family moving to a community for employment, and so forth, creates the need for a housing unit.

The housing need for new households is then adjusted to account for an ideal level of vacancy needed to promote housing choice and moderate cost, and encourage acceptable levels of housing

upkeep and repair. In the SCAG region, many communities currently have more than the ideal number of vacancies, and thereby the vacancy adjustment is, in those cases, subtracted from the total housing need. Finally, a second adjustment is made to account for units expected to be lost due to demolition, natural disaster, or conversion to non-housing uses. The sum of these factors—household growth, vacancy need (generally a negative number), and replacement need—form the new housing need for a community. Finally, the RHNA considers how each jurisdiction might grow in ways that will decrease the concentration of low-income households in certain communities. The need for new housing is distributed among income groups so that each community moves closer to the regional average income distribution.

The housing element cycle covering the 2013–2021 period included an RHNA obligation of 8,283 units, of which only a portion was built during the last 8 years. The 6th cycle comes when California faces a statewide housing shortage that is affecting all Californians by raising the price of housing and the cost of construction, and by increasing homelessness.

In the 2021–2029 housing element cycle (6th cycle), the City's RHNA obligation is a minimum of 18,458 new housing units (as shown in Table 3.9-10). Given that 100 percent of potential housing sites will not be developed to full potential, the City has provided a buffer of approximately 5,500 dwelling units (approximately 30 percent over and above the RHNA obligation) to provide for no net loss pursuant to SB 166, and thus the City will identify space for up to 24,000 new homes for the 2021–2029 RHNA cycle.

Table 3.9-10. City of Riverside 2021–2029 Regional Needs Assessment

Income Category	Units
Very low income	4,861
Low income	3,064
Moderate income	3,139
Above moderate income	7,394
Total	18,458

Local

GP 2025 was adopted in November 2007 and considers the continued growth of the City to 2025. GP 2025 serves as the major tool for directing growth within the City and presents a comprehensive plan to accommodate the City's growing needs. GP 2025 is intended to implement the community's vision for what Riverside can be in 2025. Descriptions of individual elements are provided in Section 3.7, *Land Use and Planning*.

Table 3.9-11 presents an overview of GP 2025 and other local plans, policies, and programs related to population and housing.

Table 3.9-11. Relevant Riverside General Plan and Specific Plan Policies

Plan	Policy
Riverside General Plan 2025	
Land Use and Urban Design Element	Policy LU-8.1 Ensure well-planned infill development Citywide, allow for increased density in selected areas along established transportation corridors.

Plan	Policy
	Policy LU-8.2: Avoid density increases or intrusion of nonresidential uses that are incompatible with existing neighborhoods.
	Policy LU-8.3. Allow for mixed-use development at varying intensities at selected areas as a means of revitalizing underutilized urban parcels.
	Policy LU-9.3: Designate areas for urban land uses where adequate urban levels of public facilities and services exist or are planned, in accordance with the public facilities and service provisions policies of this General Plan.
	Policy LU-9.4: Promote future patterns of urban development and land use that reduce infrastructure construction costs and make better use of existing and planned public facilities when considering amendments to the Land Use Policy Map (Figure LU-10).
	Policy LU-9.5: Encourage the design of new commercial developments as "integrated centers," rather than as small individual strip development. Integrate pedestrian access, parking, access, building design and landscape themes across all parcels in the commercial center to unify the development.
	Policy LU-9.6: Discourage strip commercial development and encourage a pattern of alternating land uses along major arterials with "nodes" of commercia development separated by other uses such as residential, institutional or office.
	Policy LU-9.7: Protect residentially designated areas from encroachment by incompatible uses and from the effects of incompatible uses in adjacent areas. Uses adjacent to planned residential areas should be compatible with the planned residential uses and should employ appropriate site design, landscaping and building design to buffer the non-residential uses.
	Policy LU-10.1: Discourage the premature development of non-urbanized areas and encourage growth through such programs as the Residential infill Incentive Program, first in undeveloped and under-developed areas within, adjacent to or in close proximity to existing urbanized neighborhoods.
	Policy LU-10.2: Review the Capital Improvement Program of the City and local public works projects of other local agencies within the corporate boundaries of Riverside annually for consistency with this General Plan, pursuant to Government Code Sections 65401 et. seq. and City Code Title 19, 19.050.030 (B).
	Policy LU-10.3: Time the provision of capital improvements to ensure that all necessary public services and facilities for an area planned for new urban development are in place when development in the area occurs.
	Policy LU-10.4: Require development projects to be timed and phased so that projects are not occupied prior to the provision of necessary urban services.
	Policy LU-10.5: Consider the availability of public facilities and services when evaluating proposals for annexation of property into the City of Riverside.

Plan	Policy
Specific Plans	
Canyon Springs Business Park Specific Plan	There are no applicable policies relevant to the Project regarding population and housing.
Downtown Specific Plan	Policy H-1-1: Provide a variety of housing options, including medium and high-density apartments and condominiums, live/work loft space, and mixed-use buildings with a residential component
	Policy H-1-2: Ensure the preservation and enhancement of the single-family residential neighborhoods in the Downtown.
	Policy H-1-4: Encourage adaptive reuse of existing structures, or the development of new buildings, for the purpose of live/workspace in the Raincross, North Main Street Specialty Services, Almond Street and Prospect Place Office Districts.
	Policy H-1-5: Encourage and promote new high density residential projects and the use of upstairs spaces in existing buildings in the Raincross District for housing to increase housing options and help bring daytime, evening, and weekend activity to the Downtown.
	Policy H-1-7: Promote housing affordability through diversification of housing for varied income groups.
Hunter Business Park Specific Plan	There are no applicable policies relevant to the Project regarding population and housing.
La Sierra University Specific Plan	There are no applicable policies relevant to the Project regarding population and housing.
Magnolia Avenue Specific Plan	Objective 1: Restore the Magnolia/Market Corridor to its historical role as a scenic, "showcase roadway" that spans the City of Riverside while updating its function as a key transit corridor to support future growth. (General Plan Objective LU-12)
	Policy 1.6: Support and encourage the redevelopment of the Magnolia Avenue corridor with mixed-use development. (General Plan Policy LU-58.7)
Riverside Marketplace Specific Plan	There are no applicable policies relevant to the Project regarding population and housing.
University Avenue Specific Plan	There are no applicable policies relevant to the Project regarding population and housing.

Sources: City of Riverside 1991, 2002, 2005, 2007, 2009, 2017a, 2017b, 2019.

Policy Consistency

The Project would be consistent with GP 2025 and Specific Plan goals and policies as described in Table 3.9-11. As discussed in Chapter 2, *Project Description*, one of the preliminary objectives of the Project is to ensure affordable housing is added across the City and not concentrated in areas with lower access to amenities or near sources of pollution. The Housing Element Update includes a guiding principle that seeks to equitably distribute a mix of housing types, including ownership and rental, that is safe and affordable for people of all income levels, backgrounds, and ages and that meets the needs of current and future Riverside residents.

The principles, policies, actions, and programs within the Housing Element relate directly to, and must be consistent, with other elements of GP 2025. As part of the adoption of the Housing Element,

the City will modify applicable policies in other elements as necessary to maintain consistency. Pursuant to new state law, the City is updating the Public Safety Element concurrent with the Housing Element update to include an analysis of fire, flood, geologic, seismic, traffic, and public safety hazards and policies to reduce the potential loss of life from these hazards. The Public Safety Element will address new state requirements including environmental justice issues and climate change adaptation and resilience.

3.9.4 Methodology and Thresholds of Significance

The analysis of the Project's impacts on population and housing was conducted using a review of the most current population and housing statistics and projections available for the City. These statistics include SCAG's 2021–2029 6th cycle RHNA, Riverside's 2021–2029 Housing Element data, Riverside's GP 2025 background data, and DOF estimates and projections. The following information on population, housing, and employment for the planning area was used in this analysis from several sources:

- **California Department of Finance.** DOF prepares and administers California's annual budget. Other duties include estimating population demographics and enrollment projections. DOF's Table E-5, "City/County Population and Housing Estimates," reports on population and housing estimates for the state, counties, and cities, benchmarked to base year 2010.
- **Southern California Association of Governments.** SCAG's 2020–2045 RTP/SCS growth forecast process projects growth in employment, population, and households at the regional, county, jurisdictional, and sub-jurisdictional levels. The Demographics & Growth Forecast Technical Report for the 2020–2045 RTP/SCS forecasts employment, housing, and population projections data for 2030–2045.
- **United States Census Bureau.** The official United States Census is described in Article I, Section 2 of the Constitution of the United States. It calls for an actual enumeration of the people every 10 years, to be used for apportionment among the states of seats in the House of Representatives. The United States Census Bureau publishes population and household data gathered in the decennial census.

Thresholds of Significance

An Initial Study was prepared for the Project in April 2021. The following environmental threshold was scoped out from detailed review in this section of the Draft EIR because the impact was determined to be less than significant in the Initial Study:

- Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere

For a complete discussion of the environmental issues that were scoped out from this Draft EIR, refer to Section 3.15, *Effects Not Found to Be Significant*.

In accordance with Appendix G of the State CEQA Guidelines, the Project would be considered to have a significant effect if it would:

- Create substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)

3.9.5 Impacts and Mitigation Measures

Impact POP-1: The Project would result in substantial unplanned population growth either directly or indirectly. This impact would be significant and unavoidable.

Housing Element Update, Zoning Code Amendments, and Environmental Justice Policies

The Project includes policies to encourage housing, meet the City's housing needs with diverse household types, and provide for households that are vulnerable to housing insecurity. The expectation is that as growth occurs, housing would serve all income levels, including very low-, low-, moderate-, and above-moderate-income residents and special-needs residents. The Project is a policy-level planning effort that encourages and facilitates the development and redevelopment of a range of housing types and affordability levels while facilitating mixed-use development and public safety infrastructure.

The Housing Element Update includes environmental justice policies to facilitate equitable distribution of housing throughout the City. Due to the environmental justice policies being a policy-level planning effort, these policies would not create unplanned growth directly or indirectly. Additionally, the Project does not include specific development proposals. Future housing development facilitated by the Project would occur as market conditions allow and at the discretion of individual property owners.

Opportunity Sites have been identified to accommodate future housing and mixed-use development; this includes potential redevelopment sites that will help the City meet housing demand. The Project involves 239 acres that do not require zoning changes and 581 acres that would require general plan amendments, Zoning Code changes, and Specific Plan amendments, for a total of 870 parcels comprising 820 acres. The Housing Element Update proposes to rezone up to 581 acres within City boundaries to accommodate a variety of housing types and densities to accommodate the needs of households of all income levels. In addition to rezoning, the Housing Element will require amendments to seven of the City's Specific Plans including mapping and land use changes to accommodate Opportunity Sites that have been identified within their boundaries.

Because of the rezoning of sites, there would be an increase in the number of new housing units between 2021 and 2029 up to approximately 24,000 to fulfill the City's RHNA obligation. Rezoning that would occur as part of the proposed Project would allow for development of up to 31,564 housing units, if all sites were developed to the maximum proposed zoning capacity.

Development of affordable housing under the Project would encourage a mix of supportive housing, affordable rental, and affordable homeownership units in both new construction and preservation buildings, which is intended to increase affordable housing in the area rather than create new housing for people outside of the City. The rezoning of Opportunity Sites has the potential to increase the City's population if all housing units are constructed and all residents are new to the City. It is also possible that existing residents that are currently sharing homes may relocate to new units. The increase in mixed-use development could increase employment-generating land uses within the City, thereby inducing direct and indirect population growth in the City.

According to SCAG, the population of the City is projected to increase to 395,800 by 2045, which represents an increase of 20.61 percent from the 2020 population of 328,155 (SCAG 2020b). Based on DOF population and housing estimates, the City's current average household size is 3.28 persons. The increase in population that would potentially result by adding 31,564 new housing units would result in a population increase of 103,530 persons, which would be greater than the SCAG 2045 population projection of 67,645 new residents. Implementation of the Housing Element Update would result in additional housing beyond what is currently allowed under the existing GP 2025 and SCAG projections. This could result in an additional net increase of 47,175 in City population beyond what is currently anticipated at build-out under GP 2025 (increase of 56,355 persons). As the Project would result in projections beyond what was anticipated in the GP 2025 and no mitigation is available to reduce this impact to a less-than-significant level, impacts would be significant and unavoidable.

Public Safety Element Update and Environmental Justice Policies

The Public Safety Element Update policies and implementing actions address natural hazards; transportation hazards; police, fire, and emergency services; pandemic preparedness and response; homelessness; and climate change and resiliency. The policies and implementing actions aim to reduce the risk to the community and to ensure protection from foreseeable natural and human-caused hazards.

Proposed new residential and mixed-use development would be predominantly located in more urbanized areas of the City. Public Safety Element policies and implementing actions could affect the design and construction of planned developments, such as addition of design elements related to emergency access and pedestrian safety. Public Safety Element policies do not include specific development proposals that would create unplanned growth through extension of roads or other infrastructure.

The Public Safety Element Update policies and implementing actions also involve Additional Environmental Justice Policies to address public safety issues within environmental justice communities. Many Public Safety Element Update policies could result in community benefits. No specific infrastructure improvements or projects are identified in the Public Safety Element Update. As this is a policy document, this update would not have any significant indirect or direct environmental effects related to population and housing. Impacts would be less than significant.

3.10 Public Services

3.10.1 Introduction

This section addresses public services in the City of Riverside (City), which include fire protection, police protection, schools, and other public facilities such as libraries and community centers. Parks are discussed in Section 3.11, *Recreation*. This section discusses the existing conditions of public services and evaluates whether future development associated with Project implementation would result in substantial physical impacts on government facilities that provide public services. The analysis methods, data sources, significance thresholds, and terminology used in this section are described in the appropriate subsections below. Details on the location of the Project and a description of Project activities are included in Chapter 2*, Project Description*, of this EIR.

3.10.2 Environmental Setting

Fire Protection

The Riverside Fire Department (RFD) provides fire protection for the City. RFD is an all-hazard emergency service agency that provides fire protection, emergency medical services, fire safety inspections, community education, and emergency preparedness planning and training for the City. RFD's major facilities include 14 fire stations throughout the City, administration and prevention offices, an Emergency Operations Center, and a training center. In addition to the 14 stations that serve the City, the Riverside County Fire Department (RCFD) provides service to the unincorporated territory within the City's Sphere of Influence (SOI). RFD's fire stations, their locations, and associated equipment are listed in Table 3.10-1.

Table 3.10-1. Fire Stations

Station	Address	Neighborhoods Served	Personnel	Station Equipment	Ward
Station 1 – Downtown and Fire Administration	3401 University Ave	Downtown, portions of Northside, portions of Wood Streets, portions of Grand, portions of Victoria, portions of eastside, and portions of Hunter Industrial Park	One battalion chief, two captains, two engineers, three fighter/ paramedics, and two firefighters	Engine 1, Truck 1, Squad 1, Battalion 1, Brush 1, ATV 1, and Utility 1	1
Station 2 – Arlington	9449 Andrew St	Arlington, Arlington South, portions of Arlanza, portions of La Sierra, portions of Arlington Heights, portions of Presidential Park, and portions of Ramona	One battalion chief, two captains, two engineers, three firefighter/ paramedics, and two firefighters.	Engine 2, Truck 2, Squad 2, Battalion 2, Haz Mat 2, Support 2, and Utility 2	5

Station	Address	Neighborhoods Served	Personnel	Station Equipment	Ward
Station 3 – Magnolia Center (Midtown)	6395 Riverside Ave	Magnolia Center, portions of Victoria, Wood Streets, portions of Grand, portions of Casa Blanca, portions of Ramona, and portions of Hawarden Hills	Two captains, two engineers, two firefighter/ paramedics and one firefighter	Engine 3, Truck 3, Rescue 3, Water Rescue 3, Utility 3, ATV 3, HART 3	3
Station 4 – University	3510 Cranford Ave	Eastside, portions of Victoria, University, and Hunter Industrial	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 4 and Water Tender 4	2
Station 5 – Airport	5883 Arlington Ave	Airport, portions of Ramona, portions of Grand, and portions of Magnolia Center	One captain, one engineer, one firefighter, and two firefighter/ paramedics	Engine 5, Squad 5, Engine 835, Squad 835, Breathing Support 5, and Water Tender 5	3
Station 6 – Northside	1077 Orange St	Northside and portions of Hunter Industrial Park	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 6 and Engine 836	1
Station 7 – Arlanza	10191 Cypress Ave	Arlanza, portions of La Sierra Acres, and portions of La Sierra Hills	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 7, Utility 7, and Brush 7	7
Station 8 – La Sierra	11076 Hole Ave	La Sierra, portions of La Sierra Hills, portions of La Sierra Acres, and portions of Arlanza	One captain, one firefighter, and one firefighter/ paramedic	Engine 8, Utility 8, and Engine 369	6
Station 9 – Mission Grove	6674 Alessandro Blvd	Canyon Crest, portions of Mission Grove, portions of Sycamore Canyon, portions of Hawarden Hills, portions of Victoria, and portions of Alessandro Heights	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 9 and Engine 839	4

Station	Address	Neighborhoods Served	Personnel	Station Equipment	Ward
Station 10 – Arlington Heights	2590 Jefferson St	Casa Blanca, portions of Presidential Park, portions of Arlington Heights, portions of Hawarden Hills, and portions of Alessandro Heights	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 10	5
Station 11 – Orange Crest	19595 Orange Terrace Parkway	Orangecrest, portions of Alessandro Heights, portions of Mission Grove, and portions of Meridian JPA	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 11, Engine 353, and Battalion 831	4
Station 12 – La Sierra South	10692 Indiana Ave	La Sierra South, portions of La Sierra, portions of Arlington South, and portions of Arlington Heights	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 12, Brush 842, and Decon 12	5
Station 13 – Sycamore Canyon	6490 Sycamore Canyon Blvd	Portions of Canyon Crest, portions of Sycamore Canyon, Sycamore Canyon Business Park and Canyon Springs, and portions of Meridian JPA	One captain, one engineer, one firefighter, one firefighter/ paramedic	Truck 13, Patrol 13, Engine 843, and Utility 13	2
Station 14 – Canyon Crest	725 Central Ave	Canyon Crest, portions of Sycamore Canyon Park, and portions of University	One captain, one engineer, one firefighter, and one firefighter/ paramedic	Engine 14, Engine 8635, Quad 14A, Quad 14B, and Utility 14	2

Source: City of Riverside 2021a.

RFD has a mutual aid agreement with RCFD, and responses to emergencies would be provided with the closest resources, regardless of the jurisdiction. RFD's Fire Department Operations Division responds to more than 25,000 calls for service annually. The average time for service calls is 7 minutes and 59 seconds (McDowell pers. comm. 2021). RFD has established a performance goal for emergency response to arrive within 8 minutes of dispatch over 90 percent of the time, slower than the 5-minute response time that is generally preferred by fire officials for urban areas. Ensuring that a high level of service can be provided over the long-term is a community goal (City of Riverside Fire Department 2021; City of Riverside 2021b). (Note: the proposed Public Safety Element Update policies include actions that include updated standards for response times.)

The Riverside Municipal Code (RMC), Chapter 16.52, *Development Fees for Fire Stations,* provides the City with the ability to collect development fees for the construction and purchase of land for fire stations as well as for the acquisition of equipment and furnishings to equip fire stations. However, to date, the City has not adopted a resolution establishing those development fees, so no fees are currently being collected. RFD implemented service improvements through application of Riverside Measure Z funding and achieved an Insurance Services Office (ISO) Rating of ISO Class 1—the

highest awarded level—in December 2019 (City of Riverside Fire Department 2019). Measure Z also continues to provide funding for RFD staff positions, training, and vehicle replacement and maintenance (City of Riverside 2020).

Police Protection

The Riverside Police Department (RPD) provides police protection services to the City. Four RPD stations serve the City. The locations and services provided at each station are shown in Table 3.10-2. The Field Operations Division provides first response to all emergencies, performs preliminary investigations, and provides basic patrol services for the City. The Field Operations Division is managed by a Captain who oversees patrol officers, sergeants, lieutenant Watch Commanders, an Executive Lieutenant, and civilian support staff. The Field Operations Division includes over 130 patrol officers, 24 Sergeants, six Lieutenant Watch Commanders, one Executive Lieutenant, one Traffic Lieutenant, and a civilian support staff position (City of Riverside 2021b).

Table 3.10-2. Police Stations

Station	Address	Services/Divisions	Personnel	Ward
Orange Station	4102 Orange St	Headquarters, Support Services Division – Personnel Bureau, Community Services, Records Bureau, and Administrative Functions	70	1
Lincoln Station	8181 Lincoln Ave	Field Operations Division – Patrol/Traffic Functions, and Technical Services Unit (Bomb Squad)	184	4
Magnolia Station	10540 Magnolia Ave	Investigations and Special Operations Divisions – Investigations, Forensics, Property Room, Communications (Dispatch), Neighborhood Policing Centers, and Training Bureau	281	6
Aviation	7020 Central Ave	Air Support, METRO (SWAT) Team	25	3

Source: Payne pers. comm.

RPD police officers strive to respond within 7 minutes to Priority 1 calls (life-threatening). Officers strive to respond to less-urgent Priority 2 calls within 12 minutes (non-life-threatening).

The City has reconsidered RPD's centralized form of organization, and RPD has implemented a decentralized Neighborhood Policing Center model in an effort to provide more equitable and responsive services across the City. Additionally, RPD does not use a formula for calculating the number of officers per capita. According to the RPD Policy Manual, adequate staffing ensures that proper supervision is available for all shifts. RPD intends to balance the employee's needs against the need to have flexibility and discretion in using personnel to meet operational needs. While balance is desirable, the paramount concern is the need to meet operational requirements of RPD (City of Riverside Police Department 2020). (Note: The proposed Public Safety Element Update policies include actions that include updated standards for response times.)

Public Schools

The City is served by two public school districts: the Riverside Unified School District (RUSD) and the Alvord Unified School District (AUSD). RUSD is the fourteenth largest school district in California. RUSD has 47 schools, including 30 elementary schools, one special-education preschool, six middle schools (grades 7–8), five comprehensive high schools, two continuation high schools,

and the Riverside Virtual School. In addition to the two public school districts within the City, relatively small southeastern portions of the City (generally areas south of Dan Kipper Drive, north of Alessandro Boulevard, and east of Sycamore Canyon Wilderness Park) are served by Moreno Valley Unified School District (MVUSD).

AUSD includes 14 elementary schools, four middle schools, three comprehensive high schools, one continuation high school, and one alternative education center. Approximately 42,000 students are enrolled in grades K–12 at RUSD, and 20,000 students are enrolled at AUSD. In addition, RUSD has nearly 7,000 adult education students enrolled in its district (City of Riverside 2021c, 2021d). Figure E-1 of the *Riverside General Plan 2025* (GP 2025) Education Element shows education facilities in the City. Table 3.10-3 and Table 3.10-4 list the RUSD and AUSD schools, respectively, in the City and their locations.

Table 3.10-3. Riverside Unified School District Schools in the City

School	Location	Ward
Elementary Schools		
Adams	8362 Colorado Ave	5
Alcott	2433 Central Ave	3
Patricia Beatty	4261 Latham St	1
Bryant	4324 3rd St	1
Castle View	6201 Shaker Dr	2
Emerson	4660 Ottawa Ave	2
Franklin	19661 Orange Terrace Pkwy	4
Fremont	1925 Orange St	1
Harrison	2901 Harrison St	5
Hawthorne	2700 Irving St	5
Highland	700 Highlander Dr	2
Hyatt	4466 Mount Vernon Ave	2
Jackson	4585 Jackson St	5
Jefferson	4285 Jefferson St	3
John F. Kennedy	19125 Schoolhouse Ln	4
Liberty	9631 Hayes St	5
Longfellow	3610 Eucalyptus Ave	2
Madison	5700 Arlington Ave	5
Magnolia	3975 Maplewood Pl	1
Mark Twain	19411 Krameria Av	4
Monroe	8535 Garfield St	5
Mt. View	6180 Streeter Ave	3
Pachappa	6200 Riverside Ave	3
REACH Leadership Academy	3422 Rustin Ave	1
Sunshine	9390 California Ave	5
Taft	959 Mission Grove Pkwy N	4
Tomas Rivera	20440 Red Poppy Ln	4
Victoria	2910 Arlington Ave	3

School	Location	Ward
Washington	2760 Jane St	3
Middle Schools		
Amelia Earhart	20202 Aptos St	4
Central	4795 Magnolia Ave	1
Chemawa	8830 Magnolia Ave	5
Gage	6400 Lincoln Ave	3
Frank Miller	17925 Krameria Ave	4
Sierra	4950 Central Ave	3
University Heights	1155 Massachusetts Ave	1
High Schools		
Arlington	2951 Jackson St	5
John W. North	1550 3rd St	2
Martin Luther King	9301 Wood Rd	4
Poly	5450 Victoria Ave	3
Ramona	7675 Magnolia Ave	3

Source: City of Riverside 2021c.

Table 3.10-4. Alvord Unified School District Schools in the City

School	Location	Ward
Elementary Schools		
Arlanza	5891 Rutland Ave	6
Collett	10850 Collett Ave	6
Foothill	8230 Wells Ave	6
La Granada	10346 Keller Ave	7
McAuliffe	4100 Golden Ave	7
Myra Linn	10435 Branigan Way	6
Alan Orrenmaa	3350 Fillmore St	6
Philip Stokoe	4501 Ambs Dr	7
Rosemary Kennedy	6411 Mitchell Ave	7
Terrace	6601 Rutland Ave	7
Twinhill	11000 Campbell Ave	7
Valley View	11750 Gramercy Pl	7
Middle Schools		
Arizona	11045 Arizona Ave	5
Loma Vista	11050 Arlington Ave	7
Wells	10000 Wells Ave	6
High Schools		
Alvord Continuation	3606 Pierce St	6
Hillcrest	11800 Indiana Ave	6
La Sierra	4145 La Sierra Ave	6
Norte Vista	6585 Crest Ave	7

Source: City of Riverside 2021d.

Other Public Facilities

Libraries

The Riverside Public Library (RPL) system provides library service to the City. Eight existing libraries serve the City, with an additional library (Main Library) to be opened in 2021. Four university and college libraries also serve the City. The locations of libraries that serve the City are shown in Table 3.10-5. Collectively, RPL offers the following services at their library locations:

- Books and E-media, including E-books
- Wi-Fi and internet access
- Computer, laptop, and iPad access
- Printing
- Home delivery of books and audiovisual materials
- Technology and literacy programs
- Reference and research services
- Public meeting rooms
- Veteran resource center
- Community outreach efforts
- Annual summer reading program
- Cultural programming
- Makerspace containing computers, 3-D printers, audio and video capture and editing tools, and traditional arts and crafts supplies
- Youth services
- Toy-lending library

Table 3.10-5. Public Libraries in the City

Library/Branch	Address	Square Footage	Ward
Arlington Branch	9556 Magnolia Ave	13,000	5
Arlanza Branch	8267 Philbin Ave	10,000	6
Ssgt. Salvador J. Lara Casa Blanca Library	2985 Madison St	10,000	4
SPC. Jesus S. Duran Eastside Library	4033-C Chicago Ave	10,816	2
La Sierra Branch	4600 La Sierra Ave	11,500	7
Main Library[1]	3581 Mission Inn Ave	60,000	1
Marcy Branch	6927 Magnolia Ave	8,769	3
Orange Terrace	20010-B Orange Terrace Pkwy	13,000	4
New Main Library (under construction)[1]	3900 Mission Inn Ave	42,000	1
University of California, Riverside	900 University Ave	38,871	2
La Sierra University	4500 Riverwalk Pkwy	60,200	7
Cal Baptist University	8432 Magnolia Ave	47,000	5

Source: City of Riverside 2021e.
[1] New Main Library opened on June 26, 2021, and replaced the existing Main Library.

Construction of the New Main Library is substantially complete and the new facility replaced the existing Main Library on June 26, 2021. It will house 60,000 books and other materials, a community room, a bookstore space, a 100-seat community room, a two-story city archive, and an outdoor arcade space for community events such as youth performances, farmers markets, concerts, and family festivals.

Library service needs and standards are determined by the following methods: volumes by population; community need/service gaps (including services provided/not provided by other area departments and agencies); customer requests; and innovation/success of pilot projects. The City does not collect assessed development impact fees on the library's behalf. Library funding sources include the General Fund, trust funds, gift funds/donations, and grants. In addition, voters approved the Riverside Library Parcel Tax (Measure I) in November 2011 to fund library services through June 2022.

3.10.3 Regulatory Setting

Fire Protection

Federal

National Fire Protection Association 1710

The National Fire Protection Association recommends that fire departments respond to fire calls within 6 minutes of receiving the request for assistance for 90 percent of incidents. These time recommendations are based on the demands created by a structural fire. It is crucial to attempt to arrive and intervene at a fire scene prior to the fire spreading beyond the room of origin. Total structural destruction typically starts within 8 to 10 minutes after ignition. Response time is generally defined as 1 minute to receive and dispatch the call, 1 minute to prepare to respond to the fire station or field, and 4 minutes (or less) travel time. (National Fire Protection Association 2020.)

State

California Code of Regulations Title 24, Parts 2 and 9 – Fire Codes

California Code of Regulations (CCR) Part 2 of Title 24 refers to the California Building Code (CBC), which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. CBC Part 9 refers to the California Fire Code (CFC), which contains other fire safety-related building standards. In particular, the 2010 CBC Chapter 7A, *Materials and Construction Methods for Exterior Wildfire Exposure*, addresses fire safety standards for new construction. In addition, CBC Section 701A.3.2, *New Buildings Located in Any Fire Hazard Severity Zone*, states:

> New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

California Public Resources Code Sections 4290–4299 and General Code Section 51178

Public Resources Code Sections 4290–4299 and General Code Section 51178 require minimum statewide fire safety standards pertaining to: roads for fire equipment access; signage identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fire fuel breaks and greenbelts. They also identify primary fire suppression responsibilities among the federal, state, and local governments. In addition, any person who owns, leases, controls, operates, or maintains a building or structure in or adjoining a mountainous area or forest-covered, brush-covered, or grass-covered land, or any land covered with flammable material, must follow procedures to protect the property from wildland fires. This regulation also helps ensure fire safety and provide adequate access to outlying properties for emergency responders and safe evacuation routes for residents.

Regional

There are no regional regulations directly applicable to fire protection with respect to the Project.

Local

City of Riverside Fire Department Strategic Plan

The *City of Riverside Fire Department Strategic Plan 2017–2022* identifies RFD's key goals and objectives and articulates the agency's core responsibilities, mission, and guiding principles (City of Riverside 2017a). The plan includes emergency planning goals and objectives for RFD's Emergency Services Division.

City of Riverside Municipal Code

Chapter 16.32.020 of the RMC is adopted as the Uniform Fire Code and states:

> The 2018 International Fire Code as amended by the California State Fire Marshal, also known as the 2019 California Fire Code ("this Code"), including Appendices Chapter 4 , B, C, E, F, G, I, M, and O which prescribes regulations consistent with nationally recognized good practice for the safeguarding, to a reasonable degree, of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices and from conditions hazardous to life or property in the use or occupancy of buildings or premises is adopted and by this reference is made a part of this Code…

RMC Chapter 16.52, *Development Fees for Fire Stations*, provides for payment of development fees to be used for the purchase of land for and construction of fire stations, and acquisition of equipment and furnishings to equip fire stations. It is noted that the City has not adopted resolutions for RMC Chapter 16.52 and does not currently implement development fees for fire stations.

Riverside General Plan 2025

Public Safety Element

The goal of a jurisdiction's Public Safety Element is to reduce the potential short- and long-term risk of death, injuries, property damage, and economic and social disruption resulting from fires, floods, droughts, earthquakes, landslides, climate change, and other hazards. Other locally relevant safety issues—such as emergency response, hazardous materials spills, crime reduction, and response to global pandemics like COVID-19 beginning in 2020 and continuing through 2021—may also be included. The Public Safety Element directly relates to topics mandated in the Land Use and Urban

Design and Open Space and Conservation Elements as well as a key consideration for the Environmental Justice Policies of the general plan. The Public Safety Element must identify hazards and ways to reduce those hazards to guide local decisions related to zoning and development regulations. Policies and implementable actions may include methods for minimizing risks, as well as ways to minimize economic disruption and speed up recovery following disaster. The City's update to the Public Safety Element will identify public safety issues and needs anticipated to be of ongoing concern to people in the City. The Public Safety Element will ensure that the City takes action to reduce natural and man-made hazards and safety threats as well as respond quickly to any public safety incident. The GP 2025 Public Safety Element includes policies to address the City's fire protection needs. Objectives and policies relevant to the Project are shown in Table 3.10-6 below.

Land Use and Urban Design Element

In compliance with California Government Code Section 65302(a) requirements, the Land Use and Urban Design Element includes existing and proposed land uses as well as their relationship to the City's visionary goals. The element incorporates objectives and policies for land development and usage. The GP 2025 Land Use Element includes policies to address the City's fire protection needs. Policies relevant to the Project are shown in Table 3.10-6 below.

Police Protection

Federal

There are no federal regulations directly applicable to police protection with respect to the Project.

State

There are no state regulations directly applicable to police protection with respect to the Project.

Regional

There are no regional regulations directly applicable to police protection with respect to the Project.

Local

Riverside 2.0 Strategic Plan – Implementing the City Council's Strategic Priorities

The Riverside 2.0 Strategic Plan is intended to be a concise tool for implementing the strategic priorities of the Riverside City Council. The City Council identified seven priorities, including improving quality of life and providing appealing, accessible, and safe venues for community services.

Riverside General Plan 2025

Public Safety Element

The GP 2025 Public Safety Element includes policies to address the City's police protection needs. Policies relevant to the Project are shown in Table 3.10-6 below. Objectives and policies that are proposed for inclusion in the Public Safety Element Update are listed in detail in Chapter 2, *Project Description*.

Land Use and Urban Design Element

The GP 2025 Land Use Element includes policies to address the City's fire protection needs. Objectives and policies relevant to the Project are shown in Table 3.10-6 below.

Public Schools

Federal

There are no federal regulations directly applicable to schools with respect to the Project.

State

California Government Code 66000

According to California Government Code 66000, a qualified agency, such as a local school district, may impose fees on developers to compensate for the impact that a project will have on existing facilities or services. The California legislature passed Senate Bill 50 in 1998, which inserted new language into the Government Code (Sections 65995.5–65995.7) that authorized school districts to impose fees on developers of new residential construction in excess of mitigation fees authorized by Government Code 66000. School districts must meet a list of specific criteria, including the completion and annual update of School Facility Needs Analysis, in order to be legally able to impose the additional fees.

Leroy F. Green School Facilities Act

California Government Code Section 65995 (The Leroy F. Green School Facilities Act of 1998) set base limits and additional provisions for school districts to levy development impact fees and to help fund expanded facilities to house new pupils that may be generated by the development project. Sections 65996(a) and (b) state that such fees collected by school districts provide full and complete school facilities mitigation under CEQA. These fees may be adjusted by the district over time as conditions change.

Regional

There are no regional regulations directly applicable to schools with respect to the Project.

Local

Riverside General Plan 2025 Education Element

The Education Element (City of Riverside 2007a) addresses the educational resources that serve the City and surrounding region. Beyond the City's educational facilities, this element addresses the City's public library system and municipal museum. The Education Element includes objectives and policies intended to ensure a "comprehensive and flexible education in which all sectors, from pre-kindergarten through postsecondary education, offer the resources and services to provide a rigorous and quality education." Objectives and policies relevant to the Project are shown in Table 3.10-6 below.

City of Riverside Municipal Code – School Development Fee

Chapter 16.56, *School Development Fee*, of the RMC establishes coordination between the City and the applicable school district to develop a school development fee for mitigating the impact of residential development on local school districts.

Riverside Unified School District

Property owners and developers pay developer fees to RUSD to mitigate the impact created by new development within RUSD boundaries on its school facilities (RUSD 2019). Level I and Level II fees are primarily applied to industrial and commercial buildings, and residential additions above 500 square feet. Level II fees are for all new residential developments. RUSD is not currently authorized to collect Level III fees.

Alvord Unified School District

AUSD determined that school fees should be levied on new development projects within AUSD boundaries, if findings can be made that such projects will lead to higher student enrollment and increased facility costs. School fees finance school facilities necessitated by students generated from new development. School development fees were recently updated in 2020 and vary for new residential construction, residential addition, commercial/industrial construction, senior housing, and self-storage (AUSD 2020).

Moreno Valley Unified School District

MVUSD also requires landowners and developers to pay developer fees to MVUSD to mitigate the impact created by new development within MVUSD boundaries on its school facilities. MVUSD applies Level I fees to new residential construction on an accessory dwelling unit, room additions or room conversions, and industrial and commercial construction. Level II fees are applied for all new residential developments. MVUSD is not currently authorized to collect Level III fees (MVUSD 2021).

Other Public Facilities

Federal

There are no federal regulations directly applicable to other public facilities with respect to the Project.

State

There are no state regulations directly applicable to other public facilities with respect to the Project.

Regional

There are no regional regulations directly applicable to other public facilities with respect to the Project.

Local

Measure C and Measure I

In 2002, the City placed a $19 annual parcel tax (i.e., Measure C) on the ballot to secure a dedicated funding source for local libraries. The measure passed but had a 10-year term that expired in June 2012. In 2011, Measure I was placed on the ballot to extend the $19 annual parcel tax for another 10 years. The measure also passed. Therefore, the library parcel tax will continue to be collected and used for library services in the City through June 2022. In the past, the Riverside Public Library used Measure C and I funds (along with general funds) to serve City residents through extended hours of operation, books, electronic resources, homework and reading programs, new programming, and acquisitions of new computers.

Riverside General Plan 2025 Public Facilities and Infrastructure Element

The Public Facilities and Infrastructure Element addresses the City's public facilities (i.e., libraries, hospitals, and community centers) and infrastructure, including water service and supply, wastewater, stormwater control, solid waste, electric power, and telecommunications. The element includes goals and policies intended to ensure the City supports well-designed and adequately maintained infrastructure and quality public facilities for its residents.

The Public Facilities and Infrastructure Element policies relevant to the Project are addressed in this section and Section 3.14, *Utilities and Service Systems*. Objectives and policies relevant to the Project are shown in Table 3.10-6.

Table 3.10-6. Relevant General Plan and Specific Plan Policies

Policy Title	Summary
Riverside General Plan 2025	
Public Safety Element	• Objective PS-6: Protect property in urbanized and nonurbanized areas from fire hazards. ○ Policy PS-6.1: Ensure that sufficient fire stations, personnel and equipment are provided to meet the needs of the community as it grows in size and population. ○ Policy PS-6.2: Endeavor to meet/maintain a response time of five minutes for Riverside's urbanized areas. ○ Policy PS-6.3: Integrate fire safety considerations in the planning process. ○ Policy PS-6.4: Promote the use of buildings, setbacks, walls, landscaping, and other design features to buffer and reduce conflicts between adjacent properties. ○ Policy PS-6.5: Promote green building design. ○ Policy PS-6.6: Continue to implement stringent brush-clearance requirements in areas subject to wildland fire hazards. ○ Policy PS-6.7: Continue to involve the City Fire Department in the development review process. ○ Policy PS-6.9: Provide outreach and education to the community regarding fire safety and prevention. • Objective PS-7: Provide high-quality police services to all residents and businesses in Riverside. ○ Policy PS-7.1: Deploy human and financial resources to ensure adequate and equitable distribution of police services.

Policy Title	Summary
	○ Policy PS-7.2: Support the transition of the Riverside Police Department from a centralized agency to one built around precincts as a means of providing more rapid, equitable and proactive community policing services. ○ Policy PS-7.3: Coordinate police services with college and university campus police forces and private security forces. ○ Policy PS-7.4: Coordinate with the Riverside County Sheriff in its efforts to provide law enforcement services within Sphere of Influence areas. ○ Policy PS-7.5: Endeavor to provide minimum response times of seven minutes on a Priority 1 calls and twelve minutes on all Priority 2 calls. • Objective PS-8: Improve community safety and reduce opportunities for criminal activity through appropriate physical design. ○ Policy PS-8.1: Maximize natural surveillance in all new development through physical design features that promote visibility. ○ Policy PS-8.2: Promote land use and design policies and regulations which encourage a mixture of compatible land uses to promote and increase the safety of public use areas and pedestrian travel. ○ Policy PS-8.3: Involve the Police Department in the development review process of public areas relative to building and site plan vulnerabilities to criminal activities. ○ Policy PS-8.4: Coordinate efforts between the Police Department and Planning Division to develop guidelines for implementation of CPTED-related issues. ○ Policy PS-8.5: Continue to encourage residents and apartment managers to become involved in the Crime Free Multi-Housing Program as a way to reduce crime in apartment communities. • Objective PS-9: Minimize the effects from natural and urban disasters by providing adequate levels of emergency response services to all residents in Riverside. ○ Policy PS-9.1: Maintain an effective, coordinated and up-to-date community-wide emergency response plan. ○ Policy PS-9.2: Support the Riverside Emergency Management Office in coordinating the City's response to disasters, providing public outreach and presentations and assisting residents to prepare for major events. ○ Policy PS-9.3: Review and test the City's Emergency Operations Plan periodically to note any deficiencies or practices requiring modification. ○ Policy PS-9.4: Ensure that equipment and structures designed to provide emergency disaster services are located and designed to function after a disaster or emergency event, or relocate any such structures which are not adequate to provide emergency services ○ Policy PS-9.5: Provide effective and relevant information to the public regarding disaster preparedness. ○ Policy PS-9.6: Conduct regularly scheduled disaster exercises to better prepare Police, Fire and other City employees with disaster responsibilities. ○ Policy PS-9.7: Identify actions to reduce the severity and probability of hazardous occurrences. ○ Policy PS-9.8: Reduce the risk to the community from hazards related to geologic conditions, seismic activity, flooding and structural and wildland fires by requiring feasible mitigation of such impacts on discretionary development projects. • Objective PS-10: Improve the community's ability to respond effectively to emergencies.

Policy Title	Summary
	○ Policy PS-10.1: Ensure that Police and Fire service facilities are strategically located to meet the needs of all areas of the City. ○ Policy PS-10.2: Consider means to develop joint police and general community facilities within the City. ○ Policy PS-10.3: Ensure that public safety infrastructure and staff resources keep pace with new development planned or proposed in Riverside and the Sphere of Influence. ○ Policy PS-10.4: Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress, and review neighborhood access needs to solve problems, if possible.
Land Use and Urban Design Element	• Objective LU-26: Ensure that a network of modern, effective and adequate community facilities are equitably distributed across the entire City. ○ Policy LU-26.1: Develop and enforce standards for community facilities (such as fire and police stations, libraries and parks) based upon population densities and proximity of existing facilities.
Education Element	• Objective ED-5: Ensure that the library system remains a premier information and independent learning resource for the Riverside residents and a complement to formal education. ○ Policy ED-5.1: Provide ample and convenient library facilities. ○ Policy ED-5.2: Outreach to the community to assess, select, organize and maintain collections of materials and information sources of value desired by the community. ○ Policy ED-5.3: Partner with the school districts, universities, colleges and community and child care centers to operate joint-use learning and information resource centers.
Housing Element	• Objective H-1: To provide livable neighborhoods evidenced by well-maintained housing, ample public services, and open space that provide a high quality living environment and instill community pride. ○ Policy H-1.5: Public Facilities and Infrastructure. Provide quality community facilities, physical infrastructure, traffic management, public safety, and other public services to promote and improve the livability, safety, and vitality or residential neighborhoods.
Specific Plans	
Canyon Springs Business Park Specific Plan	There are no applicable policies relevant to the Project regarding public services.
Downtown Specific Plan	Contains an assessment and vision for cultural and art resources and facilities.
Hunter Business Park Specific Plan	There are no applicable policies relevant to the Project regarding public services.
La Sierra University Specific Plan	Goal LSU-1: To provide a high quality, attractive mixed-use development which includes educational, residential, commercial, industrial and recreational uses, all integrated with and enhancing the existing campus environment. Policy LSU-1.7: A public elementary school site is to be provided in Subarea 6, at the corner of Raley Drive and Pierce Street, eventually to total ten acres. The school site is subject to the approval by the State of California.

Policy Title	Summary
Magnolia Avenue Specific Plan	Objective 1: Restore the Magnolia/Market Corridor to its historical role as a scenic, "showcase roadway" that spans the City of Riverside while updating its function as a key transit corridor to support future growth. Policy 1.11: Collaborate on strong joint use arrangements to create partnerships with the City, Riverside Unified School District, Alvord Unified School District, Sherman Indian School and California Baptist University to remove barriers to joint use of facilities.
Riverside Market Place	There are no applicable policies relevant to the Project regarding public services.
University Avenue Specific Plan	There are no applicable policies relevant to the Project regarding public services.

Sources: City of Riverside 1991, 2002, 2005, 2007a, 2007b, 2009, 2017b, 2017c, 2018a, 2018b, 2019.

Policy Consistency

CEQA regulations require a discussion of inconsistencies or conflicts between a project and federal, state, regional, or local plans and laws. Several federal and state laws and regional policies pertain to public services. As discussed in Chapter 2, *Project Description*, one of the objectives of the Project, through the Housing Element Update, is to provide livable neighborhoods that facilitate and encourage new sustainable neighborhoods by designing safe and healthy complete neighborhoods that take into consideration schools and other needs. Additionally, another Project objective is to address the public safety and public health needs and concerns of its residents, businesses, institutions, and visitors, and set forth a proactive and coordinated program of protection for all foreseeable natural and human-caused hazards. Therefore, implementation of the Project would be consistent with all relevant plans and laws.

3.10.4 Methodology and Thresholds of Significance

The methods for analysis are based on an assessment of existing public services such as fire and police resources, standards and capacities, existing public school resources and enrollment data, and recreational resources and standards. In order to conduct an analysis for the Project, desktop research was conducted to determine service capabilities, service ratios, response times, and performance objectives. This impact analysis considers the potential public services impacts associated with the implementation of the Housing Element Update, Zoning Code and Specific Plan amendments, Public Safety Element Update, and Environmental Justice Policies.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would be considered to have a significant effect if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
    - Fire protection
    - Police protection

- Schools
- Other facilities, including libraries

3.10.5 Impacts and Mitigation Measures

This section describes potential impacts related to public services that could result from implementation of the Project and recommends mitigation measures as needed to reduce significant impacts.

Impact PS-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or other public facilities. This impact would be less than significant.

Housing Element Update, Zoning Code Amendments, and Environmental Justice Policies

Future development facilitated by the Project would increase demand for public services over time. Potential impacts would include greater demands for fire protection, police protection, schools, and library facilities potentially resulting in the need to provide for new or expanded public facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Additionally, future development facilitated by the Project would increase the use of existing public facilities, which could cause physical deterioration of the facilities.

Fire Protection

Demand for fire protection services would increase as a result of future development facilitated by the Project. Potential impacts would include placing greater demands on fire protection services, potentially resulting in the need to provide new or expanded fire protection facilities in order to maintain an acceptable level of service. Additionally, future residential and mixed-use development facilitated by the Project would increase the use of existing fire protection services, which could cause physical deterioration of existing facilities. As discussed in Chapter 2, *Project Description*, implementation of the Project could result in the future development of an additional 31,564 dwelling units. This increase in dwelling units would increase population and could result in a permanent increase in demand for fire protection services in areas served by RFD.

RFD provides fire protection for the City and has 14 fire stations that serve the City (see Table 3.10-1). In addition, RCFD provides service to the unincorporated territory within the City's Sphere of Influence through a mutual aid agreement. According to the RFD Strategic Plan, RFD responded to 32,000 calls for service in 2015. GP 2025 Public Safety Element, Policy PS-6.2 endeavors to meet/maintain a response time of 5 minutes for the City's urbanized areas (City of Riverside 2018a). RFD's average response time is 7 minutes and 59 seconds (McDowell pers. comm. 2021), which is below RFD's established performance goal of 8 minutes of dispatch over 90 percent of the time. Ensuring that a high level of service can be provided over the long-term is a community goal. RFD implemented service improvements through application of Riverside Measure Z funding and

achieved an ISO Rating of ISO Class 1—the highest awarded level—in December 2019 (City of Riverside Fire Department 2019). Measure Z also continues to provide funding for RFD staff positions, training, and vehicle replacement and maintenance (City of Riverside 2020).

State, county, and City jurisdictions have policies related to providing adequate fire services to the area. All development would be constructed in accordance with current building and fire/life/safety ordinances and codes, including all applicable County of Riverside and City jurisdiction code requirements related to construction, access, water mains, fire flows, and hydrants. Fire services are based on community needs because local departments conduct ongoing evaluations and annual budgeting processes to determine infrastructure, equipment, and staffing needs for the upcoming year. If ongoing evaluations indicate increased response time, then the acquisition of equipment, personnel, and new stations is considered. GP 2025 Public Safety Element, Policy PS-6.1 ensures that sufficient fire stations, personnel, and equipment are provided to meet the needs of the community as it grows in size and population.

RCFD's *Strategic Plan 2009–2029* (RCFD 2009) also guides the development of fire station facilities. Future development within Riverside County would be required to comply with fire safety regulations. As previously stated, RFD has a mutual aid agreement with RCFD that stipulates that the closest station would respond to emergencies regardless of jurisdiction. This would ensure that adequate fire service is available to respond to calls for service within the City.

Compliance with the above-mentioned state and local regulations would ensure that there would be sufficient fire protection service and facilities to accommodate additional population resulting from residential and mixed-use development and associated population growth facilitated by the Project. As such, impacts related to fire protection services would be less than significant.

Police Protection

Future development would increase demand for police protection over time. Implementation of the Project could result in the future development of an additional 31,564 dwelling units and mixed-use development. This increase in dwelling units would increase population and could result in a permanent increase in demand for police protection services in areas served by the RPD.

In the City, RPD provides police protection services. There are four RPD stations that serve the City (see Table 3.10-2). The Field Operations Division provides first response to all emergencies, performs preliminary investigations, and provides basic patrol services for the City. The Field Operations Division is managed by a Captain who oversees patrol officers, sergeants, lieutenant Watch Commanders, an Executive Lieutenant, and civilian support staff. The Field Operations Division includes over 130 sworn officers, 24 Sergeants, six Lieutenant Watch Commanders, one Executive Lieutenant, one Traffic Lieutenant, and a civilian support staff position (City of Riverside 2021b).

The GP 2025 Public Safety Element, Policy PS-7.5 provides for response time of within 7 minutes to Priority 1 calls (life-threatening) and within 12 minutes for Priority 2 calls (non-life-threatening) (City of Riverside 2018a).

Implementation of the Housing Element Update would increase demands of police services over time. However, RPD would evaluate its budget annually to provide adequate police services, including police staffing increases, to accommodate additional growth associated with development facilitated by the Project. The City would continue to meet the recommended police response times

(7 minutes to Priority 1 calls and 12 minutes for Priority 2 calls); therefore, the Project would not cause any adverse effects. Therefore, impacts on police services would be less than significant.

Compliance with the above-mentioned state and local regulations would ensure that there would be sufficient police protection service and facilities to accommodate additional population resulting from development and associated population growth facilitated by the Project. As such, impacts related to police protection services would be less than significant.

Public Schools

Future development and population growth facilitated by the Project would increase the demand for RUSD and AUSD school facilities and services over time. Implementation of the Project could result in the future development of an additional 31,564 dwelling units. This increase in dwelling units would increase population and could result in a permanent increase in demand for public school services in areas served by RUSD and AUSD. Some of the new residents may attend private schools or charter schools, or they may be home schooled. Future residential development would comply with RMC Chapter 16.56, *School Development Fee*, which establishes coordination between the City and the applicable school district to develop a school development fee for mitigating the impact of residential development on local school districts. In addition, legislation allows school districts to collect impact fees from developers of new residential and commercial uses. Pursuant to Government Code Section 65996, school fees imposed through the Education Code are deemed to be full mitigation for new development projects; the City cannot impose additional mitigation measures.

RUSD, MVUSD, and AUSD school impact fees would be imposed on future development within their districts' boundaries. RUSD and MVUSD collect Level I fees for residential additions and commercial/industrial construction based on the square footage of new developments. Similarly, RUSD collects Level II fees for new residential construction based on the square footage of new developments (RUSD 2019; MVUSD 2021). AUSD collects school fees levied on new development projects, if findings can be made that such projects will lead to higher student enrollment and increased facility costs. School fees finance school facilities necessitated by students generated from new development. School development fees were recently updated in 2020 and vary for new residential construction, residential addition, commercial/industrial construction, senior housing, and self-storage (AUSD 2020).

Fees paid by the developer would be used to offset the impact of the number of new students generated by the development facilitated by the Project and would ensure that the development contributes to a fair-share amount to help maintain adequate school facilities and levels of service. Therefore, the provision of schools is the responsibility of the school district. Senate Bill 50 provides that the statutory fees found in the Government and Education Codes are the exclusive means of considering and mitigating for school impacts. Imposition of the statutory fees constitutes full and complete mitigation (Government Code Section 65995(b)).

Future development must also comply with GP 2025 Education Element Policies ED-1.1 and ED-3.1. Policy ED-1.1 requires an adequate level of infrastructure and services to be provided to accommodate campus growth at all educational levels (City of Riverside 2007a). Policy ED-3.1 requires educational institutions to accommodate the needs of City residents.

Compliance with the above-mentioned state and local regulation would ensure that there would be sufficient facilities and service to accommodate additional students resulting from development and

associated population growth facilitated by the Project. As such, impacts related to schools would be less than significant.

Other Public Facilities

Future development would increase demand for other public services—such as libraries, community centers, and museums—over time. Potential impacts would include placing greater demands on public service facilities, potentially resulting in the need to provide new or expanded facilities in order to maintain an acceptable level of service. Additionally, use of existing public services facilities would increase, which could cause physical deterioration of the facility.

The City has nine existing libraries (see Table 3.10-5). Service expansion would be evaluated regularly. Library service needs and standards are determined by the following methods: volumes by population, community need/service gaps (including services provided/not provided by other area departments and agencies), customer requests, and innovation/success of pilot projects. Impacts would be less than significant.

While there are no development impact fees that would fund the RPL system, the Project would comply with GP 2025 Education Element Objective ED-5, which states that a project should help to ensure that the library system remains a premier information and independent learning resource for the Riverside residents and a complement to formal education, and Policy ED-5.1, which states that the City is required help to provide ample and convenient library facilities. Compliance with GP 2025 would ensure that the Project would not affect the City's ability to provide adequate libraries. Therefore, the Project would result in less-than-significant impacts on library service and no mitigation is required.

Public Safety Element Update and Environmental Justice Policies

The Public Safety Element Update policies and implementing actions address natural hazards; transportation hazards; police, fire, and emergency services; pandemic preparedness and response; homelessness; and climate change and resiliency. These policies and implementing actions aim to reduce the risk to the community and to ensure protection from foreseeable natural and human-caused hazards.

Proposed new residential and mixed-use development would be predominantly located in more urbanized areas of the City. Public Safety Element Update policies and implementing actions could affect the design and construction of planned developments, including addition of design elements related to emergency access and pedestrian safety. The Public Safety Element Update policies and implementing actions would also involve evaluation of public services, with respect to responding to risks of natural hazards, transportation hazards, etc. Public Safety Element policies do not include specific development proposals that would result in the need for public services.

The Public Safety Element Update policies and implementing actions would also involve additional Environmental Justice Policies to address public safety issues within environmental justice communities. Many Public Safety Element Update policies could result in community benefits. No specific infrastructure improvements or projects are identified in the Public Safety Element Update. As this is a policy document, this update would not have any significant environmental effects related to public services. Impacts would be less than significant.

3.11 Recreation

3.11.1 Introduction

This section describes the environmental and regulatory setting for parks and recreation for the Project, and provides an analysis of potential parks and recreation impacts that could occur with the implementation of the Project. The analysis examines the degree to which the Project may result in changes to parks and recreational resources in the City of Riverside (City) and includes analysis of potential impacts related to recreational resources. The analysis methods, data sources, significance thresholds, and terminology used in this section are described in the appropriate subsections below.

Details on the location of the Project and a description of Project activities are included in Chapter 2*, Project Description*, of this EIR.

3.11.2 Environmental Setting

The Parks and Recreation Element of the *Riverside General Plan 2025* (GP 2025) describes *parks* as:

> Intended as public green space where city dwellers can escape from the rush of urban life. Passive parks may include such amenities as large open green spaces, meadows, meandering pathways, ponds and gardens. Active parks, on the other hand, include a variety of facilities for recreation. Baseball and softball diamonds, basketball courts, horseshoe rings, football fields, playgrounds and swimming pools are examples of facilities often found in active parks.

The City has 68 parks and additional open space areas with approximately 2,940.61 acres of City-owned parkland (City of Riverside 2020). The acreage for each park type is shown in detail in Table 3.11-1 and locations of parks that would serve the Project are shown on Figure 3.11-1. According to the *City of Riverside Comprehensive Park, Recreation & Community Services Master Plan* (Parks Master Plan), adopted on February 4, 2020, the City has identified nine undeveloped City-owned park sites in underserved areas of the City that can be developed into parks contingent upon availability of funds. These sites include City Citrus State Park, Golden Star Park, Hole Lake, Mission Ranch Park, Mount Vernon Park, Savi Ranch Park, Seven Mile Trail, Tequesquite Open Space, and Victoria Cross Park (City of Riverside 2020).

Table 3.11-1. Acreage for Existing Parks and Recreation Facilities in the City of Riverside

Park Category	City of Riverside Acreage
Developed Parks	
Pocket Parks	3.5
Neighborhood Parks	225.57
Community Parks	370.18
Regional Parks	279.45
Joint-Use Facilities	—
Special-Use Facilities	97.54

Park Category	City of Riverside Acreage
Natural Parks	
Regional Reserve	1,615.33
Miscellaneous Facilities	
Undeveloped City-owned property	349.05
Total City-Owned Acres	2,940.61
Total City-Owned Acres excluding Undeveloped City-Owned Property	2,595.07

Source: City of Riverside 2020.

The Parks Master Plan defines parks as areas that are "intended as public green space where city dwellers can escape for the rush of urban life." The City categorizes its parks into three categories: Developed Parks, Natural Parks, and Miscellaneous Facilities (City of Riverside 2020).

Developed Parks

Pocket parks are small parks that the general public has access to. They are often designed and built in a single lot or smaller parcel. These parks may be created as a component of public space requirements of larger developments and can occur in all manner of settings.

Neighborhood parks may provide green space, recreation centers, sports facilities, or playgrounds. They are often landscaped and serve a multitude of functions from passive recreation to a planned center for sports activities. They are typically less than 30 acres in total size and will often present themselves as a community or neighborhood focal point.

Community parks are typically larger parks meant to serve a larger geographic area than the immediate neighborhood. These parks are formed with the intent to engage the community and visitors for longer periods of time and offer more diverse activities and amenities.

Regional parks are areas preserved to protect or bring attention to natural features, historic significance, or recreational use or other reasons. These parks are administered by a local jurisdiction, usually a city or a county.

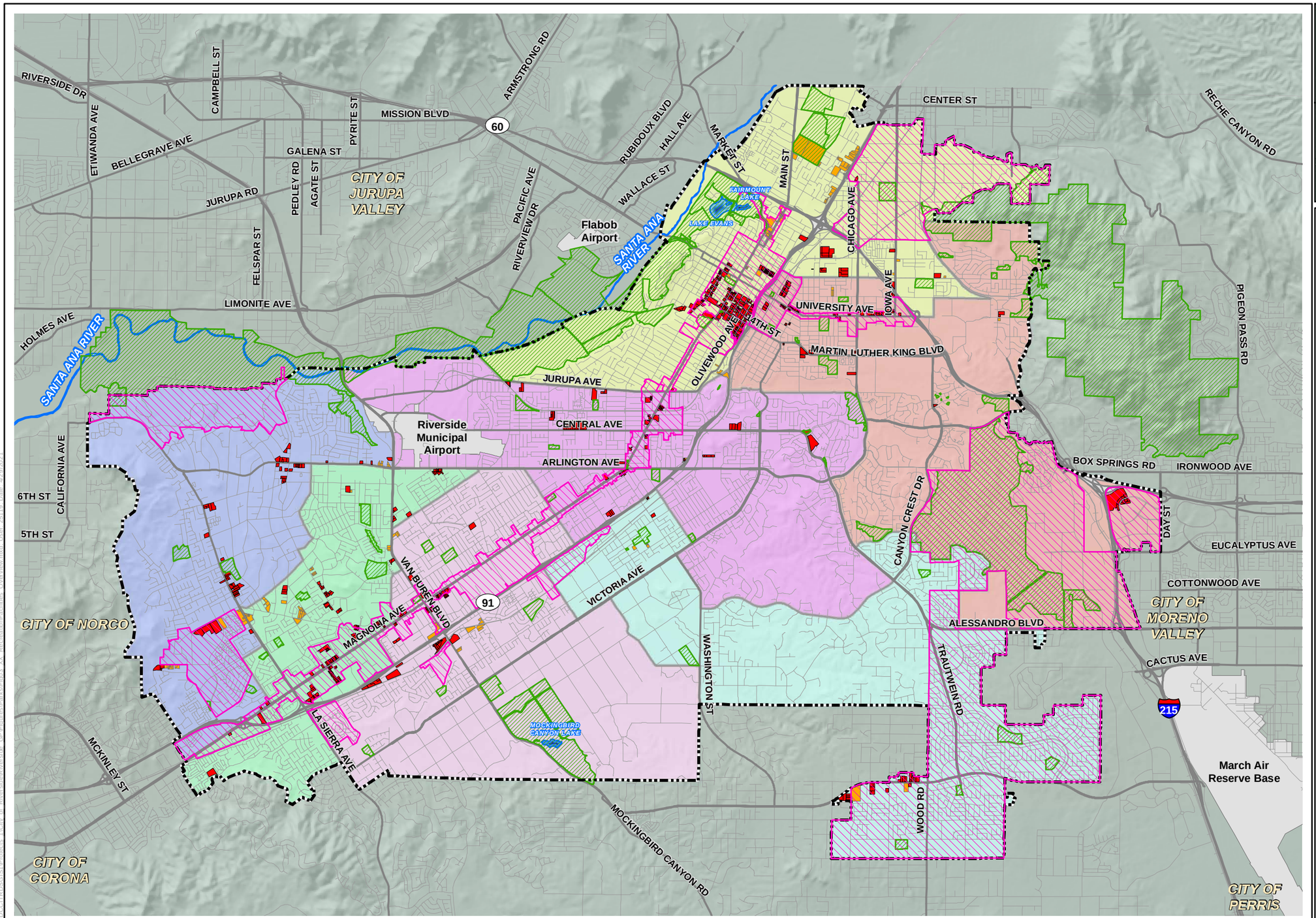
Joint-use facilities can also be referred to as shared-use or community-use sites. These sites are managed by jurisdictions or quasi-government entities and allow access for community use.

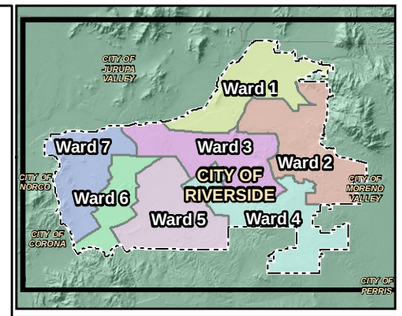
Special-use facilities cover a broad range of specialized park and recreation facilities, often with a single major use. Golf courses, historical sites, community center sites, theme parks, and water parks are other special-use facilities that fall into this use type.

County and state parks exist within the City of Riverside and the City's Sphere of Influence. Although not directly owned or controlled by the City, these parks also provide recreation opportunities to the community.

Natural Parks

Regional reserves areas set aside for the protection of wildlife, habitat, and other ecological considerations. There is usually minimal infrastructure within the park beyond trails and signs. These areas may be accessible for low-impact use.





Legend

- Riverside City Limits
- Specific Plans
- Ward 1
- Ward 2
- Ward 3
- Ward 4
- Ward 5
- Ward 6
- Ward 7
- Park/Recreation Facility

Opportunity Sites

- No Zone Changes
- Zone Changes

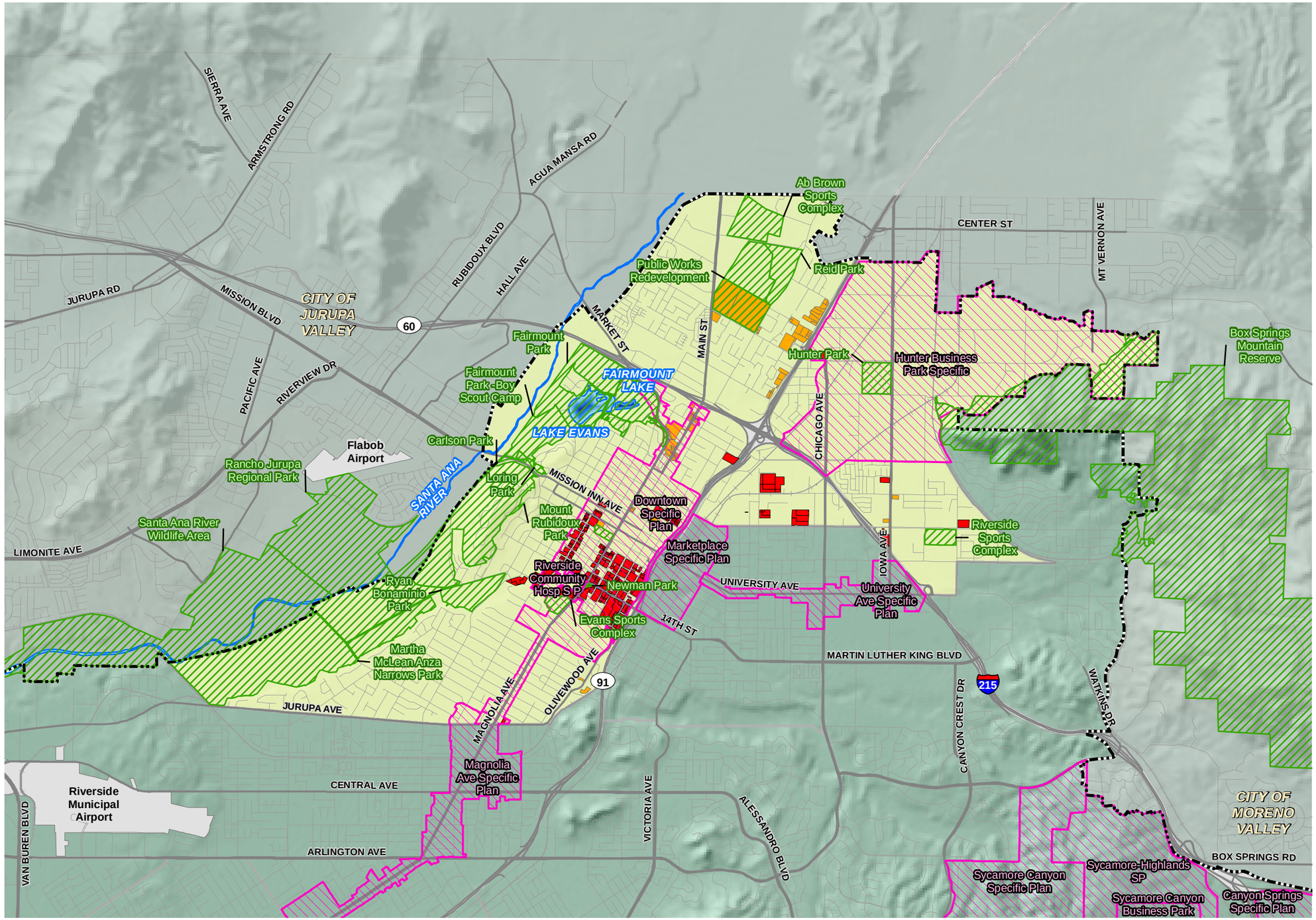
ICF

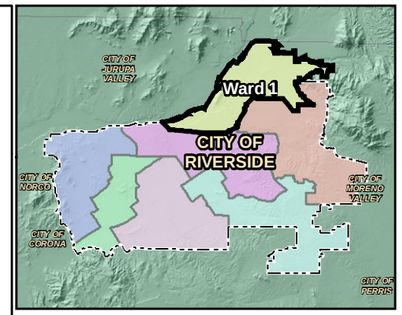
N

0 0.5 1 Miles

1:82,079

Figure 3.11-1
Recreational Resources for City of Riverside - Overview
Riverside General Plan Update





Legend

- Riverside City Limits
- Ward 1
- Specific Plan Boundary
- Park/Recreation Facility

Opportunity Sites

- No Zone Changes
- Zone Changes

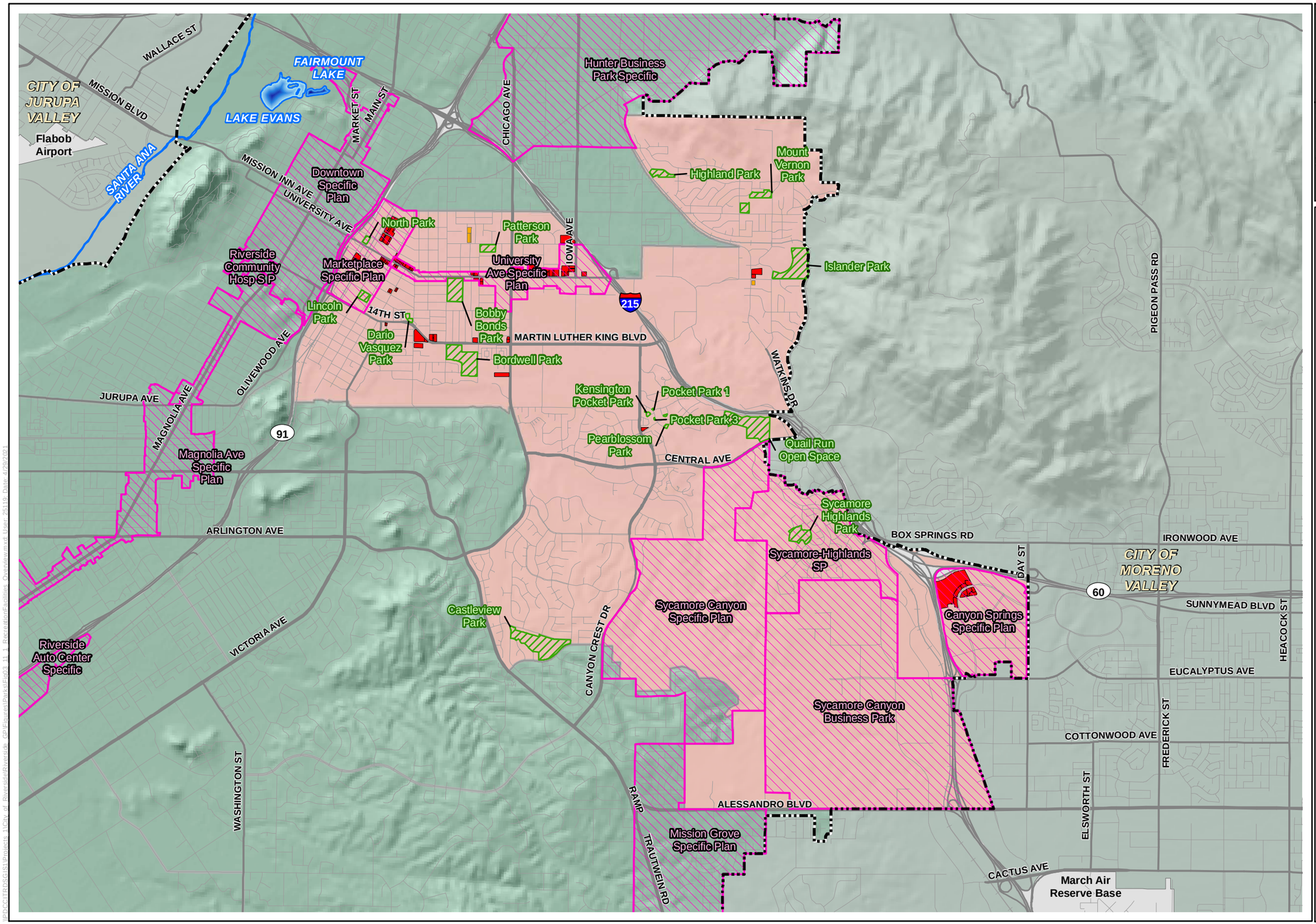
ICF

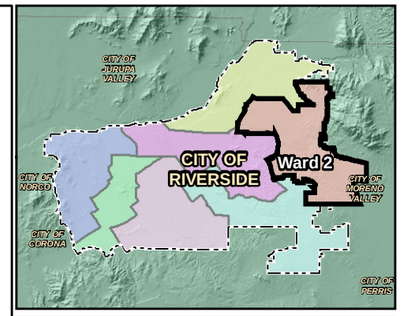
N

0 0.5 1 Miles

1:48,000

Figure 3.11-1 - Sheet 1
Ward 1 - Opportunity Sites & Recreational Resources for City of Riverside
Riverside General Plan Update





Legend

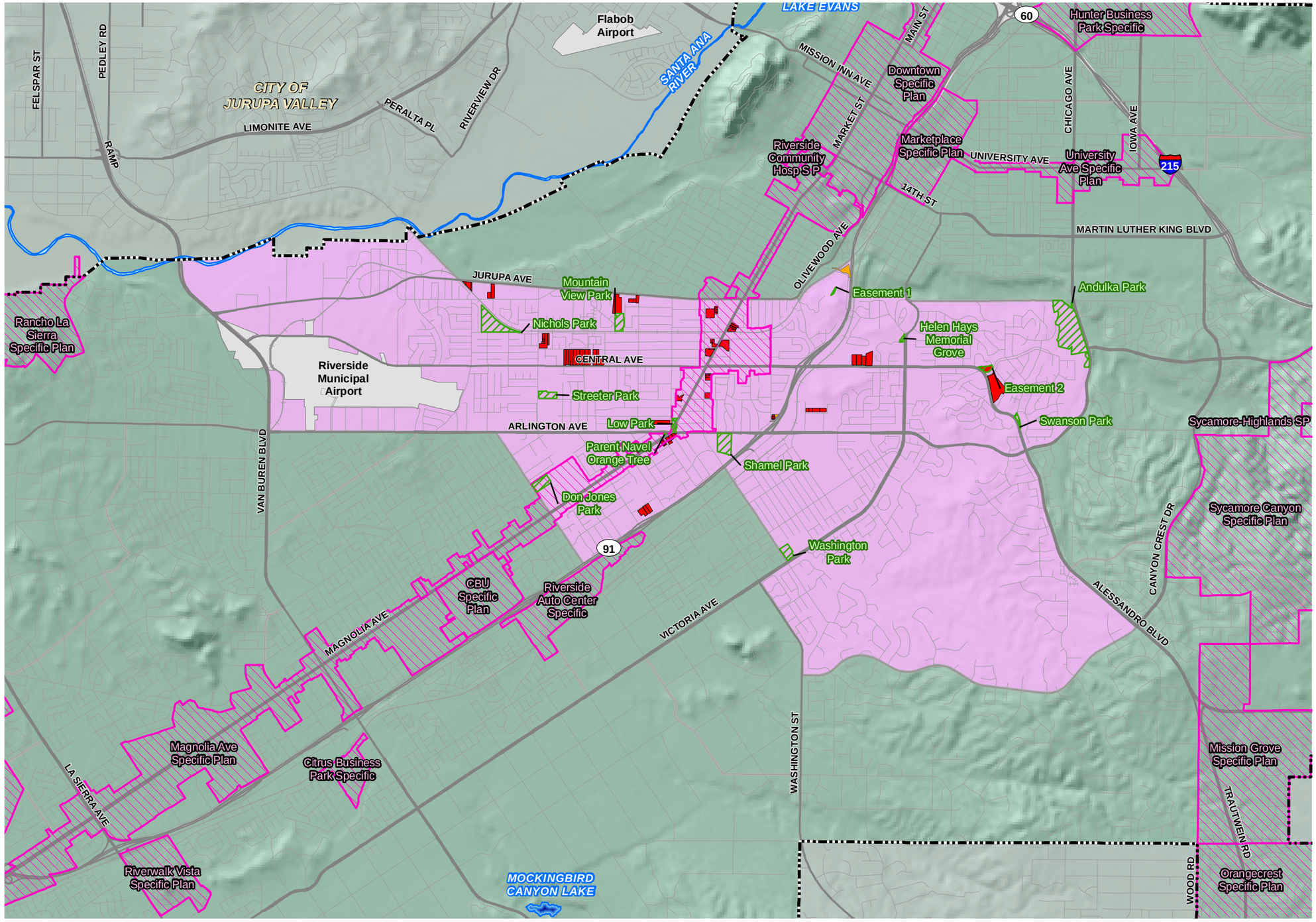
- Riverside City Limits
- Ward 2
- Specific Plan Boundary
- Park/Recreation Facility

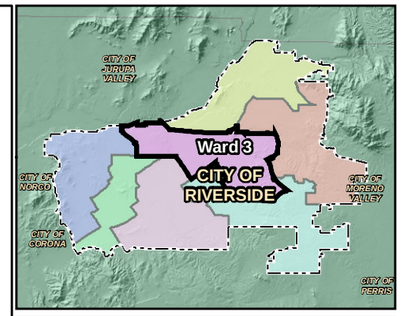
Opportunity Sites

- No Zone Changes
- Zone Changes

0 0.5 1 Miles
1:48,000

Figure 3.11-1 - Sheet 2
Ward 2 - Opportunity Sites & Recreational Resources for City of Riverside
Riverside General Plan Update





Legend

- Riverside City Limits
- Ward 3
- Specific Plan Boundary
- Park/Recreation Facility

Opportunity Sites

- No Zone Changes
- Zone Changes

0 0.5 1 Miles
1:48,000

Figure 3.11-1 - Sheet 3
Ward 3 - Opportunity Sites & Recreational Resources for City of Riverside
Riverside General Plan Update