4.11 NOISE

This chapter begins with a discussion of the fundamentals of sound and an examination of noise guidelines, policies, and standards. The remainder of the chapter provides an evaluation of the potential noise-related, environmental consequences that could occur by implementing the proposed Plan. Since the proposed Plan provides an overarching framework for future projects, but does not propose any specific projects, this evaluation focuses on the overall potential for implementation of the proposed Plan to result in noise impacts within the project site vicinity.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 BACKGROUND

Noise Descriptors

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

The following are brief definitions of terminology used in this section:

- 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. A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- Decibel (dB). A unit-less measure of sound on a logarithmic scale.
- A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level. The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- Statistical Sound Level (L_n). The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e. near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the

sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- Day-Night Sound Level (L_{dn} or DNL). The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- Community Noise Equivalent Level (CNEL). The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note that for general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice then, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated as such in this assessment.
- Intrusive. Noise which intrudes over and above the existing ambient noise at a given location. Relative intrusiveness depends on amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Characteristics of Sounds

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz (Hz) or cycles per second, and duration or time variations is measured in seconds or minutes.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration (predominantly, in a person's chest cavity). Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 4.11-1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions, and changes of less than 1 dBA

are usually not discernible (even under ideal conditions). A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernible to most people in an exterior environment, and a 10 dBA change is perceived as a doubling (or halving) of the sound.

TABLE 4.11-1 NOISE PERCEPTIBILITY

± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies, David A. and Colin H. Hansen, 2009, Engineering Noise Control: Theory and Practice. 4th Ed. New York: Spoon Press.

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level

would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dBA for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level.
- General nature of the existing conditions (e.g., quiet rural or busy urban).
- Difference between the magnitude of the sound event level and the ambient condition.
- Duration of the sound event.
- Number of event occurrences and their repetitiveness.
- Time of day that the event occurs.

Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 4.11-2 shows typical noise levels from familiar sources.

Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During project construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. These types of vibration are best measured and described in terms of velocity and acceleration.

TABLE 4.11-2 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 miles per hour		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area (daytime)		
	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 Next Room
Quiet Urban (nighttime)	40	Theater, Large Conference Room (background)
Quiet Suburban (nighttime)		
	30	Library
Quiet Rural (nighttime)		Bedroom (at night), Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation, 2013, Technical Noise Supplement, prepared by ICF International, http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf, accessed on May 14, 2018.

Peak particle velocity (PPV) expressed in inches per second (in/sec) is the maximum instantaneous peak of the vibration signal. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

As with airborne sound, annoyance from vibration is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 4.11-3 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Construction operations generally include a wide range of activities that can generate groundborne vibration. In general, blasting and demolition of structures generate the highest vibrations. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also generate groundborne vibrations, which can vary, depending on

TABLE 4.11-3 HUMAN REACTION TO TYPICAL VIBRATION LEVELS

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation, 2013, Transportation and Construction Vibration Guidance Manual, prepared by ICF International.

vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, and differential settlement of pavement all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement.[1] Trains generate substantial quantities of vibration due to wheel-rail interactions, steel wheels, heavy loads, and engine operations.[2]

4.11.1.2 REGULATORY FRAMEWORK

To limit people's exposure to physically and/or psychologically damaging as well as intrusive noise levels, agencies have established standards and ordinances to control noise. Potential noise and vibration impacts were evaluated based on the East Bay Regional Park District's (District) and City of Concord's noise standards to determine whether significant adverse noise and vibration impacts would result from construction and operation of the proposed Plan.

State Regulations

The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for non-residential structures. Pursuant to CALGreen Section 5.507.4.1, *Exterior Noise Transmission*, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite sound transmission class (STC) rating of at least 50 or a composite outdoor-indoor transmission class (OITC) rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 within a 65 dBA CNEL or L_{dn} noise contour of an airport. Where noise contours are not readily available, buildings exposed

[1] California Department of Transportation, 2013, Technical Noise Supplement, prepared by ICF International, http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf, accessed on May 14, 2018.

[2] Federal Transit Administration, 2018, Transit Noise and Vibration Impact Assessment, United States Department of Transportation.

to a noise level of 65 dBA L_{eq} during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum of STC 40 (or OITC 30).

District Regulations

Ordinance 38

The District's noise policy is set forth in Section 908, *Declaration of Noise Policy*, of the District's Ordinance 38, Rules and Regulations, revised April 2016. The District's noise ordinance regulates unnecessary, excessive, annoying noises within the park boundaries. All persons entering District parkland are required to abide by the rules and regulations of the District, the laws of the State of California, and local ordinances (e.g., City of Concord, City of Pittsburg, Contra Costa County).

The specific noise regulations in Ordinance 38 are:

- Section 908.2: Radio, Television Sets, and Similar Devices. It is unlawful for any person within the District to use or operate any radio receiving set, musical instruments, phonograph, television set, or other machine or device for producing or reproducing the sound in such a manner as to disturb the peace, quiet, and comfort of the District's users or any reasonable person of normal sensitivity in the area. The District considers noise from these sources to be a nuisance if it is audible at a distance in excess of 50 feet. Furthermore, use of sound amplifying equipment is prohibited at campgrounds between the hours of 10:00 p.m. and 7:00 a.m.
- Section 908.3: Amplified Music. It is unlawful to install use or operate within the District a loudspeaker or sound-amplifying equipment… for the purpose of transmitting music to any persons or assemblages of persons without filing a registration statement with and obtaining approval from the General Manager. Furthermore, such approval may be granted to operate such devices or equipment only within designated amphitheater areas maintained by the District for such purposes, or other such similar areas as the Board may from time to time so designate.
- Section 908.7: Regulations. The use of sound-amplifying equipment shall be subject to the following regulations: a) The operation of sound-amplifying equipment shall only occur between the hours of 10:00 a.m. and 8:00 p.m. each day, and b) the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.
- Section 908.8: General Noise Regulations. It is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise that disturbs the peace or quiet within any area within the District boundaries, or that causes discomfort or annoyance to any reasonable person of normal sensitiveness, utilizing any facility of the District. The District enforces these regulations within its regional parks to certain standards in Section 908.8. .

Local Regulations

Contra Costa County Code

The Contra County Code does not prescribe noise limits for general noise affecting noise-sensitive residential areas. However, there would be occasional events on District property to which noise sensitive areas in the unincorporated County could be exposed. For events held on District lands, the noise standards of the Contra Costa County Code for event noise are deemed applicable for the proposed Plan and are shown in Table 4.11-4.

TABLE 4.11-4 CONTRA COSTA COUNTY – EVENT NOISE LIMITATIONS

Cumulative Duration of Noise	Allowable Exterior Noise Levels Between 9 AM and 8 PM	Allowable Exterior Noise Levels Between 8 PM and 9 AM
30 minutes per hour (L_{50})	60 dBA	55 dBA
15 minutes per hour (L_{25})	65 dBA	60 dBA
5 minutes per hour (L_8)	70 dBA	65 dBA
1 minute per hour (L_2)	75 dBA	70 dBA
Level not to be exceeded at any time (L_{max})	80 dBA	75 dBA

Note: Amplified sound is prohibited after 8 PM Sundays through Thursdays and after 10 PM Fridays, Saturdays, and holidays. A temporary event permit shall not allow the use of amplified sound after these hours.
Source: Contra Costa County Code. Chapter 82-44 Temporary Events, Section 82-44.410, Conditions.

City of Concord Noise and Land Use Compatibility Standards

The proposed Plan area is within the City of Concord. The Safety and Noise Element of the General Plan contains Land Use Compatibility Guidelines for Community Noise.[3] These Land Use Compatibility Guidelines, which are similar to State guidelines promulgated by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various newly developed land uses. The City of Concords noise compatibility standards are shown in Table 4.11-5 below. Based on the City of Concord's noise compatibility standards, maximum noise levels of 60 dB are considered "normally acceptable" for unshielded residential development. Noise levels from 60 dB to 70 dB fall within the "conditionally acceptable" range, and those in the 70 dB to 75 dB range are considered "normally unacceptable."[4]

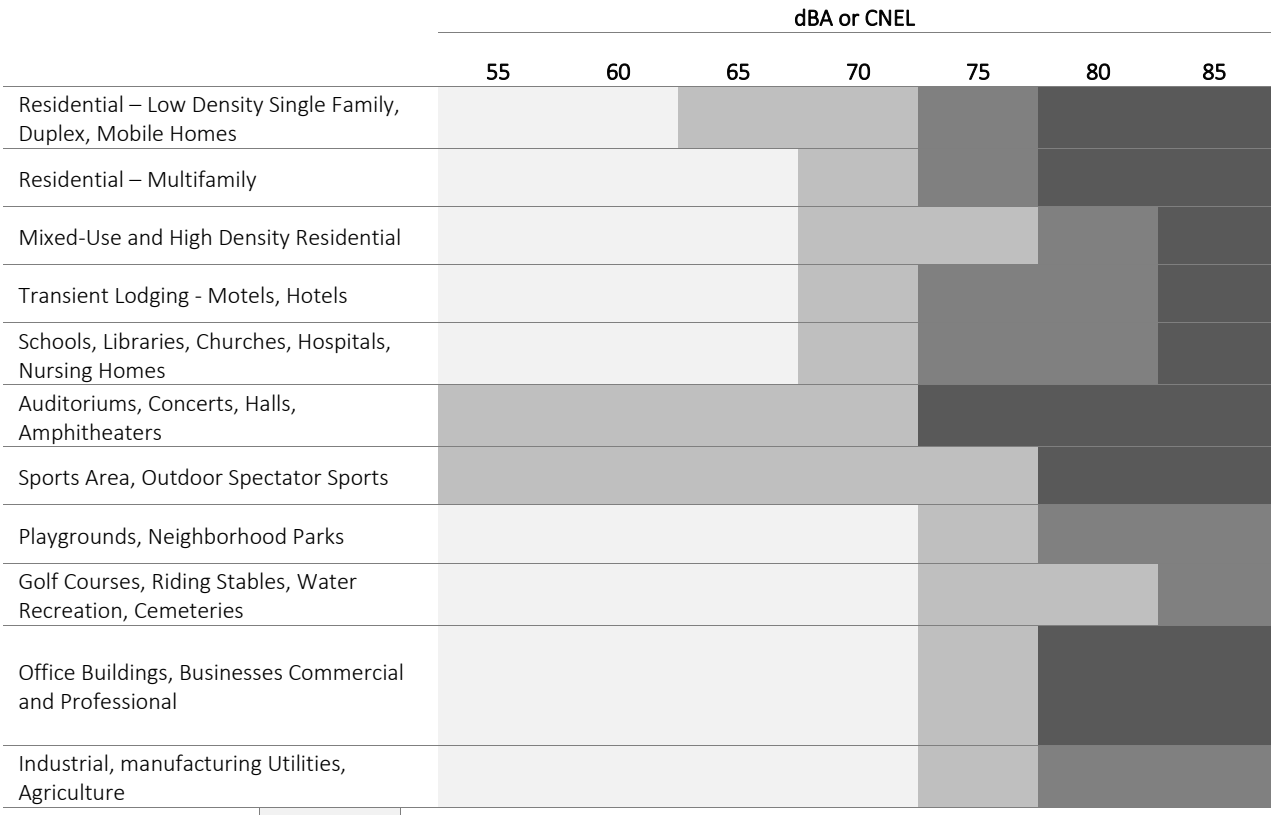
The City of Concord General Plan, Chapter 7, *Safety and Noise Element*, also sets forth the following applicable noise control goal, principles, and policies:

- Goal S-2: A Livable Noise Environment.
- Principle S-2.1: Encourage Land Use Compatibility for Community Noise Environments.

[3] City of Concord, 2007, Concord 2030 General Plan. Chapter 7, Safety and Noise.
[4] City of Concord, 2007, Concord 2030 General Plan. Chapter 7, Safety and Noise.

- Policy S-2.1.3: Consider an increase of four or more dBA to be "significant" if the resulting noise level would exceed that described as "normally acceptable" in [Table 4.11-5].

TABLE 4.11-5 CITY OF CONCORD NOISE AND LAND USE COMPATIBILITY STANDARDS



Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply 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: City of Concord, 2007, Concord 2030 General Plan. Chapter 7, Safety and Noise.

- Principle S-2.2: Mitigate Noise Sources.
  - Policy S-2.2.2: Reduce noise intrusion generated by miscellaneous noise sources through conditions of approval to control noise-generating activities.

- Policy S-2.2.4: Require new noise sources to use best available control technology (BACT) to minimize noise emissions.
- Policy S-2.2.5: Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.

City of Concord Municipal Code

The City of Concord regulates noise within its Municipal Code under Section 18.150.130(O). Noise is required to comply with the noise standards in the Safety and Noise Element of the Concord General Plan. An acoustic study is required for any use that could create noise levels greater than the level deemed normally acceptable in the General Plan. Site preparation and construction activities are permissible between the hours of 7:30 a.m. to 6:00 p.m. weekdays (except on holidays), unless approved by the City of Concord as part of a planning permit.

Section 18.150.130(F) prohibits land uses from generating ground vibrations that are perceptible without instruments by a reasonable person at the property line of the subject site. Vibrations caused by temporary activities such as construction, demolition, and truck traffic are exempt from this standard but are subject to all conditions of any approved permit.

City of Pittsburg Municipal Code

The northeast and the southeast portions of the proposed Plan area abut Pittsburg. However, no noise sensitive land uses within the vicinity are proximate to the park (the nearest residence is 2,350 feet from the project site boundary and even farther from the planned active areas). Therefore, the noise limits of the City of Pittsburg Municipal Code would not be directly applicable to activities within the project site.

Construction Noise

Neither the Contra Costa County nor the City of Concord establish a quantified construction noise threshold. Therefore, this analysis uses the Federal Transit Authority recommendation of 80 dBA $L_{eq\ (8\ hr)}$ criterion[5] as measured at the nearest residential property line to analyze construction noise impacts.

4.11.1.3 EXISTING CONDITIONS

Existing Noise environment

The project site is almost entirely vacant, except for remaining former Concord Naval Weapons Station (CNWS) structures that are no longer in use. The ambient noise environment is characterized mainly by traffic noise on State Route (SR) 4, Bailey Road (which traverses the south-central part of the site), and Willow Pass Road and Avila Road (which pass next to the northwest site boundary). Kirker Pass Road passes about 850 feet southeast of the site boundary, but is separated from the site by small hills and thus

[5] Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*.

is not expected to generate substantial noise audible onsite. Rail noise from the Bay Area Rapid Transit (BART) line also contributes to the ambient noise environment in the northern portions of the site.

Other noise sources that contribute, to a lesser extent, to the ambient noise environment include residential noise from residences in Concord and unincorporated Contra Costa County to the south; noise from commercial areas on the northeast and northwest (e.g., BART parking lots, Concord Police Association); playground/sports field noise from the schools; and earthmoving equipment and trash trucks at Keller Canyon Landfill east of Bailey Road on the east slopes of the Los Medanos Hills.[6] Additionally, stationary noise from occasional events at the Concord Pavilion amphitheater near the southeast site boundary may be audible within the project site during events.

Buchanan Field Airport

Buchanan Field Airport, owned and operated by Contra Costa County, is 3.1 miles east-southeast of the project site. The project site is not within the noise contours for the Airport.[7]

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration, including residential land uses and schools, where quiet environments are necessary for enjoyment, public health, and safety. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not considered noise- and vibration-sensitive uses for the purposes of this analysis since noise- and vibration-sensitive activities are less likely to be undertaken in these areas, and because these uses themselves often generate noise in excess of what they receive from other uses. Sensitive receptors in Concord and unincorporated Contra Costa County are proximate to the southwestern boundary of the project site. Noise-sensitive areas north of the project site in Pittsburg and unincorporated Contra Costa County are farther (i.e., over 2,350 feet) from the planned active use areas of the proposed Regional Park. Future planned and approved development as part of the EDC would also include sensitive receptors.

4.11.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant noise impact if it would:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Generation of excessive groundborne vibration or groundborne noise levels.

[6] The Concord Pavilion, which has capacity of 12,500 seats, hosts mostly musical performances with some spoken-word (e.g., comedy) performances. See Concord Pavilion, 2018, Upcoming Shows, https://www.livenation.com/venues/14806/concord-pavilion, accessed on April 30, 2018.

[7] Barnard Dunkelberg, 2008, Buchanan Field Airport Master Planning Program,http://www.co.contra-costa.ca.us/DocumentCenter/View/29151, accessed on April 23, 2018.

3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

4.11.3 IMPACT DISCUSSION

NOI-1	**The project would not cause a substantial permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Traffic Noise

With respect to projected-related traffic increases, noise impacts can be broken down into three categories. The first is "audible" impacts, which refer to increases in noise level that are perceptible to humans. Audible increases in general community noise levels generally refer to a change of 3 dBA or more since this level has been found to be the threshold of perceptibility in exterior environments. The second category, "potentially audible" impacts, refers to a change in noise level between 1 and 3 dBA. The last category includes changes in noise level of less than 1 dBA that are typically "inaudible" to the human ear except under quiet conditions in controlled environments. Only "audible" changes in noise levels at sensitive receptor locations (i.e., 3 dBA or more) are considered potentially significant. Note that a doubling of traffic flows (i.e., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dBA increase in traffic-generated noise levels. An increase of 3 dBA CNEL is used as a threshold for a substantial increase.

The District estimates that 556,309 annual visitors would visit the Regional Park at full buildout. Approximately, 2,665 visitors are anticipated on a typical weekend day and 1,075 visitors per day are anticipated on a typical weekday day. In addition, the Regional Park would host annual events at the Visitor Center Complex on the anniversary of the Port Chicago Naval Magazine explosion. These events are anticipated to draw approximately 1,000 visitors. Smaller events would be held approximately quarterly, with approximately 300 visitors expected per event.

The proposed Visitor Center Complex is approximately 3,800 feet northeast of the nearest residences in Concord. The Visitor Center Complex would serve as the gateway into the Regional Park and it is anticipated that many visitors would enter the Regional Park at or near this area. The primary vehicle entrance to the Regional Park would be along Kinne Boulevard, which would provide access from SR 4. Kinne Boulevard between the proposed Visitors Center and Willow Pass Road (which connects to SR 4) passes through vacant land on the former CNWS and not next to sensitive receptors.

Two proposed facilities would be closer to residences: the Operations Facilities, approximately 1,260 feet northeast of residences; and the Community Orchard, approximately 500 feet from residences. Access to the Operations Facilities would be limited to the District staff, partner agencies, and contractors (such as the grazer) approved by the District.

Estimated project trip generation is described in Chapter 4.14, Transportation and Traffic. The Park is estimated to generate 1,303 average daily trips on the weekend and 587 average daily trips on a weekday at buildout.[8] Nearly all trip generation by the Regional Park is expected to be during daytime. Average daily traffic volumes on Bailey Road are approximately 8,120 vehicles per day, where the Bailey Road Staging Areas would be located. A doubling of traffic flows (i.e., 8,120 vehicles per day to 16,240 per day) would be needed to create a 3 dBA increase in traffic-generated noise levels.[9] Therefore, at the nearest residences, Park-generated traffic noise would not be audible over the ambient noise environment and impacts would be *less than significant*.

Stationary (On-Site) Noise

Approximately 126 acres (5 percent) of the 2,543-acre Regional Park are proposed for Recreation/Staging Units, including 86 acres for the development footprint and a buffer from the conservation areas. Within these zones, there would be approximately 35 acres of developed recreation and operations facilities. All facilities, with the exception of trails, would be located within Recreation/Staging Units. The majority of the recreational areas would be along the southern boundary of the site near access roads. These facilities include a visitor center, event and educational spaces, picnic areas, campsites, overlooks, and interpretive elements (see Figure 3-7, Overview of the Proposed Regional Park).

The recreational facilities would generally be intended for interpretation and enjoyment of biological and cultural resources in the park and scenic vistas visible from the park. The District's regional parks are typically characterized by low ambient noise levels in order to enjoy the natural biological and cultural resource elements of the District's parklands. Overlooks, the backcountry campsite, picnic areas, and trails would not generate substantial stationary noise levels. The proposed Plan does not propose active recreation facilities (e.g., team sports fields, hardcourts). Proposed outdoor lighting would be for safety and security purposes only, not to enable nighttime use of recreational facilities. However, outdoor activities would generate noise in several places in the Regional Park. The following sections describe potential noise sources within the proposed Regional Park.

Mechanical Equipment

Proposed buildings would require heating, ventilation, and air conditioning (HVAC) systems. These include buildings at the Visitors Center (Building IA-24) and Park Operations and Support Facility (Corp Yard) buildings (Buildings 93, 94, and 420), Diablo Center, and the Caretaker's Residence. Because noise dissipates rapidly over natural surfaces at a rate of 7.5 dBA per doubling distance, the operation of HVAC units and machinery would not generate noise levels that would disturb nearby residents or exceed the strictest 55 dBA L_{eq} City of Concord noise compatibility standard. Mechanical equipment installed by the District would comply with the Concord Municipal Code and would not substantially contribute to the ambient noise environment. Impacts from mechanical equipment would be *less than significant*.

[8] Assumes peak hour traffic volumes are 10 percent of daily traffic volumes. In 2014, Bailey Road had 924 AM peak hour trips and 700 PM peak hour trips (average of AM and PM x 10 = daily). U.S. Department of the Navy, 2014, Draft Environmental Impact Statement for the Disposal and Reuse of the Former Naval Weapon Station Seal Beach, Detachment Concord, Concord, California.

[9] California Department of Transportation, 2013, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

Parking Lots

The primary sources of noise from parking lots are vehicles starting and maneuvering, automatic lock beeps, and sporadic car alarms and horns. The most disruptive of these noise sources would be car alarms and horns. Each of these individual noise sources would be sporadic and last for short durations. Traffic on the local roadways would generally overshadow noise from the parking lots. Therefore, noise associated with the proposed parking lots would not substantially increase the ambient noise environment, and impacts from the parking lots would be *less than significant*.

Operations Facilities

Operations facilities would include the Corporation Yard (Corp Yard), a native plant nursey, a Caretaker's Residence, and a livestock corral. Access to these facilities would be limited to the District staff, partner agencies, and contractors (such as the grazer) approved by the District. As such, these facilities are not anticipated to be a substantial source of noise and would not generate noise levels that exceed the Concord Municipal Code. Impacts from the operations facilities would be *less than significant*.

Community Orchard

The community orchard would be located in the footprint of a historic homestead and orchard and would be 500 feet from existing residences. Long-term operation of the orchard may require use of agricultural equipment. However, given the distance of the orchard from nearby residential areas, noise from the equipment would not exceed the noise levels of the Concord Municipal Code. Impacts from the community orchard would be *less than significant*.

Group Campsite

A group campsite would be in the middle of the southern portion of the park, approximately 1,800 feet from residents in unincorporated Contra Costa County. The campsite would generate noise from people utilizing the site for recreational and educational activities, and may involve the use of sound amplifying equipment. However, use of sound amplifying equipment in the campsites would be prohibited between the hours of 10:00 p.m. and 7:00 a.m. under District Ordinance 38 Section 908.2(c). Additionally, the group campsite is over 1,200 feet from the nearest residential receptors and noise from the group campsite would not be perceptible above the ambient noise environment. Impacts from the group campsites would be *less than significant*.

Visitor Center Complex

The Visitor Center Complex includes the Visitor Center Building, outdoor exhibit area, multi-purpose room, archive building, picnic areas, magazine exhibit space, and amphitheater. The Visitor Center Complex is over 3,800 feet away from existing residents in Concord. Noise from the use of the picnic areas would be typical of that in a park setting and would be compatible with the nearby residential uses.

The stage in the amphitheater constructed in the Visitor Center Complex would face west, toward the Visitor Center building, so that the building would block part of the sound from activities at the amphitheater. The amphitheater would be used for Park programming, such as interpretive talks. No

large-scale musical performances would be staged at these facilities due to their small size. Noise associated with amphitheater use includes elevated speech, singing, music, and applause. Nighttime use of the amphitheater is not proposed. Noise generated from the interpretive talks and other District programming at the small outdoor amphitheater would occur in the daytime and would be compatible in a residential neighborhood. Additionally, use of the amphitheater would conform with District Ordinance 38 and would comply with Contra Costa County's event noise limitations (see Table 4.11-4). Considering the distances from the amphitheater from the nearest off-site developed land uses, stationary-source noise from amphitheater would not cause noise at such land uses exceeding City of Concord community noise level exposure standards or the Contra Costa County's event noise limits. Impacts from the Visitor Center Complex, including use of the amphitheater, would be *less than significant*.

Significance without Mitigation: *Less than significant.*

NOI-2 The project would not cause a substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

The area affected by the construction effort involved in implementation of the proposed Plan would be comparatively limited relative to the 2,543-acre project site size. Proposed recreational and operations facilities, including those involving adaptive reuse, would be developed on approximately 86 acres (including 35 acres within Recreation/Staging Units) of the 2,543-acre Regional Park. Plan implementation would involve adaptive reuse of several buildings, and reuse of parts of existing structures at other locations.

Park facilities, roads, and trails would be built in three phases, with Phase 1 being the southern part of the Regional Park, south of Bailey Road; Phase 2 being the Visitor Center complex; and Phase 3 being the remainder of the Regional Park (see Figure 3-10, Proposed Phasing; project phasing is discussed further in Chapter 3, Project Description). Construction of the staging areas, park facilities, and trails would not require use of pile drivers. Construction activities would generally occur in the daytime hours when people are less sensitive to noise.

The Community Orchard would be 500 feet from existing residences; however, construction of the orchard would not involve use of a substantial number of large off-road construction equipment. The most intensive construction activities would be associated with construction of the Corp Yard, which is approximately 1,260 feet northeast of residences.[10] At a distance of 100 feet from a construction or demolition site, 8-hour average noise from the various types of equipment will, at times, range from 73 to 84 dBA.[11] No impact pile driving, which can generate excessive noise levels and may be needed for underground parking or bridge construction, is anticipated as part of the Plan. At a distance of over 1,260

[10] The Community Orchard would be about 500 feet from existing residences; cultivation of the Orchard would not involve substantial construction.

[11] United States Department of the Navy, 2014, Draft Environmental Impact Statement for the Disposal and Reuse of the Former Naval Weapon Station Seal Beach, Detachment Concord, Concord, California.

feet (and conservatively not accounting for any shielding or ground absorption), construction noise levels would range from 51 to 62 dBA and would not exceed the FTA threshold of 80 dBA. Therefore, this impact is considered to be *less than significant*.

Significance without Mitigation: Less than *significant.*

NOI-3 The project would not cause exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

As discussed previously, annoyance is a subjective measure and vibrations may be found to be annoying at much lower levels, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

Operational Vibration

Land uses generating substantial operational vibration include industrial uses, roads, and railways. The proposed Plan does not propose development of land uses or improvements that would generate substantial operational phase vibration. Therefore, the impact would be *less than significant*.

Construction Vibration

Construction operations generally include a wide range of activities that can generate ground-borne vibration, which varies in intensity depending on several factors. In general, blasting and demolition of structures, as well as pile driving and vibratory compaction equipment, generate the highest vibrations. Because of the impulsive nature of such activities, the use of the peak particle velocity (PPV) descriptor has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet.[12] However, use of pile drivers and other vibratory equipment is not anticipated for the construction activities associated with implementation of the proposed Plan.

Heavy trucks can also generate ground-borne vibrations, which can vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, and differential settlement of pavement increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions.[13]

[12] California Department of Transportation, 2004, Transportation- and Construction-Induced Vibration Guidance Manual, prepared by ICF International.

[13] California Department of Transportation, 2013, Transportation and Construction Vibration Guidance Manual, prepared by ICF International.

Construction-induced vibration that can be detrimental to a building is very rare and has only been observed in instances where the structure is in a high state of disrepair and the construction activity occurs immediately adjacent to the structure. Given the distance from future construction areas to off-site structures, no vibration-induced architectural damage would occur as a result of implementation of the proposed Plan.

Construction of improvements called for in the proposed Plan would generate some vibration. Several proposed Regional Park amenities would involve adaptive re-use of existing buildings, or re-use of foundations; these projects would involve less construction effort (and especially less grading, or no grading) compared to new construction. The nearest site where substantial construction could occur is the Corp Yard and Native Plant Nursery, about 1,260 feet northeast of existing residences.[14] The Community Orchard would be 500 feet from existing residences; however, construction of the orchard would not involve use of a substantial number of large off-road construction equipment. At these distances, vibration from on-site construction would not be readily perceptible and would not cause annoyance. Therefore, the impact would be *less than significant*.

Significance without Mitigation: *Less than significant.*

NOI-4 The project would not expose people residing or working in the project area to excessive aircraft noise levels.

The project site is outside of noise contours for Buchanan Field Airport, which is 3.1 miles east-southeast of the project site.[15] Therefore, project implementation would not expose park visitors or staff to excessive noise levels from aircraft approaching or departing Buchanan Field Airport and there would be *no impact*.

The nearest heliport to the project site is the Q Area Heliport on the US Army Military Ocean Terminal Concord (formerly CNWS) 2.3 miles to the north.[16] Helicopters approaching and departing the Heliport would pass high enough over the project site so that they would not subject park visitors or staff to excessive noise. Therefore, there would be *no impact*.

Significance without Mitigation: *No impact.*

[14] The proposed Community Orchard in the south part of the project site would be about 500 feet northeast of existing residences. The Community Orchard would be an orchard managed for fruit production and education; and would not involve construction of buildings.

[15] Barnard Dunkelberg, 2008, Buchanan Field Airport Master Planning Program.

[16] Airnav.com, 2018. Airport Information, http://www.airnav.com/airports/, accessed on April 30, 2018.

4.11.4 CUMULATIVE IMPACTS

NOI-5	**The project would not contribute to significant cumulative noise impacts.**

The cumulative impact analysis for noise includes potential future development under the proposed project combined with effects of development on lands within the project site vicinity in Concord, Pittsburg, and unincorporated Contra Costa County.

Operational Noise (Traffic)

Trips generated by cumulative growth in the project site vicinity would be distributed over the regional and local roadway network. As identified under Impact NOI-1, the proposed project would nominally contribute to the cumulative traffic noise levels in the project area. Therefore, traffic noise generated by the proposed project would not be cumulatively considerable. Impacts would be *less than significant*.

Operational Noise (Stationary Sources)

Unlike transportation noise sources, the effects of which can extend well beyond the limits of a project site, stationary-source noise generated by a project is limited to noise impacts to noise-sensitive receptors near the project site. As previously discussed, noise levels from stationary would not be substantial. Stationary-source noise from the proposed project would consist of noise from mechanical equipment on buildings and noise generated by park users, both of which would be localized in the visitor areas (35 acres) of the 2,543-acre project site. Therefore, stationary-source noise from the proposed project is not anticipated to combine with such noise from related projects to cause significant cumulative impacts, and this impact would be *less than significant*.

Operational Vibration

Only some categories of land uses—such as transportation facilities and some industrial uses—generate substantial operational vibration. Neither the proposed project nor related projects propose development of those categories of land uses. Therefore, cumulative impacts would be *less than significant*, and project impacts would not be cumulatively considerable.

Construction Noise and Vibration

Like stationary-source noise, construction noise and vibration impacts are confined to a localized area of impact. Cumulative impacts would only occur if other projects were being constructed in the immediate vicinity of the project's construction activities at the same time as the project. Construction noise and vibration associated with implementation of the proposed Plan would be phased over 31 years. Proposed project construction would involve a limited construction effort in relation to the 2,543-acre proposed project site, due both to the relatively small development area (35 acres) and because many proposed facilities would involve adaptive reuse of existing buildings or reuse of parts of existing buildings. In addition, construction sites would be scattered throughout the site. The proposed visitor center is likely to

be the closest portion of the Plan that would involve the construction of buildings and grading to potential future developments under the Concord Reuse Project. As discussed above, at a distance of 100 feet from a construction or demolition site, 8-hour average noise from the various types of equipment will, at times, range from 73 to 84 dBA.[17] At a distance of over 350 feet from potential future developments under the Concord Reuse Project (and conservatively not accounting for any shielding or ground absorption), construction noise levels would range from 62 to 73 dBA and would not exceed the FTA threshold of 80 dBA. At this distance, construction noise from buildout of the proposed Regional Park would not contribute substantially to a cumulative construction noise or vibration impact. Therefore, this impact is considered to be *less than significant*.

Significance without Mitigation: *Less than significant.*

[17] United States Department of the Navy, 2014, Draft Environmental Impact Statement for the Disposal and Reuse of the Former Naval Weapon Station Seal Beach, Detachment Concord, Concord, California.

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4.12 POPULATION AND HOUSING

This chapter describes the regulatory framework and existing conditions on the project site related to population and housing in the vicinity of the project site, and the potential impacts of implementation of the proposed project.

4.12.1 ENVIRONMENTAL SETTING

This section describes the regulatory framework and existing conditions related to population and housing and the potential impacts that could result from development of the proposed project.

4.12.1.1 REGULATORY FRAMEWORK

This section summarizes key State, regional, and local regulations related to population and housing. There are no federal regulations pertaining to population and housing that apply to the proposed project.

State Regulations

California Housing Element Law

California Housing Element Law[1] includes provisions related to the requirements for housing elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, this section of the Government Code calls for local jurisdictions to plan for, and allow the construction of a share of the region's projected housing needs.

Regional Regulations

Association of Bay Area Governments Projections 2013

The Association of Bay Area Governments (ABAG) is the official regional planning agency for the San Francisco Bay Area region, which is composed of the nine Counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 cities. ABAG produces growth forecasts on four-year cycles so that other regional agencies, including the Metropolitan Transportation Commission (MTC) and the Bay Area Air Quality Management District (BAAQMD) can use the forecasts to make project funding and regulatory decisions.

The ABAG projections are the basis for the regional Ozone Attainment Plan and the Regional Transportation Plan (RTP), each of which are discussed in Chapter 4.2, Air Quality, and Chapter 4.14, Transportation and Traffic, of this Draft EIR. The General Plans, zoning regulations and growth

[1] Government Code Sections 65580 to 65589.8.

management programs of local jurisdictions inform ABAG's projections. These projections are developed to reflect the impact of "smart growth" policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout their region.

Association of Bay Area Governments 2015-2023 Regional Housing Need Allocation

The Regional Housing Need Allocation (RHNA) is the State-mandated process to identify the total number of housing units (by affordability level) that each City and County must accommodate in its Housing Element. ABAG develops a methodology to distribute the total housing need for the San Francisco Bay Area identified by the California Department of Housing and Community Development (HCD) for an eight-year period. Each City and County must demonstrate how it plans to accommodate its portion of the region's housing need through the Housing Element. The RHNA was adopted by the ABAG Executive Board on July 18, 2013. Adopted in 2008, Senate Bill 375 requires ABAG to develop a Sustainable Communities Strategy (SCS). The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board (CARB).[2]

Local Regulations

City of Concord 2030 General Plan – Housing Element (2014)

The City of Concord 2030 General Plan includes a Housing Element, adopted in 2014. The Housing Element includes five goals and numerous policies for providing housing for all income groups in the city. The goals are:

- H-1: Promote a balanced supply of housing types, densities, and prices to meet the needs of all income groups residing or who wish to reside in Concord.
- H-2: Preserve and enhance Concord's residential neighborhoods and improve the quality of life for all residents.
- H-3: Promote the expansion of housing opportunities for all special needs groups, including seniors, female-headed households, persons with disabilities, first-time homebuyers, large families, and homeless individuals and families.
- H-4: Strive for equal housing opportunity and access for all people regardless of race, religion, gender, marital status, age, ancestry, national origin, color, sexual orientation, familial status, source of income, or disability.
- H-5: Protect the environment and lower the cost of energy through energy conservation policies.

[2] Association of Bay Area Governments, 2013, Regional Housing Need Plan San Francisco Bay Area 2014-2022.

Of these goals and their attendant policies, none are applicable to the proposed project, due to the Land Use Plan's program of open space, conservation, recreation and interpretive facilities. No housing or residential development will be built in the Concord Hills Regional Park.

4.12.1.2 EXISTING CONDITIONS

As described in Chapter 3, Project Description, of this Draft EIR the Concord Hills Regional Park is comprised of a road and rail network, as well as small magazines and existing buildings serving the former Concord Naval Weapons Station (CNWS). As such, no housing units or residents currently exist on the project site.

Population

Concord is the largest City in Contra Costa County, with a total population of 129,889 as of January 1, 2019. With a total population of 122,067 in 2010, the city experienced a population growth of 9 percent from 2010. According to current California Department of Finance estimates, the average household size is 2.9 persons per household, a slight increase from the average household size of 2.73 in 2010.[3]

As of current estimates, approximately 1,155,879 people live in Contra Costa County, an increase of approximately 9 percent from the 2010 population of 1,049,025. Currently, average household size in the County in 2.9 persons per household, which is an increase from the 2010 average of 2.7. The population is increasing at the same rate within the County as a whole, compared to the City.

Housing

As of 2019, there were 47,345 housing units in Concord, with a vacancy rate of 6 percent. Of the occupied housing units, approximately 59 percent were owner-occupied, and 41 percent are renter-occupied in 2017.[4] In 2010, there were 47,125 housing units in Concord, with a vacancy rate of 6 percent. Of those occupied units, 61 percent were owner-occupied and 39 percent were renter-occupied. Between the years 2010 and 2019, the number of housing units increased by 1 percent, while the vacancy rate remained unchanged. The share of housing units that were renter-occupied in 2010 was 37 percent,[5] representing an increase of 4 percent between the years 2010 and 2017.

There are currently 416,062 housing units in the County, with a vacancy rate of 6.3 percent. Of the occupied units, 64.5 percent are owner-occupied, while 35.5 percent are renter-occupied. Compared to the City of Concord, the rate of homeownership is greater within the County as a whole. In 2010, there were 396,782 housing units in the County, with a vacancy rate of 7.2 percent. Of the occupied housing units, 69.5 percent were owner-occupied while 30.5 percent were renter-occupied. Between the years

[3] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019*. Sacramento, California, May 2019., accessed on May 15, 2019

[4] U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Table B25003, Tenure, Universe: Occupied Housing Units, Concord City, California.

[5] U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates, Table B25003, Tenure, Universe: Occupied Housing Units, Concord City, California.

2010 and 2019, the number of housing units increased by 3.9 percent, representing a greater increase than the City (which saw growth of less than 1 percent).[6]

Within the project vicinity, housing units are provided for Bay Area Coast Guard personnel along Olivera Road southwest of the project site. No housing units are located on-site.

Future Housing Needs

As shown in Table 4.12-1 below, the ABAG's 2013 Projections indicate that by 2040 the population of Concord will increase by 45 percent to 181,500 and the number of households will grow 39 percent to 63,190. These rates are higher than the ABAG's projected population growth of 23 percent and household growth on 19 percent for Contra Costa County as a whole.

TABLE 4.12-1 POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS

					Change 2015–2040	
Concord	2015	2020	2030	2040	Number	Growth Rate Percent[a]
City						
Population	125,300	128,500	154,000	181,500	56,200	45%
Households	45,380	46,500	54,840	63,190	17,810	39%
Jobs	52,900	58,880	63,320	69,450	16,550	31%
Contra Costa County						
Population	1,085,700	1,123,500	1,224,400	1,338,400	252,700	23%
Households	387,870	400,800	432,430	464,150	76,280	19%
Jobs	374,610	407,810	432,730	467,390	92,780	25%

a. Percent are rounded to the nearest whole number.
Source: Association of Bay Area Governments, 2013, *Projections 2013*, Subregional Study Area Table, Contra Costa County.

Employment

As shown in Table 4.12-1, there were approximately 52,900 jobs in Concord in 2015, comprising 14 percent of all jobs in Contra Costa County. According to ABAG, jobs in the city are projected to increase by 31 percent between 2015 and 2040 from 52,900 to 69,450. Jobs in Contra Costa County are expected to increase by 25 percent between 2015 and 2040, from 374,610 to 467,390.

[6] California Department of Finance, Report E-5, Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019 with 2010 Benchmark.

4.12.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant unplanned population and housing impact if it would:

1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.12.3 IMPACT DISCUSSION

POP-1	**The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

The proposed project would result in a significant impact related to population growth if it would lead to substantial unplanned growth either directly or indirectly. As described in Chapter 3, Project Description, of the Draft EIR, the proposed project is a long-term management plan for a new Regional Park. Therefore, the proposed project would not result in direct population growth. Potential impacts stemming from the indirect inducement of unplanned population growth are discussed below.

Improvements to the existing infrastructure would be made in four separate phases over a 31-year buildout horizon (i.e., 2019 to 2050) to accommodate the proposed project facilities, such as visitor and employee-serving buildings (e.g., visitor center, caretaker residence) and trails, cattle grazing-related infrastructure, fencing, gates and regulatory signage. As described in Chapter 3, Project Description, one District employee would be housed in the Caretaker's Residence. These improvements would not accommodate population growth beyond what was projected by ABAG.

As described above, ABAG and MTC have responsibility for regional planning in the nine-county Bay Area, which includes the project site. ABAG and MTC have developed regional growth forecasts for the Bay Area as a whole and for constituent jurisdictions. Table 4.12-1 shows population, housing, and employment projections for the study area that are included in the regional forecasts. The proposed project would be considered to induce substantial growth if the estimated buildout resulting from future development permitted under the proposed project would exceed these regional growth projections for the study area. Implementation of the proposed project would result in the potential future development of up to 52 full-time equivalent (FTE) jobs, including one caretaker who would be a full-time resident. The project does not include housing, with the exception of the caretaker's residence, and would therefore not directly increase the population of the project site. Therefore, the project would not exceed regional growth projections. Further, the project conforms with Concord's 2030 General Plan and other regional plans. As discussed in other chapters of this Draft EIR, implementation and adoption of the proposed project would not result in physical impacts to the environment as a result of introducing new housing and population on the project site. Therefore, impacts related to substantial population growth would be *less than significant*.

The project site is served by utility and transportation infrastructure and therefore, implementation of the proposed project would not require significant off-site infrastructure improvements that may generate indirect population growth. As described in Chapter 3, Project Description, of this Draft EIR, the proposed project would accommodate the installation of a utility connection in order to provide water and electricity to the proposed project components. Once specific utility and pipeline projects are planned and the details are known, additional environmental review may be required. Therefore, the proposed project would not indirectly induce substantial growth through the extension of roads or other new infrastructure that would lead to additional growth outside the project site. Accordingly, indirect impacts related to substantial population growth would be *less than significant*.

Significance without Mitigation: *Less than significant.*

POP-2 The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

As described above under Section 4.12.1.2, Existing Conditions, the project site is comprised of road and rail network, as well as small magazines and existing buildings serving the former CNWS and does not contain any residential units. As such, implementation of the proposed project would not displace existing housing or people and *no impact* would occur.

Significance without Mitigation: *No impact.*

4.12.4 CUMULATIVE IMPACTS

POP-3 The project would not contribute to significant cumulative population and housing impacts.

Impacts from cumulative growth are considered in the context of growth associated with the proposed Plan, as well as projected growth from the rest of Contra Costa County, as forecast by ABAG.

Impacts of cumulative growth are considered in the context of their consistency with regional planning efforts. As described above, the proposed project would not induce a substantial amount of growth or require the construction of replacement housing elsewhere. Although the proposed project would increase the number of jobs by 52 FTE, this growth would not exceed the regional employment growth projections nor would it exceed growth assumed under the General Plan 2030. Further, the project conforms with Concord's 2030 General Plan and other regional plans. Thus, the proposed project would not contribute to cumulative growth that could displace substantial numbers of people or housing or cumulatively exceed planned levels of growth. Therefore, cumulative impacts would be *less than significant*.

Significance without Mitigation: *Less than significant.*

4.13 PUBLIC SERVICES AND RECREATION

This chapter describes public services, including fire protection, police and parks and recreation provided in the project vicinity and evaluates the potential impacts to public services and recreation that could result from development of the project. In each section, a summary of the relevant regulatory setting and existing conditions are followed by a discussion of project-specific and cumulative impacts.

This chapter contains separate sections for the following public services:

- Fire Protection
- Police
- Parks and Recreation

4.13.1 FIRE PROTECTION SERVICES

4.13.1.1 ENVIRONMENTAL SETTING

This section describes the current regulations, resources, and response time for fire protection services in the City of Concord.

Regulatory Framework

State Regulations

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations (CCR), commonly referred to as the "California Building Code" (CBC). The CBC is located in Part 2 of Title 24. The CBC is updated every three years, and the current 2016 CBC went into effect in January 2017. The City of Concord adopted the CBC into its Municipal Code (see below). Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The 2016 California Fire Code (CFC)adopts by reference the 2015 International Fire Code (ICF) with necessary State amendments. Updated every three years, the CFC contains regulations related to construction, maintenance and use of buildings. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. The 2016 CFC was adopted by the City of Concord, into its Municipal Code (see section below).

District Regulations

East Bay Regional Park District Wildfire Hazard Reduction and Resource Management Plan

In 2010, the District approved the Wildfire Hazard Reduction and Resource Management Plan, which focuses on the urban interface at the boundaries between open space parklands and adjacent residential neighborhoods, between Castro Valley and Richmond. The Plan provides an assessment of wildfire hazards and provides preliminary recommendations for site-specific fuel reduction treatments and best management practices to reduce hazards. The Plan also describes methods for reducing fuels and managing vegetation through the East Bay hills fuel break, which is an area of thinned vegetation between parklands and homes. The District maintains the fuel break through a variety of measures. Because the project site was not yet transferred to the District at the time that the Wildfire Hazard Plan was written, the Wildfire Hazard Plan does not include site-specific vegetation treatment goals, treatment actions, or best management practices (BMP) for the project site. However, the District would apply the general fuel treatment methods, vegetation management practices, and monitoring activities of its Wildfire Hazard Plan to the project site.

East Bay Regional Park District Master Plan

The East Bay Regional Park District Master Plan, adopted July 16, 2013, provides policy direction for resource stewardship and development of parks within the jurisdiction of the District. The Master Plan also includes a vision, a mission statement, as well as policies and goals directing adequate resources for fire and public safety protection:

> FR1b: The District will not open new parkland for public use unless it has adequate resources for planning and meeting the operational needs for public safety, fire protection, resources stewardship, interpretation and recreation services.

Local Regulations

Contra Costa County General Plan

The Contra Costa County General Plan, adopted in 2000, includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. Applicable goals, policies, and programs are identified and assessed for their effectiveness later in this chapter under Section 4.13.1.3, Impact Discussion. The General Plan includes the following goals and policy specific to fire protection and applicable to the proposed project:

- Goal 7-Y: To ensure a high standard of fire protection, emergency, and medical response services for all citizens and properties throughout Contra Costa County.
- Goal 7-AA: To incorporate requirements for fire-safe construction into the land use planning and approval process.

- Policy 7-63: The County shall strive to achieve a total response time (dispatch plus running and set-up time) of 5 minutes in central business district, urban, and suburban areas for 90 percent of all emergency responses.

Contra Costa County Hazard Mitigation Plan

Contra Costa County updated its Hazard Mitigation Plan in 2018, and it includes a City of Concord annex. The Hazard Mitigation Plan outlines activities designed to reduce or eliminate losses resulting from natural hazards, including wildfires. The Hazard Mitigation Plan describes wildfire risks for the county and establishes goals and objectives to mitigated risks.

Concord 2030 General Plan

The City of Concord 2030 General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. Applicable goals, policies, and programs are identified and assessed for their effectiveness later in this chapter under Section 4.13.1.3, Impact Discussion. The General Plan includes the following goal, principle, and policies specific to fire protection and applicable to the proposed project:

- Goal S-7: Comprehensive Emergency and Safety Services for Community Protection.
- Principle S-7.2: Facilitate Fire Prevention.
  - Policy S-7.2.2: Require new development to incorporate water systems that meet CCCFPD fire flow requirements or to provide adequate on-site water storage.
  - Policy S-7.2.3: Ensure that sufficient access for fire protection services is available in all new development.

Concord Reuse Project Area Plan

The Concord Reuse Project Area Plan (Area Plan) includes policies and standards for land use, transportation, environmental protection, labor agreements, affordable housing, and public safety for the conversion of land uses within the Inland Area of the Concord Naval Weapons Station (CNWS) to civilian use. Adopted by City Council in 2012, the Area Plan adapted goals and concepts developed in the Concord Community Reuse Plan that articulated the community's preferred vision for the area. The Reuse Plan was adopted in 2010. The Area Plan involves development of over 12,200 new housing units, over 6.1 million square feet of commercial floor space, and a variety of community facilities and city parks primarily clustered on the western portion of the former base. The Area Plan provides the following principle and policies applicable to the project site:

- Principle CFP-3: Provide high levels of police and fire protection services to the CRP [Concord Reuse Project] area.
  - Policy CFP-3.2: Plan for the eventual development of two new stations to serve the CRP area. Stations should be located in a way that can minimize future response time for fire and emergency medical service calls.

- Policy CFP-3.3: Coordination with Police and Fire Departments. Plan for the eventual development of two new stations to serve the CRP area. Stations should be located in a way that can minimize future response time for fire and emergency medical service calls.

Concord Municipal Code

The City of Concord Municipal Code (CMC), organized by Title, Chapter, and Section, contains all ordinances for the City. Title 15, Building and Building Regulation, includes regulations relevant to fire protection services in Concord as follows:

- Chapter 15.65, Fire Code. The Fire Code regulates, among other things, issuance of permits where operations or business or the installation or modification of any systems regulated under the Fire Code are planned, application and collection of applicable fire permit fees, and installation of residential and commercial automatic sprinkler systems. The Fire Code also adopts the Contra Costa County Fire Protection District Ordinance (2016-23), and the 2016 CFC.
- Chapter 15.10, Building Code. Chapter 15.10 of the Municipal Code adopts the 2016 California Building Code, referred to as the Building Code.

Existing Conditions

Contra Costa County Fire Protection District

The Contra Costa County Fire Protection District (CCCFPD) provides fire protection services to the project site. The CCCFPD serves approximately 600,000 people, covering nine cities and unincorporated areas with the County and maintaining 30 fire stations. The CCCFPD has mutual aid agreements with the neighboring departments, including the East Contra Costa Fire Protection District (ECCFPD), the District, the California Department of Forestry and Fire Protection (CAL Fire), and private industrial companies within each jurisdiction.

The CCCFPD anticipated a staffing of 370.6 full-time equivalents (FTE) for the 2018/2019 Fiscal Year (FY). CCCFPD's current service ratio is one fire station per 26,300 people.

The CCCFPD's dispatch time goal is to relay a dispatch within 90 seconds of receiving a call for service. As of 2007, the average time from call to dispatch was 103 seconds.[1]

The CCCFPD's headquarters is located at 40045 Port Chicago Highway in Concord. The CCCFPD operates three stations in the project vicinity and all stations serve the project site. The Concord Naval Weapons Station Fire Department will be conveyed by the Navy to a public agency such as the CCCFPD at the time when the site is conveyed; currently, the station operates under a mutual aid agreement between the Navy and the CCCFPD. The three stations are strategically placed to provide the most efficient response times. The CCCFPD FY 2017/2018 Adopted District Budget is $127 million, which is a 5 percent increase from the FY 2016/2017 budget. For the FY 2017/2018 adopted budget, $2.3 million is budgeted for capital

[1] City of Concord, 2007, Concord 2030 General Plan, page 7-20.

outlays, such as new fire stations. The CCCFPD maintains a schedule of fees for a variety of uses and permits in order to help support cost recovery for the CCCFPD.[2]

East Bay Regional Park District Fire Department

The District provides fire prevention and protection services to visitors to all 65 District parks. The District employs 46 firefighters and staff. Fire protection facilities in the District are managed by the park operations department and are headquartered at Lake Chabot Road in Castro Valley, with nine substations located in various parks under the District's jurisdiction. The facilities are staffed during the fire season. The District maintains fire engines, as well as helicopters with water dropping capabilities to serve larger-scale wildfire emergencies. The nearest stations to the site are Station Number 3, located at 700 Carquinez Scenic Drive in Martinez, and the Briones Station Number 6, located at 53/63 Alhambra Valley Road in Martinez. The District Fire Department maintains automatic aid agreements with all of its neighboring agencies and participates in the State mutual aid response system in coordination with the California Emergency Management Agency. In addition to fire prevention and protection services, the District Fire Department manages emergency medical services, a hazardous materials program and a search and rescue task force.

4.13.1.2 STANDARD OF SIGNIFICANCE

The proposed project would result in a significant impact related to fire protection if it would:

1. Result in substantial adverse physical impacts associated with the provision of or need for new or physically-altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

4.13.1.3 IMPACT DISCUSSION

PS-1	**The project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

The proposed project has the potential to add 126[3] acres of recreational uses, and 2,417 acres of conservation uses into the CCCFPD's service area. Potential future development could result in approximately 52 FTE employees, including one caretaker, as well as approximately 556,000 annual visitors at full buildout. This represents an increase in the demand for fire protection services for CCCFPD by drawing park users to a particular location. However, the proposed project would not result in new permanent residents or businesses within the project site. In addition, buildout would occur over a 50-

[2] Contra Costa County, Recommended 2018/2019 Budget, http://www.cccounty.us/DocumentCenter/View/49434, accessed on April 16, 2018.

[3] This 126-acre figure includes the 86 acres for the development footprint (approximately 50 acres of trails and 35 acres of park facilities) and a buffer from the conservation and open space areas.

year horizon, which would result in an incremental increase in demand for fire protection services to be accommodated by the CCCFPD.

Potential future construction and operation as a result of the proposed project would not prevent the CCCFPD from maintaining acceptable service ratio, response times, or other performance objectives that would require the new construction of or modifications to an existing fire station. Consistent with Concord Reuse Project Area Plan Policy CFP-3.2 and CFP-3.3, there are plans for expansion and construction of new CCCFPD fire protection facilities in the project vicinity to serve the Concord Reuse Project Area Plan area as a whole. The proposed Project facilities are generally consistent with the proposals for the project site in the Reuse Plan and the Area Plan. The Draft EIR for the Area Plan found the impacts of these new facilities to be less than significant without mitigation.[4]

Therefore, while the proposed project would contribute to the demand for already-planned new fire protection facilities, impacts from the construction of new or expanded fire protection facilities as a result of implementing the proposed project would be *less than significant* and no mitigation measures are required.

Significance without Mitigation: *Less than significant.*

4.13.1.4 CUMULATIVE IMPACTS

PS-2	**The project, in combination with past, present and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to fire protection services.**

The cumulative setting for fire protection services consists of the current service area boundaries of the CCCFPD, which include the current city limits. The proposed project, in combination with other reasonably foreseeable development, would not increase the population of the jurisdictions within and surrounding the project site, including Concord and Pittsburg, and subsequently the CCCFPD service area; however, the increase in visitors to the project site could contribute to the need for expanded fire protection services that could cause significant physical impacts to the environment. As described in impact discussion PS-1, the proposed project's contribution to this cumulative impact would be less than cumulatively considerable. Furthermore, the Concord Community Reuse Plan EIR evaluated potential impacts to public safety services resulting from buildout of the project area. The proposed project facilities are generally consistent with the proposals for the project site in the Reuse Plan and the Area Plan. The Community Reuse Plan EIR determined that with implementation of the goals and policies in place at the city and regional level, potential cumulative impacts to fire protection services would be less than significant.[5] Like future development under the proposed project, all future development in the city would be required to comply with regulations established to reduce adverse impacts from fire hazards. For these reasons, the cumulative impact on the provision of fire services would be *less than significant*.

[4] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 14-16.
[5] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 17-13.

Significance without Mitigation: *Less than significant.*

4.13.2 POLICE SERVICES

4.13.2.1 ENVIRONMENTAL SETTING

This section describes regulations, resources, and response times for police protection and public safety services in Concord.

Regulatory Framework

There are no federal or State regulations pertaining to law enforcement that apply to the proposed project.

District Regulations

East Bay Regional Park District Master Plan

The East Bay Regional Park District (District) Master Plan, adopted July 16, 2013, provides policy direction for resource stewardship and development of parks within the jurisdiction of the District. The Master Plan also includes a vision, a mission statement, as well as policies and goals directing adequate resources for fire and public safety protection:

> FR1b: The District will not open new parkland for public use unless it has adequate resources for planning and meeting the operational needs for public safety, fire protection, resources stewardship, interpretation and recreation services.

Local Regulations

Concord 2030 General Plan

The City of Concord 2030 General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. An applicable goal, principle, and policy are identified and assessed for their effectiveness later in this chapter under Section 4.13.2.3, Impact Discussion.

- Goal S-7: Comprehensive Emergency and Safety Services for Community Protection.
- Principle S-7.1: Provide the Highest Standard of Police Protection Services.
  - Policy S-7.1.1: Evaluate the effects of new development on law enforcement service and take public safety issues into account when reviewing land use proposals.

Concord Reuse Project Area Plan

The Area Plan includes policies and standards for land use, transportation, environmental protection, labor agreements, affordable housing, and public safety for the conversion of land uses within the Inland Area of the CNWS to civilian use. Adopted by City Council in 2012, the Area Plan adapted goals and

concepts developed in the Concord Community Reuse Plan that articulated the community's preferred vision for the area. The Reuse Plan was adopted in 2010. The Area Plan involves development of over 12,200 new housing units, over 6.1 million square feet of commercial floor space, and a variety of community facilities and city parks primarily clustered on the western portion of the former base. The Area Plan provides principle and policies applicable to the project site:

- Principle CFP-3: Provide high levels of police and fire protection services to the CRP area.
  - Policy CFP-3.2: Police Department Field Office. Plan for the eventual development of a Concord Police Department Field Office to serve the CRP area.
  - Policy CFP-3.3: Coordination with Police and Fire Departments. Plan for the eventual development of two new stations to serve the CRP area. Stations should be located in a way that can minimize future response time for fire and emergency medical service calls.

Existing Conditions

Concord Police Department

The Concord Police Department (CPD) provides law enforcement services in the City of Concord, including the project site. The CPD headquarters is located at 1350 Galindo Street, and the CPD operates one field office in downtown Concord at 1950 Parkside Drive. The district offices allow the CPD to fulfill its philosophy of community oriented policing services. Lieutenants are assigned full-time to each office which is staffed by non-sworn personnel.

The CPD has a mutual aid agreement with other agencies with jurisdiction over facilities and districts near the site, including the California Highway Patrol (CHP), the Contra Costa County Sheriff, the Bay Area Rapid Transit (BART) District Police, and the University Police at the Concord Campus of California State University (CSU) East Bay.[6]

Staffing

The CPD service population as of January 1, 2019 is equal to the City population of 129,889 and CPD staffing includes 150 full-time sworn officers with a staffing ratio of 1.2 officers per 1,000 service population.[7] This service ratio does not meet the national standard of 1.25 officers per 1,000 residents, and is less than the State standard of between 1.4 to 1.7 officers per 1,000 residents.[8]

Call Volume and Response Times

The CPD prioritizes calls for police services by urgency. Priority 1 calls involve emergency and potentially life-threatening situations have a response time goal of 5 to 6 minutes.[9]

[6] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 14-2.

[7] Weiler, Sarah. Police Department, City of Concord. Personal communication with Jacqueline Protsman, PlaceWorks. October 7, 2019.

[8] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 14-1.

[9] City of Concord, 2006, Concord 2030 Urban Area General Plan Draft EIR, page 3.11-12.

East Bay Regional Park District Police Department

The District Police Department will provide police protection to the Project area. The District maintains a full-time staff of police officers, dispatchers and fire responders based out of its Headquarters at Lake Chabot Regional Park in Castro Valley. The Police Department includes an Air Support Unit, Marine Patrol, Equestrian Patrols, K-9 Unit, Special Enforcement Unit, Investigations Unit and a 24- hour per day 911 Communications Center. The Police Department patrols 1,750 square miles of park trails throughout the 65 District parks. The Police Department employs approximately 500 personnel during the peak summer season, which includes 71 sworn police officers, and 200 volunteers. District police vehicles and helicopters will patrol Concord Hills daily. 4.13.2.2

4.13.2.2 STANDARD OF SIGNIFICANCE

The proposed project would result in a significant impact related to police protection if it would:

1. Result in substantial adverse physical impacts associated with the provision of or need for new or physically-altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

4.13.2.3 IMPACT DISCUSSION

PS-3	**The project would not result in the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

The proposed project has the potential to add 126[10] acres of recreational uses, and 2,417 acres of conservation open space uses into the CPD's service area. Potential future development could result in approximately 52 FTE employees, including one caretaker, as well as approximately 556,000 annual visitors that would increase fire protection demands on the CPD. However, the proposed project would not result in new permanent residents or businesses within the project. In addition, buildout would occur over a 50-year horizon, which would result in an incremental increase in demand for police protection services to be accommodated by the CPD.

The Concord Reuse Project Area Plan Policy CFP-3.2 and CFP-3.3 specify the planning of an additional field office to serve the Concord Reuse Project Area Plan area, the impacts of which were analyzed in the Draft EIR and found to be less than significant without mitigation.[11]

In addition to the Park District's Police Department officers and volunteers in the Plan area, the expected construction of two new Police and Fire stations by the City in the Reuse Project area (as identified in the

[10] This 126-acre figure includes the 86 acres for the development footprint (approximately 50 acres of trails and 35 acres of park facilities) and a buffer from the conservation and open space areas.

[11] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 14-15.

Concord Reuse Area Plan described in the local regulations sections above), would ensure adequate police protection services are available for the existing and future residents of Concord and park visitors. Future construction of police facilities would be subject to separate project-level CEQA review in order to identify potential environmental impacts and mitigation measures as needed. Therefore, while the proposed project would contribute to the demand for already-planned new police facilities, impacts from the construction of new or expanded police facilities as a result of implementing the proposed project would be *less than significant* and no mitigation measures are required.

Significance without Mitigation: *Less than significant.*

4.13.2.4 CUMULATIVE IMPACTS

PS-4	**The project, in combination with past, present and reasonably foreseeable projects, would not result in less-than-significant cumulative impacts with respect to police services.**

The cumulative setting for police services consists of the current service area boundaries of the CPD, which include the current city limits. The proposed project, in combination with other reasonably foreseeable development, would not increase the population of Concord and subsequently the CPD service area; however, the increase in visitors to the project site could contribute to the need for expanded police facilities that could cause significant physical impacts to the environment. As described in impact discussion PS-3, the proposed project's contribution to this cumulative impact would be less than cumulatively considerable. Furthermore, the Concord Community Reuse Plan EIR evaluated potential impacts to public safety services resulting from buildout of the project area. The Community Reuse Plan EIR determined that with implementation of the goals and policies in place at the city and regional level, potential cumulative impacts to police protection services would be less than significant.[12] The Park District Police Department will also patrol the Concord Hills Regional Park. For these reasons, the cumulative impact on the provision of police services would be *less than significant*.

Significance without Mitigation: *Less than significant.*

4.13.3 PARKS AND RECREATION

4.13.3.1 ENVIRONMENTAL SETTING

This section describes the regulatory framework and existing conditions related to parks and recreation services in Concord and the potential impacts that would result from development of the proposed project on parks and recreation services.

[12] City of Concord, 2008, Concord Community Reuse Project Draft EIR, page 17-13.

Regulatory Framework

State Regulations

The Quimby Act of 1975 authorizes Cities and Counties to pass ordinances requiring developers to set aside land, donate conservation easements or pay fees for park improvements. The Quimby Act sets a standard park space to population ratio of up to 3 acres of park space per 1,000 persons. Cities with a ratio of higher than 3 acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development.[13] The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of city-owned parkland. A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for a recreation facility or park land, and the type of development project upon which the fee is imposed.

District Regulations

East Bay Regional Park District Master Plan

The East Bay Regional Park District (District) Master Plan, adopted July 16, 2013, provides policy direction for resource stewardship and development of parks within the jurisdiction of the District. Specifically, the District Master Plan includes policies related to recreational outreach, resources, education, programs, interpretive resources, as well as availability and access to park resources and facilities:

- FR1b: The District will not open new parkland for public use unless it has adequate resources for planning and meeting the operational needs for public safety, fire protection, resources stewardship, interpretation and recreation services.
- Policy PA 1: The District will use the concepts of the Healthy Parks Healthy People movement to focus its outreach and education efforts. To achieve the goals of the Healthy Parks Healthy People movement the District will partner with other park, recreation and community organizations; along with schools, local health providers and businesses to provide opportunities for families and individuals to experience both traditional and non-traditional types of outdoor activities while reconnecting to the outdoors.
- Policy PA 2: The District will provide information about its parks, trails and programs in a variety of venues, languages and types of media. There is a need to serve both a more ethnically diverse set of residents and an increasing number of seniors and youth.
- Policy PA 3: The District will regularly use formal and informal survey methods to assess the interests of its constituents. This information will be used to guide the development of outreach and educational programs, facilities and activities found in the parks.
- Policy PA 4: The District will provide access to parklands and trails to suit the level of expected use. Where feasible, the District will provide alternatives to parking on or use of neighborhood streets. The District will continue to advocate and support service to the regional park system by public transit.

[13] California Government Code Section 66477, California Department of Parks and Recreation website, Quimby Act 101: An Abbreviated Overview, http://www.parks.ca.gov/pages/795/files/quimby101.pdf, accessed on March 13, 2018.

- Policy PA 5: The District will cooperate with local and regional planning efforts to create more walkable and bikeable communities, and coordinate park access opportunities with local trails and bike paths developed by other agencies to promote green transportation access to the Regional Parks and Trails.
- Policy PA 6: The District will comply with the requirements of the Americans with Disabilities Act and use the current edition of the California State Parks Accessibility Guidelines as its standard for making the improvements necessary to create accessible circulation, programs and facilities throughout the Park District.
- Policy PA7: The District will evaluate and monitor the compliance level of access routes from public transit stops into the parks and encourage local agencies to make the improvements necessary to provide compliant accessibility to the parks.
- Policy PA 8: The District will endeavor to assist individuals and groups who require special assistance with programs or facilities because of physical disability or economic circumstances.
- Policy IRS 1: The District will provide a variety of interpretive programs that focus attention on the region's natural and cultural resources. Programs will be designed with sensitivity to the needs and interests of people of all ages and backgrounds. Programs will enhance environmental experiences and foster values that are consistent with conserving natural and cultural resources for current and future generations to enjoy. The District will pursue and encourage volunteer support to assist in meeting these objectives.
- Policy IRS2: The District will offer recreational programs and services that appeal to participants of all ages and backgrounds, in keeping with its vision and mission. The District will create and manage a comprehensive offering of recreational opportunities, tours and outdoor skills training that will help visitors use and enjoy the parks and trails, and will collaborate with other agencies, organizations and partners to provide a broad spectrum of regional recreational opportunities.
- PRPT10: The District encourages the creation of local trail networks that provide additional access points to the regional parklands and trails in order to provide loop trail experiences and to connect the regional system to the community. The District will support other agencies in completing local trail networks that complement the Regional Trail system and will coordinate with local agencies to incorporate local trail connections into District brochures.
- PRPT11: Regional trails may be part of a national, state, or Bay Area regional trail system. The District will cooperate with other agencies and organizations to implement these multijurisdictional efforts.
- PRPT18: The District will coordinate with other agencies and organizations involved in planning for jointly managed regional trails or trails that extend beyond the District's jurisdiction. When applicable, the District will use planning and environmental studies done by or in cooperation with other agencies for trail planning and development.
- PRPT21: Areas of higher level recreational use and concentrations of service facilities will be designated as Recreation/Staging Units. Where possible, these areas will be clustered and located on the edges of the park.
- PRPT24: The District will seek to locate facilities in a manner that preserves open space whenever possible. The District will design proposed facilities so that their color, scale, style and materials will

blend with the natural environment. Park improvements will be designed to avoid or minimize impacts on wildlife habitats, plant populations and other resources.

- Policy RFA 1: The District will provide areas and facilities that serve the recreational needs of park users, in accordance with the plans, policies and park classifications adopted by the Board of Directors. The District will generally not develop or provide facilities that are more appropriately provided by local recreational and park agencies. Where possible and appropriate, the District will provide multiple-use facilities to serve recreational needs.
- Policy RFA 2: The District will provide a diverse system of non-motorized trails to accommodate a variety of recreational users including hikers, joggers, people with dogs, bicyclists and equestrians. Both wide and narrow trails will be designed and designated to accommodate either single or multiple. users based on location, recreational intensity, environmental and safety considerations. The District will focus on appropriate trail planning and design, signage and trail user education to promote safety and minimize conflicts between users.
- Policy RFA 3: The District will continue to add narrow trails designated as both single- and multi-use for hikers, equestrians, dog walkers and bike riders throughout the system of regional parklands.
- Policy RFA 4: The District will expand its unpaved multi-use trail system as additional acreage and new parks are added. The District will continue to provide multi-use trails to link parks and to provide access to park visitor destinations.
- Policy RFA 5: The District will continue to plan for and expand the system of paved, multi-use regional trails connecting parklands and major population centers.
- Policy RFA 6: The District will continue to develop group and family picnic facilities throughout the parks system and will continue to improve the reservation system.
- Policy RFA 7: The District will continue to develop children's play areas in suitable park settings designated for recreation. The District will attempt to incorporate environmental and cultural themes in the design of these facilities.
- Policy RFA 9: The District will continue to plan and develop a balanced system of regional camping facilities, including day camps, group camps, backpack camps, family camps and residential camps.
- Policy RFA 10: The District will continue to provide special recreational facilities throughout the parklands to broaden the range of opportunities in the parks and to take advantage of existing resources. The District will ensure that these facilities are compatible with the District's vision and mission, with other parkland resources and priorities. and with public needs and demands.

Camping Program (District Resolution 1996-4-80 and Program Update)

The Park District has a camping program, adopted in 1996, which makes available for interested East Bay residents a wide range of different and exciting camping experiences. It is intended that the camping experiences be diverse in nature, and that the camping sites be selected in a manner that assures a reasonable accessibility for East Bay residents, wherever they may live in the two-county area. The camping facilities and experience will be of a regional nature, and occur in those selected District facilities in which the activity will not compromise or endanger the quality of the environment.

Local Regulations

Concord 2030 General Plan

The City of Concord 2030 General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. The General Plan's Parks, Open Space and Conservation Element provides guidance for preservation of the City's open spaces and other natural resources, as well as identify the parks and recreation facilities available to local residents. The Element contains the following selected goals, principles, and policies:

- Goal POS-1: Premier Parks and Recreation Facilities.
- Principle POS-1.1: Provide and Maintain Park and Recreation Facilities for the Entire Community.
  - Policy POS-1.1.1: Acquire and develop additional neighborhood and community parks to serve existing and future needs, working toward a goal of 6 acres of park land per 1,000 residents.
  - Policy POS-1.1.5: Secure and maintain parks and open space facilities consistent with the ability of the City, East Bay Regional Park District, or an equivalent entity to finance acquisition and operation.
- Goal POS-2: A Protected and Accessible Open Space System.
- Principle POS-2.1: Provide an Interconnected Open Space System.
  - Policy POS-2.1.2: Participate in joint planning and implementation with the State of California Parks and Recreation Department, East Bay Regional Park District, and other appropriate agencies to establish connections to Mt. Diablo State Park.
  - Policy POS-2.1.4: Incorporate portions of the Concord Reuse Project site into the regional open space network, and provide trail and greenway connections between this area and developed Concord neighborhoods.
- Principle POS-2.3: Expand Open Space Systems as Opportunities are Identified.
  - Policy POS-2.3.1: Increase the regional trail, ridgeline, and hillside open space system in the City's Planning Area through joint efforts with East Bay Regional Park District, Contra Costa County, the U.S. Government, and nonprofit trustee agencies.

Concord Reuse Project Area Plan

The Concord Reuse Project Area Plan includes policies and standards for land use, transportation, environmental protection, labor agreements, affordable housing, and public safety for the conversion of land uses within the Inland Area of the CNWS to civilian use. Adopted by City Council in 2012, the Plan adapted goals and concepts developed in the Concord Community Reuse Plan that articulated the community's preferred vision for the area. The Reuse Plan was adopted in 2010. The Area Plan involves development of over 12,200 new housing units, over 6.1 million square feet of commercial floor space, and a variety of community facilities and city parks primarily clustered on the western portion of the former base. The Plan provides the following principle and policies applicable to the project site:

- Principle CFP-6: Provide and maintain a CRP area park system that meets future community needs, both on-site and throughout the city of Concord.
  - Policy CFP-6.2: Park Service and Siting Standards. Use the Planning Area's open space system to help achieve the citywide goal of having six acres of open space per 1,000 residents. For planning purposes, acreage counted toward this ratio should exclude open space that is principally used for resource conservation, including the Regional Park and Mt. Diablo Creek Corridor. Park planning should also pursue the siting of an active neighborhood park no less than two acres in size within a one-half mile of all future homes in the Area.
  - Policy CFP-6.10: Interagency Coordination. Coordinate the planning and operation of the local park system with the East Bay Regional Park District and the National Park Service, including East Bay Regional Park District plans to expand and connect the regional open space system and National Park Service plans for the Port Chicago Naval Magazine National Memorial.

Concord Reuse Project Specific Plan (2018-2020)

On November 20, 2018, the City of Concord released a Notice of Preparation (NOP) for the environmental review of the Concord Reuse Project Specific Plan. The Specific Plan, when released in 2020, will be the land use regulation for the 2,327-acre section of the former Naval Weapons Station which is being conveyed to the City by the United States Navy.[14] In the "Draft Land Use Program" of the NOP, 149 acres of "Creek Corridor," 390 acres of "District and Citywide Parks," and 266 acres of "Greenways" are proposed. Of these and other greenways and open space corridors, the NOP states:

The proposed project would involve the construction of new open space and related improvements and facilities, active-use parks (including a proposed Tournament Sports Park), trails, and greenways. Implementation of the project would also create demand for open space. The EIR will describe the existing open space and recreation resources managed by the City, the East Bay Regional Park District, and other regional agencies. At full buildout, development under the proposed project would exceed the City's requirement of 6 acres of parkland per 1,000 residents and would meet other City policies related to open space and recreation. The EIR will analyze whether the proposed project ensures that this ratio would be achieved for each individual phase of development and, if not, whether residents and employees of the proposed project land uses would increase the use of existing neighborhood and regional parks and result in substantial physical deterioration such that off-site park construction would be necessary.[15]

Concord Municipal Code

The City of Concord Municipal Code, organized by title, chapter, and section, contains all ordinances for Concord. Title 19, Planning and Development, includes regulations relevant to parks and recreational facilities. Chapter 19.15, Park Land Requirements, outlines the requirements for the dedication of land or payment of fees for park and recreational services and land for public right of access. Under Section

[14] This boundary does not extend north beyond Highway 4 and is different than the earlier Concord Reuse Project Area Plan boundary, which did extend beyond Highway 4 and did not include the Coast Guard base.

[15] City of Concord, 2018, "Concord Reuse Project Specific Plan Project Description and Potential Environmental Issues, page 21 and Table 3.

19.15.020, the City can require the dedication of land or the payment of fees, or a combination of both, for park and recreational purposes as a condition to the approval of a tentative subdivision, parcel map, or permit approval for residential development on one or more parcels of the subdivision. The amount of land dedicated or fees paid is calculated based upon residential density per the formula listed under Section 19.15.030, which is based on 5 acres per 1,000 persons.

Existing Conditions

City-Owned Parks and Facilities

The Concord Parks and Recreation Department programs and operates parks and recreational facilities in the City of Concord; all green infrastructure is maintained by the Public Works Department. The City has adopted a goal of maintaining a ratio of 6 acres of developed parkland per 1,000 residents.[16] Currently, the City provides 636 acres of parkland for the residents in 22 neighborhood and community parks, with a ratio of 5.2 acres per 1,000 residents, which is 87 percent of the standard.[17]

Regional Parks and Open Space

In addition to the City's parks facilities, Concord residents have access to a range of regional parks and open space under the jurisdiction of the District, including the Briones Regional Park, Diablo Foothills Regional Park, and Las Trampas Regional Wilderness. Diablo Foothills Regional Park is the closest regional facility to the project site, and is located approximately 4 miles to the southwest. The Park has connections to Mt. Diablo State Park and the Walnut Creek Open Space. The 1,060-acre park provides opportunities for horseback riding, hiking, and bicycling, as well as Castle Rock Recreation Area, which offers seasonal aquatic recreational opportunities. Briones Regional Park is located approximately 5 miles to the east. The 6,177-acre Park includes trails suitable for hiking, running, and horseback riding, and also includes camping and picnic facilities, as well as an archery range. Las Trampas Regional Wilderness is located 10 miles to the south, and consists of 5,342 acres of wilderness and trails.

Other Parks and Open Spaces

The State of California Parks system and East Bay Municipal Utility District (EBMUD) provide additional open space near the project site. The 20,000-acre Mount Diablo State Park is accessible from approximately 2.5 miles southeast of the project site. The Park consists of a museum providing historic and ethnographic information, as well as exhibits about the park's natural features. Recreational activities include hiking, biking, horseback riding, and camping, as well as rock climbing sites. EBMUD owns approximately 28,000 acres of open space allowing for recreational activities within watersheds around the San Pablo, Briones, Lafayette, Upper San Leandro, and Chabot reservoirs.

[16] City of Concord, 2006, General Plan Draft EIR, page 3.10-5.
[17] 636 acres divided by 124.4 (existing population as of 2003[124,440]/1,000) = 5.2 acres per 1,000 residents.

4.13.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to parks and recreation if it would:

1. Result in substantial adverse physical impacts associated with the provision of or need for new or physically-altered parks and recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.13.3.3 IMPACT DISCUSSION

PS-5	**The project would not result in the need for new or physically altered park facilities or other recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.**

As described in Chapter 3, Project Description, of this Draft EIR, potential future development under the proposed project is expected to generate approximately 52 FTE employees, including one caretaker, as well as approximately 556,000 annual visitors to the project site; the proposed project would not include new permanent residents that could increase the demand for the parks and recreational facilities in the city.

Implementation of the proposed project would have a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered parks and recreational facilities in order to maintain the City's adopted ratio of 6 acres of parkland per 1,000 residents are required. As described under Existing Conditions, the City currently does not meet its standard of 6 acres per 1,000 residents. However, the proposed project would add 126[18] acres of park and recreational uses, and 2,417 acres of conservation open space uses to the city. This is consistent with Concord General Plan Policy POS-1.1.1 to develop additional parks to meet the adopted goal of 6 acres of park land per 1,000 residents, as well as Policy POS-2.3.1 to increase the hillside open space system through joint efforts with the District.

As described in Chapter 3, Project Description, Recreation/Staging Units would comprise approximately 126 acres of the proposed Regional Park. Within these zones, there would be approximately 35 acres of developed recreation and operations facilities. These facilities would include a visitor center, event and educational spaces, picnic areas, campsites, overlooks, and interpretive elements.

[18] This 126 acres includes the 86 acres for the development footprint (approximately 50 acres of trails and 35 acres of park facilities) and a buffer from the conservation and open space areas.

The proposed project would increase the quality of recreational options in the area, and thus would not result in the physical deterioration of or require the expansion of an existing facility, nor would it require the addition of new parks in Concord or the surrounding area. As the proposed project would not affect population growth, it would not increase the use of existing parks or facilities. Further, the proposed project, by providing a guide for future development of the site, may attract some users from existing parks and facilities, thus alleviating the physical deterioration of existing parks and facilities. The proposed project would construct new recreational facilities and renovate existing facilities to increase park usability by potential users. However, construction activities would be required to undergo project-specific CEQA analysis to mitigate any potential significant environmental impacts. Therefore, the proposed project would result in *no impact*, and no mitigation measures are required.

Because the proposed project includes 126 acres of publicly-accessible park and recreational areas in the proposed Recreation/Staging Units, this would contribute to the City's goals for providing recreational opportunities to the residents of Concord and impacts would be *less than significant*.

Significance without Mitigation: *Less than significant.*

PS-6	**The project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur, or be accelerated.**

The park and recreational opportunities under the proposed project combined with the wide range of parks and recreational facilities available for public use in Concord and the surrounding area would not be expected to increase the use of recreational facilities to the extent that substantial deterioration would occur. As described under impact discussion PS-5, the proposed project would introduce recreational facilities in Concord that are accessible to the regional population. In addition, the District has identified two future parks and recreational areas, including Deer Valley located near Antioch, and Delta Access located in eastern unincorporated Contra Costa County, adding to the existing regional park facilities.[19] Consequently, the proposed project would not result in substantial physical deterioration of existing neighborhood and regional parks or other recreational facilities, and a *less-than-significant* impact would occur.

Significance without Mitigation: *Less than significant.*

PS-7	**The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.**

[19] East Bay Regional Park District, 2013, Master Plan 2013, page 94.

As described under impact discussion PS-5, implementation of the proposed project would include 126 acres of park and recreational facilities, and 2,417 acres of conservation open space uses that would contribute to an increase in access to recreation facilities for residents of Concord and the region. For this reason, implementation of the proposed project would not warrant the construction of recreational facilities elsewhere that could result in physical impacts to the environment. Therefore, implementation of the proposed project would not require the expansion of an existing facility, nor would it require the addition of new parks in Concord or the surrounding area and impacts would be *less than significant*.

Significance without Mitigation: *Less than significant.*

4.13.3.4 CUMULATIVE IMPACTS

PS-8	**The project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.**

Implementation of the proposed project would have a significant impact if, in combination with other development projects in Concord, it would result in substantial adverse physical impacts associated with the provision of new or physically altered parks and recreational facilities in order to maintain the City's adopted ratio of 6 acres of parkland per thousand residents.

While cumulative growth in the employee population would result in increased use of neighborhood and regional parks and recreational facilities, buildout of the reasonably foreseeable projects in Concord would not result in substantial adverse impacts to parks and recreational facilities in Concord. The new employees that would be generated by cumulative development would use existing local and regional parks and recreational facilities, and continued implementation of the parkland dedication requirements established in the CMC would ensure that existing parks or public facilities are well-maintained and improved as needed, avoiding substantial physical deterioration of recreational facilities.

Overall, implementation of the proposed project, in combination with other past, present, and reasonably foreseeable projects, would result in a *less-than-significant* cumulative parks and recreation impact. The proposed project would have a positive impact in terms of recreational facilities and would help the City meet its parkland standard.

Significance without Mitigation: *Less than significant.*

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4.14 TRANSPORTATION AND TRAFFIC

This section describes the regulatory framework and existing conditions on the project site related to transportation and traffic. This section also addresses the potential impacts of the proposed Plan's implementation on transportation and traffic conditions on and in the regional vicinity of the project site.

The City of Concord, in a letter to the East Bay Regional Park District (District) dated July 27, 2017, sent in response to the Notice of Preparation of this Draft EIR, expresses transportation concerns with future park site access, particularly new access points such as Avila Road and Bailey Road, as well as the potential impact of the new visitor center. These concerns are addressed in the impact discussions below.

4.14.1 ENVIRONMENTAL SETTING

4.14.1.1 REGULATORY FRAMEWORK

This section identifies the laws, regulations, policies, and programs related to the physical environment that pertain to the project's effects on transportation and circulation on the highways and local roadways within the project site area.

Federal Regulations

Federal highway standards are administrated in California by the California Department of Transportation (Caltrans) (see discussion under "State Regulations" below).

State Regulations

Caltrans and the California Transportation Commission (CTC) are the primary agencies that oversee transportation infrastructure in California. Caltrans manages the state's highway and inter-city rail systems, and the CTC is responsible for the programming and allocating of funds for the construction of highway, passenger rail, and transit improvement in California.

California Transportation Plan 2040

Caltrans' California Transportation Plan 2040 (CTP 2040) is a statewide, long-range transportation plan that establishes a policy framework for all levels of government to address future mobility needs and reduction of GHG emissions. Transportation goals identified in the CTP 2040 include improving multi-modal mobility and accessibility for all people and preserving the multi-modal transportation system. Policies related to these goals include operating an efficient transportation system; strategic investment; providing multi-modal choices; sustainable and preventative maintenance strategies; including life cycle costs in decision making; and adapting the transportation system to reduce impacts from climate change. The project site is located in Contra Costa County, within Caltrans' District 4, which encompasses the nine-county San Francisco Bay Area.

State Transportation Improvement Program and State Highway Operating and Protection Program

The CTC is responsible for adopting the five-year State Transportation Improvement Program (STIP) and approving the four-year State Highway Operating and Protection Program (SHOPP). The 2018 STIP includes an estimated $46.4 million in allocations for state highway improvements, intercity rail, and regional highway and transit improvements in Contra Costa County through Fiscal Year 2022-23. The Interregional Transportation Improvement Program and Regional Transportation Improvement Program (RTIP) nominate projects for inclusion in the STIP. The RTIP is prepared by Caltrans to allocate funding for highway and rail projects that improve interregional mobility across the state. There are multiple STIP and SHOPP projects planned in the vicinity of the project site.

California Transportation Development Act

The California Transportation Development Act (TDA) provides a dedicated State funding source for use by local jurisdictions at the county level to improve existing public transportation and encourage regional public transportation coordination. Transit agency audits are performed on a triennial basis to ensure that transit agencies are meeting minimum service performance standards. Unmet transit needs identified by local transit agencies and included in the Regional Transportation Plan (RTP). TDA funds can be allocated to non-transit uses if there are no unmet transit needs within the jurisdiction that are reasonable to meet with the use of TDA funds.

Senate Bill 743

With the adoption of the Senate Bill 375 in 2008, the State Legislature signaled its commitment to encourage land use and transportation planning decisions and investments to reduce vehicle miles traveled and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill 32).

On September 27, 2013, Senate Bill 743 was signed into law. Senate Bill 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, Level of Service, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). Senate Bill 743 required the Office of Planning and Research to propose revisions to the CEQA Guidelines establishing new criteria to “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” (Public Resources Code Section 21099(b)(1)).

The new CEQA Guidelines Section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas, and shifts the focus from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses (which in turn reduces vehicle trips). Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. The City of Concord is currently engaged in this process and has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Since the regulations of SB 743 have not been finalized or adopted by the City, automobile delay remains the measure used to determine the significance of a traffic impact. As a lead agency, the District may elect to develop its own significance thresholds or may opt to use the thresholds of "host" jurisdictions (i.e., for projects within the City of Concord, the District would use the City's thresholds).

Regional Regulations

Multiple regional agencies are involved in planning for transportation in and around Concord, and include the Metropolitan Transportation Commission (MTC) of the Bay Area, the Contra Costa Transportation Authority (CCTA), and two Regional Transportation Planning Committees (RTPCs) serving central and eastern Contra Costa County. The East Bay Regional Park District Master Plan contains numerous policies and goals for transportation to its parks.

Plan Bay Area

The MTC serves as the region's federally-designated Metropolitan Planning Organization (MPO) and the State-designated regional transportation planning agency. MPOs are designated in urbanized areas with populations over 50,000 people and are responsible for developing a Regional Transportation Plan (RTP) that recommends regional transportation projects to be included in the STIP. In the Bay Area, the RTP was developed by MTC in partnership with the Association of Bay Area Governments (ABAG), and was integrated with the Sustainable Communities Strategy and adopted in 2013 as Plan Bay Area. Plan Bay Area fulfills the requirements of California's 2008 Senate Bill 375 to reduce GHG emissions from cars and light trucks and plan for future population growth. Plan Bay Area identifies the Concord Naval Weapons Station (CNWS) site as a Priority Development Area, where the region expects to see transit-oriented and infill development that will accommodate the majority of future growth. As a result, 70 percent of funding through the One Bay Area Grant, which provides a share of the region's federal transportation funding, must be invested in Priority Development Areas for local street preservation, bicycle and pedestrian access improvements, planning activities, and other specific transportation programs.

Congestion Management Program

California's Proposition 111 (1990) specifies that each county designate a congestion management agency to implement programs to manage traffic levels. The CCTA is designated as the congestion-management agency for Contra Costa County and is responsible for coordinating land use, air quality, and transportation planning and for preparing and updating the county's Congestion Management Program (CMP) every two years. The 2017 CMP identifies level of service standards for state highways and principal arterials including Interstate 680 (I-680), State Route (SR) 4, SR 242, and sections of Clayton Road, Treat Boulevard, Kirker Pass Road, and Ygnacio Valley Road near the project site. Performance measures are also identified for these key roadways in addition to performance measures for transit service in the county. The CMP also includes a seven-year capital improvement program.

Measure J

In 2004, Contra Costa voters approved Measure J, a law to extend a sales tax under Measure C for an additional 25 years beyond Measure C's 2009 expiration. Measure C was a 0.5-percent transportation sales tax in Contra Costa County passed in 1988, and Measure J continues the half-cent transportation sales tax to fund voter-approved transportation programs and projects and is managed by CCTA. The measure is expected to provide $2.5 billion for countywide and local transportation projects. As part of Measure J, RTPCs must develop an action plan for Routes of Regional Significance and establish Multimodal Transportation Service Objectives for those routes. Multimodal Transportation Service Objectives are based on specific criteria and include quantifiable measures of effectiveness for attaining transportation objectives.

Regional Transportation Planning Committees

TRANSPAC (Transportation Partnership and Cooperation) is the designated RTPC in central Contra Costa County, including the City of Concord. The TRANSPLAN committee is the RTPC for eastern Contra Costa County, which includes the area just east of the former CNWS. Multimodal Transportation Service Objectives in both eastern Contra Costa County and central Contra Costa County action plans use a delay index for freeways of regional significance. The eastern Contra Contra Costa County action plan Multimodal Transportation Service Objective for freeways also includes a utilization of high-occupancy lanes.

District Regulations

The East Bay Regional Park District Master Plan, adopted July 16, 2013, provides policy direction for stewardship and development of parks within the jurisdiction of the District. The Master Plan is organized into six chapters that describe the purpose and role of the District, challenges and priorities. The Master Plan also includes a vision, mission, and policies for parking, encouraging green transportation and availability and access to park facilities:

- PA 4: The District will provide access to parklands and trails to suit the level of expected use. Where feasible, the District will provide alternatives to parking on or use of neighborhood streets. The District will continue to advocate and support service to the regional park system by public transit.
- PA 5: The District will cooperate with local and regional planning efforts to create more walkable and bikeable communities, and coordinate park access opportunities with local trails and bike paths developed by other agencies to promote green transportation access to the Regional Parks and Trails.
- PA 6: The District will comply with the requirements of the Americans with Disabilities Act and use the current edition of the California State Parks Accessibility Guidelines as its standard for making the improvements necessary to create accessible circulation, programs and facilities throughout the Park District.
- PA-7: The District will evaluate and monitor the compliance level of access routes from public transit stops into the parks and encourage local agencies to make the improvements necessary to provide compliant accessibility to the parks.

- PRPT 9: Regional trails will connect regional parks or trails to each other, to parks and trails of other agencies, or to areas of unusual scenic beauty; vista points, San Francisco Bay, Delta or lake shoreline, natural or historic resources, or similar areas of regional significance. Regional trails may also connect regional parks and trails to important destinations such as transit centers, schools, colleges, civic centers, other major institutions, employment centers, large commercial complexes, or residential areas. A regional water trail may provide a water connection with launching and landing sites for small watercraft to points along the San Francisco Bay shoreline and/or the Sacramento/San Joaquin River and Delta.
- PRPT 10: The District encourages the creation of local trail networks that provide additional access points to the regional parklands and trails in order to provide loop trail experiences and to connect the regional system to the community. The District will support other agencies in completing local trail networks that complement the Regional Trail system and will coordinate with local agencies to incorporate local trail connections into District brochures.
- PRPT 21: Areas of higher level recreational use and concentrations of service facilities will be designated as Recreation/Staging Units. Where possible, these areas will be clustered and located on the edges of the park.
- RFA 2: The District will provide a diverse system of non-motorized trails to accommodate a variety of recreational users including hikers, joggers, people with dogs, bicyclists and equestrians. Both wide and narrow trails will be designed and designated to accommodate either single or multiple users based on location, recreational intensity, environmental and safety considerations. The District will focus on appropriate trail planning and design, signage and trail user education to promote safety and minimize conflicts between users.
- RFA 5: The District will continue to plan for and expand the system of paved, multi-use regional trails connecting parklands and major population centers

Local Regulations

City of Concord 2030 General Plan

The City's 2030 General Plan includes a Transportation Element that describes future improvements to the City's transportation system to accommodate new development. The 2030 General Plan was amended in 2012 to include the Area Plan for the Concord Reuse Project. Relevant policies from the Transportation Element include the following:

- Policy T-1.1.2: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy. Transportation improvements should be consistent with statewide greenhouse gas reduction goals established by Assembly Bill 32, and the land use and transportation policy initiatives established by Senate Bill 375.
- Policy T-1.1.3: Unless otherwise specified, the benchmark for the evaluation of intersections and roadway segments is LOS D. In the Downtown area, the benchmark is LOS E, recognizing the more urban, pedestrian-oriented character of this area. The Downtown is defined as the area served by streets designated Downtown in this element. The LOS E benchmark also applies in the Concord BART Station vicinity, the North Concord / Martinez BART Station vicinity, and along the City's transit routes.

Transit routes are generally defined as roads with two or more bus transit lines, such as Concord Avenue, Clayton Road, and Treat Boulevard.

- Policy T-1.1.5: Require all new development to provide adequate right-of-way and to construct ultimate on and off-site improvements.
- Policy T-1.1.16: Continue to provide and enhance landscaped medians and street edges that are visually pleasing and provide shade and buffers for pedestrians and cyclists; landscaping should use native or low-water plants and reduce stormwater runoff to the greatest extent possible.
- Policy T-1.3.3: Ensure that streets are designed to balance the needs of multiple travel modes, including vehicles, pedestrians, bicycles, and transit. This policy supports the concept of "complete streets," consistent with AB 1358. New streets should be designed to balance the needs of motorists with the needs of other travelers and should recognize the special needs of children, seniors, and persons with disabilities. Over time, the existing street system will be adapted to reflect the "complete streets" emphasis, making it easier to travel around Concord without a car.
- Policy T-1.5.1: Ensure adequate parking facilities are provided for public convenience and to promote economic development, where consistent with other objectives such as promoting public transit use, walking and bicycling.
- Policy T-1.5.5: Locate and design off-street parking lots in a way which makes them less visually prominent.
- Policy T-1.6.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient pedestrian access to transit stops; work with agencies to relocate stops when necessary.
- Policy T-1.7.2 Use innovative and effective walkway features to enhance the pedestrian experience, including buffers between pedestrians and vehicle traffic, wide sidewalks, illuminated crosswalks, signalized crossings, bulb-outs, pedestrian-scale lighting, benches, and other street furniture; include trees wherever possible, selecting species that do not negatively impact sidewalks as they grow.
- Policy T-1.8.4 Require provision of bicycle facilities in new developments, where appropriate.

Concord Reuse Project Area Plan

The Concord City Council adopted the Concord Reuse Project Area Plan in January 2012, and Chapter 2 of Book Two (Technical Chapters) sets forth policies to ensure that the multi-modal transportation network offers residents, employees and visitors multiple choices for the trips they make. The topics addressed in the Plan are complete streets, intermodal connectivity, emerging technologies, parking management, Transportation Demand Management, and off-site impacts. Relevant policies from the Concord Reuse Project Area Plan include the following:

- Policy T-1.1: Road Connections to Adjacent Neighborhoods. Provide road connections between the Planning Area and surrounding neighborhoods. These connections include Arnold Industrial Way, Panoramic Drive, Willow Pass Road, Clayton Way, Bailey Road and extensions of Denkinger Road, West Street, Avila Road, Salvio Street, and a new street connecting to East Olivera Road. Do not provide additional connections for motor vehicles other than on the roads listed above.

- Policy T-1.2: Bicycle and Pedestrian Connections. Provide bicycle and pedestrian connections within Greenways and in other locations where feasible to link the bicycle and pedestrian network in surrounding neighborhoods to the neighborhoods, workplaces, and commercial and recreational amenities in the Planning Area.
- Policy T-1.5: Bicycle and Pedestrian Safety. Provide for the safety of bicyclists and pedestrians through low-speed streets, properly-sized bike lanes, continuous sidewalks, and crosswalks; and by implementing traffic controls that reduce conflicts with motor vehicles.
- Policy T-1.6: Transit Connectivity. Develop funding agreements with local transit operators, or require private operators, to provide frequent bus service between mixed-use districts, Village Centers, and commercial districts and to connect the Planning Area to surrounding neighborhoods.
- Policy T-1.7: Intermodal Connectivity. Create a circulation system that provides easy connections from BART to bus and from both BART and bus to car-share, pedestrian and bicycle facilities that provide access to destinations throughout the Planning Area. These connections are critical in making transit trips appealing and convenient.
- Policy T-2.1: Support Facilities for New Technologies. Assist in providing support facilities for emerging technologies, such as alternative fueling stations.
- Policy T-3.5: Preferential Parking. Provide preferential parking for car-share, carpool, and vanpool vehicles in all workplace and educational campus parking facilities.

City of Concord Department of Public Works

The City of Concord Department of Public Works is responsible for maintaining the city's street infrastructure, including curbs, gutters, sidewalks, street lighting, and traffic control devices. The development of infrastructure (e.g., roadways, sidewalks, etc.) is subject to review/approval by the Department, and must follow the Department's Standard Plans and Specifications.

City of Concord Bicycle, Pedestrian, and Safe Routes to Transit Plan

The City of Concord adopted the Bicycle, Pedestrian & Safe Routes to Transit Plan in 2016, which presents a strategy for the development of a comprehensive bicycling and walking network to provide access to transit stops and stations, and other destinations throughout the city.[1] Relevant policies from the Bicycle, Pedestrian, and Safe Routes to Transit Plan include the following:

- Policy 2.A.1: Apply state of the practice and emerging designs including the Design Guidelines supplemented to this plan, the California Manual on Uniform Traffic Control Devices, and national manuals such as National Association of City Transportation Officials guides.
- Policy 2.A.3: Prioritize pedestrian and bikeway designs to address the needs and safety for people of all ages and abilities, considering issues such as street design speed, hierarchy of streets, connectivity, and level of stress experienced.

[1] City of Concord, 2016, Bicycle, Pedestrian, & Safe Routes to Transit Plan, https://www.cityofconcord.org/DocumentCenter/View/ 1045/ Bicycle-Pedestrian-and-Safe-Routes-to-Transit-Plan-PDF, accessed on June 22, 2018.

- Policy 3.F.1: Seek to provide marked crossings at reasonable intervals in areas with existing or potential high pedestrian activity and establish vehicle speed and volume thresholds for appropriate treatments such as crossing control, curb extensions, and refuge islands.
- Policy 3.H.2: Integrate bicycle and pedestrian facilities as part of new street design and resurfacing projects where feasible.

California Mitigation Fee Act

The California Mitigation Fee Act (Government Code Sections 66000 to 66020) allows the city to levy transportation impact fees on new development. An offsite street improvement program is included in the City of Concord's Municipal Code to administer transportation impact fees. The off-site street improvement program levies a fee on future development outside of the CNWS to partially fund transportation improvements identified in the 2030 General Plan that will accommodate growth and maintain level of service benchmarks.

4.14.1.2 EXISTING CONDITIONS

Project Location and Vicinity

The project site is located on the eastern side of the City of Concord in central Contra Costa County. The City of Concord is served by several major highways, including I-680, SR 4, and SR 242, and an extensive street network made up of arterials, collectors, and local roads. The northwest boundary of the project site runs along the southern side of SR 4, east of its interchange with SR 242 and I-680. Willow Pass Road crosses the site in a northeasterly direction and provides access to SR 4 just north of the site. Bailey Road crosses the southeast portion of the site in a northeasterly direction and then joins SR 4 in western Pittsburg. The North Concord/Martinez BART Station is located to the west of the site, off Port Chicago Highway. Several access roads provide circulation around the site. The regional and local roadways serving the site are further described below.

Regional Roadways

I-680 is the primary north-south freeway in central Costa County and runs along the west side of Concord, with an interchange with SR 4 near the northwestern corner of the city. I-680 begins at an interchange with Interstate 80 (I-80) in Solano County north of Contra Costa County and travels south to its terminus in San José. The number of lanes on I-680 within the vicinity of the project site varies from seven lanes north of SR 4 to twelve lanes north of Monument Boulevard.

SR 4 is the primary west-east route in northern Contra Costa County. SR 4 begins at the interchange with I-80, near the San Pablo Bay, and runs east through northern Concord to the cities of Pittsburg, Brentwood, Stockton, and eventually reaches its terminus at SR 89 near the California/Nevada State border. SR 4 varies from twelve lanes east of SR 242 to nine lanes east of Willow Pass Road, with direct ramp access near the site provided on Willow Pass Road.

SR 242 is a north-south route that connects SR 4 with I-680, running northeasterly through Concord. SR 242 is a six-lane highway with direct ramp access near the site provided on Olivera Road.

Local Roadways

Willow Pass Road is an arterial that begins at I-680 in Pleasant Hill as a six-lane road, and travels east and then north through Concord as a four-lane and ultimately a two-lane road. Willow Pass Road terminates just north of the project site, where it provides ramp access to SR 4.

Bailey Road is a two-lane arterial that travels in a northeasterly direction from Clayton Road, through the project site, to Pittsburg.

Port Chicago Highway is a semi-circular route that begins at Clayton Road as a one-way northbound road in central Concord, and continues north as a two-way road (with four lanes and then two lanes) before turning east and terminating in Bay Point. The road provides ramp access to SR 4 just north of the project site near the North Concord/Martinez BART Station.

Kirker Pass Road/Railroad Avenue/Ygnacio Road is a major corridor extending between I-680 in Walnut Creek and SR 4 in Pittsburg. The roadway does not provide direct access to the former CNWS, but serves as one of the west-to-east arterials south of the site. The segment south of the property primarily has two lanes in each direction with a center median.

Concord Boulevard is an arterial (with varying width of two and four lanes) to the west of the project site that begins at the intersection of Clayton Road and Sutter Street, just east of SR 242 near Downtown Concord. The roadway continues in a southeastward direction beyond Kirker Pass Road, where it continues as Oakhurst Drive.

Travel Activity in Concord

A traffic analysis of existing traffic conditions on roadway segments, freeway segments, freeway ramps, and intersections in the vicinity of the former CNWS was conducted by Kittleson and Associates in 2013,[2] updating data used in the Concord Community Reuse Plan EIR.[3] The study locations initially analyzed in the Concord Community Reuse Plan EIR were reviewed by public and agency stakeholders during the City's CEQA public review process. As a result of extensive information and feedback received from agency and other stakeholders during this public review process, the City expanded the number of study intersections and study roadway segments.

Traffic Volumes

Peak hours for weekday traffic volumes typically occur between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. Traffic volumes are generally highest during the evening peak hour for the roadway segments studied, except for Bailey Road, which has higher morning peak-hour volumes.

[2] Department of the Navy, 2014, Draft Environmental Impact Statement (EIS) for the Disposal and Reuse of the Former Naval Weapons Station Seal Beach, Detachment Concord.

[3] City of Concord, 2010, Concord Community Reuse Project Final EIR.

Interstate 680

Morning peak hour volumes for I-680 (between Monument Boulevard and SR 4) range from about 3,000 to 7,600 vehicles in the northbound direction and from about 4,900 to 8,600 vehicles in the southbound direction. Evening peak hour volumes range from about 4,800 to 9,600 vehicles in the northbound direction and from about 4,100 to 7,300 vehicles in the southbound direction. All of the I-680 freeway ramps in the vicinity of the project site have higher evening peak-hour volumes than morning volumes.

State Route 242

The segment of SR 242 north of I-680 carries about 3,100 northbound vehicles and 4,700 southbound vehicles during the morning peak hour, and 3,000 southbound vehicles and 5,300 northbound vehicles during the evening peak hour. The peak hour for freeway ramps varies.

State Route 4

Morning peak hour volumes on SR 4 (between SR 242 and Railroad Avenue) range from about 2,200 to 4,800 vehicles in the eastbound direction and from about 2,900 to 8,700 vehicles in the westbound direction. Evening peak hour volumes range from 4,100 to 7,900 in the eastbound direction and from about 2,200 to 3,400 vehicles in the westbound direction. Westbound peak-hour volumes are generally twice as high during the morning, and eastbound peak-hour volumes are twice as high during the evening. The peak hour for freeway ramps varies.

Existing Traffic Operations

Evaluation of the capacity of roadway and freeway segments, freeway ramps, and intersections to accommodate current traffic volumes is based on the road facility's Level of Service (LOS). Level of Service is a qualitative measure that describes the general operating conditions of the roadway or freeway segment, freeway ramp, or intersection using factors such as speed, travel times, and delays. Level of Service is reported on a scale of "LOS A" to "LOS F," with "LOS A" representing excellent operating conditions with little or no delay, and "LOS F" representing the worst operating conditions with substantial delays. The level of service classifications for intersections and roadways are defined in Tables 4.14-1 and 4.14-2, respectively.

Intersections

The majority of the intersections included in the analysis operate at or better than the established acceptable level of service standard during both morning and evening peak hours. There are three intersections that operate worse than acceptable standards. The Willow Pass Road/SR 4 westbound ramps and Willow Pass Road/SR 4 eastbound ramps, which are both unsignalized and operate at a morning peak-hour LOS E and F, respectively. The signalized intersection of Bailey Road and the SR 4 eastbound ramps operates at LOS F during the evening peak hour.

TABLE 4.14-1 DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE

Description	Average Total Vehicle Delay (Seconds)	Level of Service Grade	Average Control Vehicle Delay (Seconds)	Description
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	**Free Flow or Insignificant Delays:** Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	**Stable Operation or Minimal Delays:** Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	**Stable Operation or Acceptable Delays:** Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	**Approaching Unstable or Tolerable Delays:** Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	**Unstable Operation or Significant Delays:** Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	**Forced Flow or Excessive Delays:** Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Roadway Segments

The roadway segments in the vicinity of the project site generally operate at LOS D or better and are within the performance thresholds. Exceptions to acceptable service levels are two-lane Willow Pass Road (north of Landana Drive) and Bailey Road east of Concord Boulevard, both of which operate at LOS F during both peak traffic hours.

TABLE 4.14-2 DEFINITIONS FOR ROADWAY LEVEL OF SERVICE

Level of Service Grade	Description
A	**Free Flow or Insignificant Delays:** The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. Maneuverability with the traffic stream is good. Minor disruptions to flow are easily absorbed without a change in travel speed.
B	**Stable Operation or Minimal Delays:** The presence of other vehicles becomes noticeable. Average travel speeds are the same as LOS A, but drivers have slightly less freedom to maneuver within the traffic stream. Minor disruptions are still easily absorbed, although local deterioration in level of service will be more obvious.
C	**Stable Operation or Acceptable Delays:** The influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration in level of service, and queues will form behind any significant traffic disruption
D	**Approaching Unstable or Tolerable Delays:** The ability to maneuver within the traffic stream is severely restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming, and the level of service deteriorating.
E	**Unstable Operation or Significant Delays:** Operations are at or near capacity, an unstable level of service. The densities vary, depending on the free-flow speed. Vehicles are operating with the minimum spacing for maintaining uniform flow. Disruptions cannot be dissipated readily, often causing queues to form and service to deteriorate to LOS F.
F	**Forced or Breakdown Flow with Excessive Delays:** This condition occurs when vehicle arrive at a rate greater than the rate at which they are discharged. Operations with queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Transportation Research Board, Highway Capacity Manual, 2000.

Freeway Segments

The freeway segments in the vicinity of the project site operate at LOS D or better during both peak hours, except two segments on SR 4 (east of SR 242 and east of San Marco Boulevard) that operate at LOS F in the westbound direction during the morning peak hour.

Freeway Ramps

The majority of ramps studied currently operate at LOS E or better with the exception of four ramps on SR 4, which operate at LOS F during one of the peak hour (the westbound off-ramps to Port Chicago Highway and Willow Pass Road, the westbound on-ramp from Willow Pass Road to SR 4, and the eastbound off-ramp to San Marco Boulevard).

Routes of Regional Significance

As described in the Regulatory Framework discussion, Multimodal Transportation Service Objectives, specifically the travel speed and delay index, are used to evaluate Routes of Regional Significance. None of the area freeways exceed the delay index standard. In addition, SR 4 currently meets the threshold minimum Multimodal Transportation Service Objective for High Occupancy Vehicle utilization in eastern Contra Costa County.

Transit

Several public transit options are available in Concord with stops in proximity to the project site, offering the potential for "transit-oriented open space" recreation. Bay Area Rapid Transit (BART) provides commuter rail service throughout the region. The Pittsburg/Bay Point – SFO/Millbrae line provides a connection between Concord, San Francisco, and the San Francisco International Airport. The future Concord Hills Regional Park / Port Chicago Memorial visitor's center is located approximately 2.5 miles straight to the North Concord / Martinez Station off Port Chicago Highway; 3 miles to the Concord Station on Oakland Avenue in Downtown Concord, and 3 miles to the Pittsburg/Bay Point Station off Bailey Road.

The Central Contra Costa Transit Authority, or County Connection, provides fixed-route and paratransit bus service in Concord and has several routes that provide service near the project site, including Routes 10, 15, 17, 28/627, and 93X, and several lines that connect to the three BART stations. Tri Delta Transit provides bus service in east Contra Costa County with routes that connect Concord with Bay Point, Pittsburg, Antioch, Oakley, Brentwood, and Discovery Bay. Route 201 provides service between the Concord Station and the Pittsburg/Bay Point Station, where transfers can be made to 11 other Tri Delta Transit bus routes. The City of Concord's General Plan indicates additional transit service is planned for the CNWS area that would connect to BART stations and other Concord neighborhoods.

Bicycle and Pedestrian Facilities

Bicycling and walking are considered viable alternatives to the automobile in Concord, and the Concord Development Plan promotes pedestrian-oriented design and supporting bicycle facilities. Caltrans classifies bicycle facilities into three main categories:[4]

- Class I Bike Path – Provides an exclusive right-of-way (outside a roadway right-of-way) for bicycle access.
- Class II Bike Lane – Provides a striped width on a paved roadway to delineate a width for the preferential use by bicyclists.
- Class III Bike Route – Shares the road pavement with motorists with bike route signs or markings, but without a designated width for bicyclists.

The City of Concord, in its Trails Master Plan, employs a similar classification for bicycle facilities, but adds two additional subcategories:

- Class 3A routes are similar to Caltrans Class III designation routes.
- Class 3B routes use edge lanes to provide additional space for bicyclists, but do not meet the 5-foot bike lane minimum width required by Caltrans Class II bike lanes.

The Concord General Plan proposes a network of Class I and II bicycle facilities for the redevelopment of the CNWS site.

[4] California Department of Transportation, 2016, California Transportation Plan 2040.

The City of Concord and Contra Costa County have identified a number of proposed multi-use trails in and around the project site, including additional Class I and Class III trails with off-street and on-street facilities. The Contra Costa Countywide Bike and Pedestrian Plan provides policy and infrastructure recommendations to improve bicycle and pedestrian facilities throughout the region. Contra Costa County has several Class I trails in the study area, including the Contra Costa Canal Trail and the Iron Horse Trail, as well as Class II Bike Lane and Class III Bike Route facilities.

The Concord Trails Master Plan provides a framework for planning trails in Concord with the purpose of promoting the use of trails for recreation as well as an alternative mode of transportation. The Trails Master Plan includes recommended trail alignments and design guidelines, and identifies several potential trail routes, including a connection to the Delta De Anza Trail and Class I collector trails that follow either rail lines or creeks that run through the site.

4.14.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant transportation and traffic impact if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

4.14.3 IMPACT DISCUSSION

TRAF-1	**The project could increase traffic volumes on area roadways, and could conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Project Construction

While there is no applicable program, plan, ordinance, or policy associated with temporary construction activity, construction activities associated with implementation of the proposed Plan would generate short-term increases in traffic volumes on area roadways. Construction activities that would generate off-site traffic would include the delivery of construction vehicles and equipment to the project site, the daily arrival and departure of construction workers, and the hauling of materials to and from the project site throughout the construction period. As described in Chapter 3.5, Site Preparation, Specific Plan construction activities that would involve the most use of haul trucks would include the demolition of Buildings IA-55, 97, and 87, and site grading (e.g., parking lots, picnic areas with parking, new buildings, the Corp Yard, new segments of roads and trails). The haul truck traffic would vary depending on the

construction activity, but would be spread over the course of the workday. In addition to truck trips, construction workers would commute to and from the site at the start and end of each workday.

It should be noted that Plan construction would occur over the course of three phases over the course of 50 years, meaning that construction of all Plan elements would not occur simultaneously, thus lessening the overall impact of construction traffic on local roadways at any given time (see Table 4.3-2, Proposed Phasing). Although the proposed project would add both truck and worker commute traffic to local area roadways, the traffic increase would be short-term in nature and is not expected to result in any long-term degradation in operating conditions on local roadways. Construction staging would occur primarily on site and would not be expected to disrupt access to nearby uses. In addition, no lane closures are expected during project construction, and emergency access in the area would be maintained at all times.

Construction vehicles traveling to and from the project site could disrupt vehicular, bicycle, and pedestrian activity along nearby public roadways (e.g., Baily Road). This would be a *potentially significant* impact.

Project Operation

Roadways

Based on the estimated visitor levels upon buildout of the Regional Park, the proposed project would generate approximately 590 weekday vehicle trips, with approximately 35 and 77 trips during the AM and PM peak hour, respectively. This includes trips by both park employees and visitors. Accordingly, the project's estimated peak-hour vehicle trips would be well below the 100-trip threshold set by both CCTA and the City of Concord for a full (detailed) traffic impact analysis. Trip generation under Phase 1 and Phase 2 (pre-buildout) conditions would be lower than the above-described levels and would also be much lower than the 100-trip threshold. As described above, area roadways and intersections generally operate at or better than the established level of service (LOS) standards. There are exceptions to those acceptable LOS conditions. For transportation facilities that operate at unacceptable level of service under no-project conditions, the City of Concord's threshold of significance is a project-caused increase in traffic volume of three percent or more. The low number of weekday peak-hour trips that the Regional Park would generate would be dispersed over different roads in the network serving the project site, and would increase traffic volumes by less than three percent on any single roadway. Furthermore, the City of Concord recently adopted its *Bicycle, Pedestrian & Safe Routes to Transit Plan* (2016), which presents a strategy for the development of a comprehensive bicycling and walking network to provide access to transit stops and stations, and other destinations throughout the city.[5] Through implementation of this Plan, options for alternative modes of transportation within Concord, including to the proposed Regional Park, would likely increase. Such improvements, and the alternative transportation options they would provide, may further reduce the total number of vehicle trips generated by the project. For the above reasons, the effects of the increase in peak-hour traffic volumes on area roadways caused by the project would be minimal.

[5] City of Concord, 2016, Bicycle, Pedestrian, & Safe Routes to Transit Plan, https://www.cityofconcord.org/DocumentCenter/View/1045/Bicycle-Pedestrian-and-Safe-Routes-to-Transit-Plan-PDF, accessed on June 22, 2018.

Public Transit, Bicycle, and Pedestrian Facilities

Proposed development would neither directly nor indirectly eliminate existing or planned alternative transportation corridors or facilities (e.g., bike paths or lanes) as envisioned by the City of Concord in its 2016 Bicycle, Pedestrian and Safe Routes to Transit Plan, including changes in polices or programs that support alternative transportation, nor would it result in the construction of facilities in locations where future alternative transportation facilities may be planned. Space would be provided along Kinne Boulevard in front of the Visitor Center for a bus/shuttle stop that could be used for public transit and private shuttle providers. For those reasons, the proposed project would not conflict with adopted policies, plans, or programs related to public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Congestion Management Program Facilities

CCTA has established travel demand measures such as the above-described 100 new peak-hour trip threshold for a full (detailed) traffic impact analysis. As described above, the proposed project's weekday peak-hour vehicle trip generation would be lower than that threshold (also established by the City of Concord). For the reasons described above, the increase in peak-hour traffic volumes on area roadways caused by the project would not conflict with CCTA CMP standards.

Based on the above discussion, the proposed project would have a *less-than-significant* impact with respect to conflicts with plans, policies, and regulations related to the performance of the area's circulation system.

Significance without Mitigation: *Potentially significant.*

Impact TRAF-1: Construction activity associated with the proposed Regional Park could result in temporary impacts to the circulation system. This would be a potentially significant impact

Mitigation Measure TRAF-1: *Traffic Control Plan.* The District shall prepare, or shall require construction contractor(s) to prepare, and implement a traffic control plan (TCP) for each of the three Plan phases, prior to commencing construction on that phase. The TCPs will aim to reduce traffic impacts on the roadways at and near the work sites, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders and construction vehicles, as appropriate. The District and construction contractor(s) shall coordinate development and implementation of the TCPs with the City of Concord, as appropriate. To the extent applicable, the TCP shall conform to the California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control) (Caltrans, 2014). The TCP shall include, but not be limited to, the following elements:

- Circulation and detour plans to minimize impacts on local road circulation during unanticipated road and lane closures (if any). Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone.
- Identifying truck routes designated by the County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible.

- Sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent public right-of-ways.
- Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by on-site inspectors.
- Scheduling truck trips outside the peak morning and evening commute hours to the extent possible.
- Limiting the duration of unanticipated road and lane closures (if any) to the extent possible.
- Construction activities that may encroach on bicycle routes or multi-use paths, advance warning signs (e.g., "Bicyclists Allowed Use of Full Lane" and/or "Share the Road") shall be posted that indicate the presence of such users.
- Implementing roadside safety protocols. Advance "Road Work Ahead" warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone.
- Coordinating construction administrators of police and fire stations (including all fire protection agencies), and recreational facility managers. Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable.
- Repairing and restoring affected roadway rights-of-way to their original condition after construction is completed.

Significance with Mitigation: *Less than significant*. Based on the analysis presented above, implementation of this Mitigation Measure TRAF-1 would reduce the potential construction-period impact on the performance of the circulation system to a less-than-significant level.

TRAF-2 The project would increase traffic volumes on area roadways, but would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Senate Bill 743 (SB 743), signed by Governor Brown in 2013, directed Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines:

> "establishing criteria for determining the significance of transportation impacts of projects within transit priority areas . . . that promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" and to "recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." (Pub. Res. Code, § 21099(b)(1), emphasis added.)

On January 3, 2019, the comprehensive amendments to the CEQA Guidelines went into effect. The amended Guidelines include a new Section 15064.3 to implement SB 743, which establishes vehicle miles

of travel (VMT) thresholds as the most appropriate measure of transportation impacts under CEQA; and shifting away from the level of service (LOS) analysis. In December 2018, OPR also issued a Technical Advisory on Evaluating Transportation Impacts in CEQA, containing technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures for implementation of section 15064.3. Under Section 15064.3(b)(1) of Guidelines, generally land use "projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact."

The technical advisory suggests a significance threshold for VMT that is based on State-mandated greenhouse gas emission reduction targets. But the VMT thresholds under section 15064.3 do not take effect until July 1, 2020, unless the lead agency adopts the VMT metrics earlier. CCTA is Contra Costa County's Congestion Management Agency, and sets level of service standards. Neither CCTA nor the City of Concord have established VMT thresholds to date. As such, no determination on the significance of VMT impacts is made in this document since none is legally required.

Significance without Mitigation: *No impact*.

TRAF-3 The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The proposed Regional Park would meet all required geometric design standards for access. There would be three vehicular park access points for the area north of Bailey Road, a public road maintained by Contra Costa County. The primary access would be near the Visitor Center along Kinne Road, and two secondary access points would be provided, one along Bailey Road and one along a planned new road (to be named Delta Road). There would be one vehicular park access point for the area south of Bailey Road. The proposed project would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features or vehicles incompatible with existing traffic. Therefore, potential impacts related to traffic safety hazards would be *less than significant*.

Significance without Mitigation: *Less than significant.*

TRAF-4 The project would not result in inadequate emergency access.

Proposed development would meet all requirements for access and ingress/egress of emergency vehicles. Construction of the proposed project would not require road closures or affect any of the existing road networks surrounding the project site. As described under Impact TRAF-4, there would be four vehicle access points that would connect the Regional Park with the surrounding road network. In addition, there would be internal maintenance roads (paved and unpaved) provided for internal circulation. For those reasons, the project would provide adequate access for emergency vehicles, and the impacts would be *less than significant*.

Significance without Mitigation: *Less than significant.*

4.14.4 CUMULATIVE IMPACTS

TRAF-5 The project would increase traffic volumes on area roadways, but would not contribute in a considerable way to cumulative transportation and traffic impacts.

The geographic scope of analysis for cumulative impacts on transportation and traffic conditions encompasses the road network that would serve the proposed Regional Park. Projects in the geographic scope include the Concord Reuse Project, the Faria/Southwest Hills project, the Keller Canyon Landfill Expansion project, as well as other development projects in the cities of Concord and Pittsburg.[6] See Chapter 4 for a complete list of the cumulative projects. Redevelopment of the former CNWS as part of the Concord Reuse Project would result in levels of service that are below the operating standard established by each applicable jurisdiction (i.e., CCTA or City of Concord) at area intersections and on area roadways.[7] As stated above, the proposed Regional Park would generate approximately 590 weekday vehicle trips. As a point of comparison with one of the large development projects included in the cumulative analysis, the Concord Community Reuse Project would generate approximately 173,000 weekday vehicle trips. Furthermore, the trip generation of the proposed project land use (recreation/ conservation) compared to the residential or employment-based land uses of the cumulative projects would be more oriented to off-peak travel times, during which transportation facilities are less congested and have the capacity to accommodate additional demand.

Construction of the Concord Reuse Project Specific Plan, including the Tournament Sports Park, as well as the other, smaller-scale projects included in the geographic scope of the cumulative analysis, could potentially overlap with construction of the proposed Regional Park. Although the potential impact of construction traffic was not evaluated for the Concord Community Reuse Plan or for the other cumulative projects, it is likely that simultaneous construction of multiple projects in the same geographic area could lead to increased congestion on regional (e.g., SR 4) and local roadways (e.g., Willow Pass Road). Similar to the comparison of the proposed project's operational trips to those estimated to be generated by the implementation of the Concord Community Reuse Project Specific Plan, construction of the proposed project would likely contribute few vehicle trips to regional and local roadways in relation to the number of vehicle trips that would likely be generated by the large development projects. Furthermore, project construction would occur over the course of three phases over the course of 50 years, meaning that construction of all project elements would not occur simultaneously, thus lessening the overall impact of construction traffic on local roadways at any given time (see Table 3-2, Proposed Phasing).

Considering the scale and temporal character of the proposed project's vehicle trip generation, the proposed Regional Park's contribution to cumulative adverse conditions on local and regional transportation facilities would be less than cumulatively considerable. This is because, as stated under

[6] The Concord Reuse Project includes 65 acres set aside for the Tournament Sports Complex, which is currently being designed and evaluated by the City (https://www.concordreuseproject.org/186/Tournament-Sports-Complex). Specific elements of the Complex related to transportation and access have not yet been defined or evaluated, and as such cannot be specifically considered in the cumulative impact analysis of the proposed project.

[7] City of Concord, 2010, Concord Community Reuse Project Final EIR.

Impact TRAF-1, the effects of the park's low trip generation, dispersed over different roads in the network serving the project site, would be negligible, relative to the effects of vehicle trips associated with other projects in the cumulative scenario. Therefore, the cumulative impact would be *less than significant*.

Significance without Mitigation: *Less than significant.*