



**Walnut
Creek 2050**
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Noise

Existing Conditions Report

SEPTEMBER 2026

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Introduction

The City of Walnut Creek is currently preparing a comprehensive update to its General Plan. The updated plan will include a standalone Noise Element prepared in alignment with the state’s General Plan Guidelines.

This Existing Conditions Report (ECR) addresses the first goal. It provides information regarding existing conditions in the city to inform the development of strategies to protect the noise environment for existing and future residents. The report includes the following sections: (1) a brief description of the fundamentals of environmental noise; (2) a summary of applicable regulations; (3) a description of the existing noise environment; and (4) identification of opportunities and constraints related to potential noise-sensitive uses and development of strategies to attain noise and land use compatibility.

WHAT DOES A NOISE ELEMENT DO?

Element requirements are based on four goals:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process.
- To develop strategies for abating excessive noise exposure through cost-effective measures, including avoiding incompatible land uses.
- To identify areas where noise environments are deemed acceptable, as well as locations deemed “noise sensitive.”
- To use the community noise equivalent level (CNEL) or day-night average sound level (Ldn) noise contours for local compliance with the State Noise Insulation Standards.

Summary of Key Findings

The following is a list of key findings from the Noise ECR that will be further analyzed and explored in later phases of the General Plan Update (GPU).

- **Mobility sources of noise.** The primary noise sources in the city are vehicle traffic and Bay Area Rapid Transit (BART) operations.
- **Other noise sources.** Other noise sources from activity in the city include movement of people and goods, mechanical equipment and nuisance noise, and construction noise.
- **Noise compatibility.** The city's ambient noise conditions are generally compatible with new sensitive receptor development.
- **Noise policy framework.** The City has an existing framework of General Plan policies, ordinances, and development plans that can provide a foundation for updating the General Plan.

Noise Fundamentals

The California Department of Transportation (Caltrans) defines noise as sound that is loud, unpleasant, unexpected, or undesired. For the purpose of this noise analysis, noise only exists if a source, path, and receiver are present. Sound pressure waves must be produced by a source and transmitted through a medium, such as air. Then the sound must be perceived by, registered by, or affect a receptor, such as an ear or noise monitoring device.¹

Sound pressure levels are quantified using a logarithmic ratio of actual sound pressures to a reference pressure squared, called “bels.” A bel is typically divided into tenths, or decibels (dB). Sound pressure alone is not a reliable indicator of loudness because frequency, or pitch, also affects how receptors respond to the sound. To account for the pitch of sounds and the corresponding sensitivity of human hearing to those sounds, the raw sound pressure level is adjusted with a frequency-dependent A-weighting scale that is stated in units of decibels (dBA). Typical A-weighted noise levels are listed in **Table 1**.

For more information on the terms and definitions related to this noise existing conditions report, please see **Appendix A: Terms and Definitions**.

¹ California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

Table 1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Levels (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet flyover at 1,000 feet	— 105 —	
Gas lawn mower at 3 feet	— 95 —	
Diesel truck at 50 feet at 50 miles per hour	— 85 —	Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime	— 75 —	
Gas lawn mower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area	— 65 —	Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
	— 55 —	Large business office
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater or large conference room (background)
Quiet suburban nighttime	— 35 —	
	— 30 —	Library
Quiet rural nighttime	— 25 —	Bedroom at night
	— 15 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Sources: Caltrans. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. 2013.

Noise Effects

Reaction to a given sound varies depending on acoustical characteristics of the source and the environment of the receptor. The A-scale deemphasizes low-frequency sounds because humans are more sensitive to high-frequency sounds, and high-frequency sounds are more likely to cause hearing damage. People tend to compare an intruding noise with existing background noise levels. If a new noise is considerably louder or more noticeable than existing noise levels, it is generally considered objectionable. The activity that the receptor is engaged in also affects response. For example, the same noise source, such as constant freeway traffic, may be more objectionable to people sleeping than to workers in a factory. A three dBA change is the smallest increment that is perceivable by most receivers, and a five dBA change in community noise levels is noticeable. Generally, one to two dBA changes are not detectable except under controlled laboratory conditions. A sound that is 10 dBA greater than the reference sound is typically perceived as twice as loud.² Sensitivity to noise increases in the evening and at night. The 24-hour descriptors described above (day-night average noise level (Ldn) and community noise equivalent level (CNEL)) reflect this sensitivity by adding artificial noise penalties to evening and nighttime hours.

As noted above, excessive noise can cause hearing loss. More commonly, noise can interfere with human activity, such as by disrupting communication, concentration, and sleep. The U.S. Environmental Protection Agency identifies a 24-hour exposure level of 70 decibels as the level of environmental noise that will prevent any measurable hearing loss over a lifetime. Noise levels of 55 dBA outdoors and 45 dBA indoors are identified as the levels of noise that permit spoken conversation and other activities such as sleeping, working, and recreation without ambient noise-related interference and annoyance.³ As described below, these noise levels have been incorporated into regulations to limit noise exposure.

Regulatory Framework

Federal Standards

Federal Aviation Administration Standards

Enforced by the Federal Aviation Administration, the Code of Federal Regulations (CFR), Title 14, Part 150, prescribes the procedures, standards, and methods governing the development,

² Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

³ U.S. Environmental Protection Agency (USEPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.

submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving these programs. CFR Title 14 also identifies land uses that are typically compatible with various levels of noise exposure by individuals. The Federal Aviation Administration considers residential land uses to be compatible with exterior noise levels at or less than 65 dBA Ldn.

Federal Highway Administration Highway Traffic Noise Regulation

The Federal Highway Administration implements CFR Title 23, Part 772 of the Code of Federal Regulations (CFR), which establishes procedures for the study and abatement of highway traffic noise. The regulation establishes the noise abatement criteria (NAC), which identify hourly noise levels where interference with speech communication is expected to occur and represent a compromise between noise levels that are desirable and those that are achievable. For residential areas, the exterior NAC is 67 dBA Leq (equivalent energy level).

Noise Control Act

The Noise Control Act of 1972 identifies uncontrolled noise as a danger to health and welfare, particularly for people in urban areas. Responsibility for noise control remains primarily a state and local issue. However, the act established a means for effective coordination of federal research and noise control activities. The act includes a directive to the U.S. Environmental Protection Agency (USEPA) to develop and publish information on noise levels to protect public health and welfare with an adequate margin of safety. In 1974, the USEPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. The document identifies an interior noise level of 45 dBA Ldn in residential areas as adequate to protect indoor activity from interference and annoyance. An exterior noise level of 55 dBA Ldn was identified as the maximum noise level to avoid interference and annoyance in residential areas and other areas in which quiet is a basis for use. A maximum 24-hour average outdoor noise level of 70 dBA Leq is recommended to prevent hearing loss.⁴

⁴ USEPA. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.

U.S. Department of Housing and Urban Development (HUD)

HUD environmental criteria and standards are presented in 24 CFR Part 51. Subpart B establishes criteria related to noise abatement and control. The standards establish goals of exterior noise levels that do not exceed 55 dBA Ldn, but noise levels of 65 dBA Ldn are considered acceptable. In general, new residential construction qualifying for HUD financing proposed in high noise areas (exceeding 65 dBA Ldn) must incorporate noise attenuation features to maintain the acceptable interior noise level of 45 dBA Ldn. It is assumed that with standard construction any building will provide sufficient attenuation to achieve an interior level of 45 dBA Ldn or less if the exterior level is 65 dBA Ldn or less, and no special evaluation of attenuation is necessary. Approvals in a “normally unacceptable noise zone” (exceeding 65 dBA but not exceeding 75 dBA) require a minimum of 5 dBA additional noise attenuation for buildings if the day-night average is greater than 65 dBA but does not exceed 70 dBA, or a minimum of 10 dBA of additional noise attenuation if the day-night average is greater than 70 dBA but does not exceed 75 dBA.

Railroad Noise Emission Compliance Regulations and Railroad Noise Emission Standards

The Federal Railroad Administration Office of Safety is responsible for enforcing the Railroad Noise Emission Compliance Regulations (49 CFR 210). These regulations prescribe the minimum compliance guidelines for the Railroad Noise Emission Standards (40 CFR 201). The Railroad Noise Emission Compliance Regulations outline procedures that must be followed when noise levels from railroad equipment or operations exceed the Railroad Noise Emission Standards. For example, equipment defects must be corrected, or the defective equipment must be removed from service (40 CFR 210.7).

State Standards

California Noise Control Act

The California Noise Control Act of 1973 (provided as Sections 46000 through 46080 of the California Health and Safety Code) finds that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the state to provide Californians with an

environment free from noise that jeopardizes their health or welfare. Section 46050.1 of the act mandates development guidelines for the preparation and content of noise elements.

California Noise Insulation Standards (California Code of Regulations, Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential uses. These standards are contained in the California Building Standards Code (Title 24). Title 24 requires that residential structures be designed to prevent the intrusion of exterior noise so that the interior noise, with windows closed, attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room. The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure may be exposed to exterior noise levels of 60 dBA CNEL or greater. Such acoustical analysis must demonstrate that the residences have been designed to limit intruding noise to a maximum interior noise level of 45 dBA CNEL.

State of California General Plan Guidelines

The State of California 2017 General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR) (now the Office of Land Use and Climate Innovation, or LCI), provide guidance for the acceptability of specific land use types in areas of specific noise exposure. Appendix D: Noise Element Guidelines, of OPR's General Plan Guidelines provides suggested land use compatibility guidelines that may be used by jurisdictions to develop local land use compatibility standards. The state's recommended compatibility levels are provided in **Table 2**. The Noise Element Guidelines recognize that site-specific conditions may make certain noise levels more or less acceptable than the mean response. As such, the Guidelines include correction factors to adjust measured noise exposure values to more accurately assess local sentiment toward acceptable noise exposure. These correction factors are provided in **Table 3**. The guidelines also include a recommended interior noise exposure of 45 dBA Ldn for residences and other places where people sleep.⁵

Noise levels are defined in four compatibility categories in **Table 2** for each land use, as defined below:

⁵ California Governor's Office of Planning and Research. 2017. "Appendix D: Noise Element Guidelines." In State of California 2017 General Plan Guidelines.

- **Normally acceptable.** Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
- **Conditionally acceptable.** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Typically, conventional construction but with closed windows and fresh air supply systems or air conditioning will suffice.
- **Normally unacceptable.** Generally, new construction or development should be discouraged. If new construction or development proceeds, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- **Clearly unacceptable.** Generally, new construction or development should not be undertaken.

Table 2. Land Use Compatibility for Community Noise Elements (dBA Ldn or dBA CNEL)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Acceptable	Clearly Unacceptable
Residential-low-density, single-family, duplex, mobile homes	50–60	55–70	70–75	<75
Residential – multi-family	50–65	60–70	70–75	<75
Transient lodging – motels, hotels	50–65	60–70	70–80	<80
Schools, libraries, churches, hospitals, nursing homes	50–70	60–70	70–80	>80
Auditoriums, concert halls, amphitheaters	N/A	50–70	N/A	>80
Sports arenas, outdoor spectator sports	N/A	50–75	N/A	>65

Table 2. Land Use Compatibility for Community Noise Elements (dBA Ldn or dBA CNEL)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Acceptable	Clearly Unacceptable
Playgrounds, neighborhood parks	50–70	N/A	67.5–75	>70
Golf courses, riding stables, water recreation, cemeteries	50–75	N/A	70–80	>72.5
Office buildings, business commercial, and professional	50–70	67.5–77.5	>75	>80
Industrial, manufacturing, utilities, agriculture	50–70	70–80	>75	N/A

Sources: California Governor's Office of Planning and Research. "Appendix D: Noise Element Guidelines." In *State of California 2017 General Plan Guidelines*. 2017.

Notes: CNEL = community noise equivalent level; dBA = A-weighted decibel; Ldn = day-night noise level; N/A = not applicable

Table 3. Noise Level Correction Factors

Type of Correction	Description	Amount of Correction to be Added to Measured CNEL (dB)
Seasonal	Summer (or year-round operation).	0
	Winter only (or windows always closed).	-5
Outdoor residual noise level	Quiet suburban or rural community (remote from large cities and industrial activity and trucking).	+10
	Quiet suburban or rural community (not near industrial activity).	+5
	Urban residential community (not immediately adjacent to heavily traveled roads and industrial areas).	0
	Noisy urban residential community (near relatively busy roads or industrial areas).	-5
	Very noisy urban residential community.	-10
Previous exposure and community attitudes	No prior experience with intruding noise.	+5
	Community has had previous exposure to intruding noise, but little effort is being made to control it. Correction may also be applied in a situation where the community has not been exposed to noise previously, but the community is aware that bona fide efforts are being made to control it.	0
	Community has had considerable previous exposure to intruding noise, and the noisemaker's relations with the community are good.	-5

Table 3. Noise Level Correction Factors

Type of Correction	Description	Amount of Correction to be Added to Measured CNEL (dB)
	Community is aware that the operation causing noise is very necessary, and it will not continue indefinitely. Correction can be applied for an operation of limited duration and under emergency circumstances.	-10
Pure tone or impulse	No pure tone or impulsive character.	0
	Pure tone or impulsive character present.	+5

Sources: California Governor's Office of Planning and Research. "Appendix D: Noise Element Guidelines." In *State of California 2017 General Plan Guidelines*. 2017.

Notes: CNEL = community noise equivalent level; dB = decibel.

City of Walnut Creek Standards

City of Walnut Creek General Plan

The Noise Element of the City's General Plan 2025 contains the City's current goals and policies related to environmental noise. **Table 4** presents the Noise Element Guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories in the city, found in **Figure 1** of the Noise Element.

Table 4. Land Use/Noise Compatibility (dBA Ldn)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Unacceptable
Single-family residential	<60	60–75	>75
Multi-family residential, hotels, and motels	<65 ¹	65–75	>75
Outdoor sports and recreation, neighborhood parks and playgrounds	<65	65–80	>80
Schools, libraries, museums, hospitals, personal care, meeting halls, churches	<60	60–75	>75
Office buildings, business commercial, and professional	<70	70–80	>80
Auditoriums, concert halls, amphitheaters	N/A	<70	>70

Sources: City of Walnut Creek. Walnut Creek General Plan 2025, Noise Element. 2026.

Notes: dBA = A-weighted decibel; N/A = not applicable

Normally acceptable: Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally acceptable: Specified land use may be permitted only after detailed analysis of the noise reduction requirements.

Unacceptable: New construction or development should not be undertaken because mitigation to comply with Noise Element policies is unfeasible.

¹ Requires noise mitigation to reduce interior noise levels pursuant to Actions 1.2.3 and 1.2.4, provided below.

Additionally, the Noise Element includes the following standards for new development:

- **Action 1.2.1:** For new single-family residential projects, use a standard of 60 Ldn for exterior noise in private use areas.
- **Action 1.2.2:** For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 65 Ldn in outdoor areas, excluding balconies.
- **Action 1.2.3:** Strive for a maximum interior noise level of 45 Ldn in all new residential units.
- **Action 1.2.4:** For new downtown mixed-use development or for new residential development affected by noise from BART or helicopters, ensure that maximum noise levels do not exceed 50 Ldn in bedrooms and 55 Ldn in other rooms.
- **Action 2.1.1:** Require the evaluation of noise mitigation measures for projects that would cause a substantial increase in noise.

City of Walnut Creek Noise Ordinance

The City's regulations with respect to noise are included in Chapters 4–6, Article 2 of the Municipal Code. This chapter is also referred to as the “Noise Ordinance.” The purpose of the Noise Ordinance is to control and, in some instances, prohibit noise and vibration which may impact the health, safety or welfare of the citizens of Walnut Creek. The Ordinance generally prohibits loud noise, defined as excessive or unreasonable noise, sound, or vibration that endangers the comfort, repose, health, peace, or safety of others within the limits of the city. Specific operation standards are outlined for amplified noise, yelling, and keeping of animals. Section 4-6.203(f) limits construction to the hours of 7:00 a.m. and 6:00 p.m. on weekdays that are not holidays. Similarly, Section 4-6.203(g) limits operation of residential or commercial maintenance equipment, such as landscape equipment, to between the hours of 8:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays.

Existing Conditions

Existing noise-sensitive land uses (NSLUs) and noise sources that affect the city are described below. Mobile noise sources are, and are expected to continue to be, the most pervasive noise source in Walnut Creek, specifically Interstate 680 (I-680). The city is also exposed to noise emanating from sources such as commercial operations, construction activities, and the BART rail line. These existing noise sources and existing NSLUs are described below.

Noise-Sensitive Land Uses

Housing is the primary NSLU in the city, but other NSLUs include schools, in-patient medical facilities, churches, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise.

Existing Measured Noise Levels

Noise levels have been surveyed throughout the city as part of several recent environmental documents. As noted, I-680 is the primary source of vehicle noise in the city. A noise survey was conducted at locations along the entire length of the I-680 corridor through the city in April 2021 as part of the I-680 Northbound Express Lane Completion Project.⁶ Noise measurement locations and 10-minute, or peak hour, measurement results are provided in **Table 5**. As shown in **Table 5**, measured noise levels ranged from 51 dBA to 71 dBA, depending mostly on distance. For example, the lowest recorded noise levels (51 and 53 dBA) were recorded at Park Regency Apartment Complex (3128 Oak Road), approximately 500 feet from the roadway, and Kingston Place Apartments (3055 N. Main Street), approximately 400 feet from the roadway. The highest noise level of 71 dBA was recorded at 1035 Esther Drive, approximately 100 feet from the roadway, and 2101 Oakvale Road, approximately 150 feet from the roadway. Three measurement locations also recorded pass-by of a BART train in addition to vehicle traffic noise. The BART pass-by resulted in noise levels four to seven dBA higher than the noise levels in the same location without a train pass-by. The results of the noise survey indicate noise levels are in the acceptable to normally unacceptable range for NSLU along major transportation corridors, subject to their setback from the roadway.

Table 5. Summary of I-680 Northbound Express Lane Completion Project Noise Survey

Measurement Location	10-Minute dBA Leq	Measurement Location	10-Minute dBA Leq
Kingston Place Apartments (3055 North Main Street)	51	St. Mary School (1158 Bont Lane)	69
Holiday Inn Express Walnut Creek – Pool Area (2730 North Main Street)	54	Alpine Park Apartments (1777 Botelho Drive)	63

⁶ Caltrans and Contra Costa Transportation Authority. 2024. Interstate 680 Northbound Express Lane Completion Project Draft Environmental Impact Report/Environmental Assessment. EA 04-0Q3100/Project ID 0418000070.

Table 5. Summary of I-680 Northbound Express Lane Completion Project Noise Survey

Measurement Location	10-Minute dBA Leq	Measurement Location	10-Minute dBA Leq
2740 Jones Road	59	1271 Bonita Lane	55
2600 Jones Road	62 (BART pass-by) ²	131 Paulson Lane	58
2548 Jones Road	56	1548 Webb Lane	56
	63 (BART pass-by)	1524 Brentwood Court	68
1409 Walden Road	54	Iron Horse Regional Trail (2039 Danville Boulevard)	62
55 Via Los Ninos	64	36 Quail Court	61
	68 (BART pass-by)	The Bridge at Walnut Creek Apartments (1365 Creekside Drive)	58
Motel 6 Walnut Creek – Pool Area (2389 North Main Street)	65	2687 Oak Road	66 ³
1641 Alvarado Avenue	60	68 Kuhl Court	63 ³
2231 Buena Vista Avenue	60	1660 Lilac Drive	64 ³
Kingdom Hall of Jehovah’s Witnesses (2207 Buena Vista Avenue)	59	Rudgear Park & Ride	70 ³

Sources: Caltrans and Contra Costa Transportation Authority. Interstate 680 Northbound Express Lane Completion Project Draft Environmental Impact Report/Environmental Assessment. EA 04-0Q3100/Project ID 0418000070. 2024.

Notes:

¹ Monitoring consisted of two daytime 10-minute measurements at each location, except four 24-measurements, as noted in the table. Ten-minute measurements were taken on the same day, with the second measurement immediately following the first. Results were within one dBA of each other at all locations except where a BART operation was also recorded. Both measurements are provided where a BART pass-by was recorded, otherwise the higher measurement result is provided here. Traffic counts during the measurements ranged from to 1,706 to 2,412 vehicles, 31 to 105 medium-duty trucks, and 42 to 109 heavy-duty trucks.

² A measurement without a BART pass-by was not recorded at this location.

³ Loudest hour measured in a 24-hour period. Peak hour was 12:00 p.m. at 2687 Oak Road, 5:00 a.m. and 6:00 a.m. at 68 Kuhl Court (same average for both hours), 5:00 p.m. at 1660 Lilac Dr., and 4:00 p.m. at Rudgear Park & Ride.

Noise measurements were conducted in areas outside the I-680 corridor as part of preparation of the Walnut Creek Water Treatment Plant Pretreatment Project Draft Environmental Impact Report (EIR) (SCH #2022020573) and Mitchell Townhomes Project Draft EIR (SCH #2024110923). The Walnut Creek Water Treatment Plant is in an existing residential area south of San Luis Road in the northwest area of the city. Noise measurements were conducted in March and April 2023, in the existing residential neighborhood north and east of the site, including at a religious facility. A summary of monitoring results is provided in **Table 6**. The Mitchell Townhomes Project conducted a noise survey in an existing commercial and residential area in the northeast area of the city in October 2024, surrounding the proposed project site on Mitchell Drive. A summary of monitoring results is provided in **Table 7**. These noise surveys show existing ambient community noise levels between 50 and 63 dBA Ldn, and daytime noise levels between 46 and 65 dBA Leq. Noise levels are in the normally acceptable to conditionally acceptable range for single-family residential and institutional noise-sensitive uses, and normally acceptable for multi-family residences, hotels, and motels.

Table 6. Walnut Creek Water Treatment Plant Pretreatment Project Noise Survey

Measurement Location	Average Daytime (7:00 a.m. to 7:00 p.m.) Hourly Leq	Average Evening (7:00 p.m. to 10:00 p.m.) Hourly Leq	Average Nighttime (10:00 p.m. to 7:00 a.m.) Hourly Leq	Weekday Average Ldn
Walnut Creek Water Treatment Plant Property behind 1085 Alfred Avenue	47	42	43	50
Briones to Mt. Diablo Regional Trail, behind 1305/1309 Ramsay Circle	47	43	39	48
San Luis Road and Buena Vista Avenue	63	58	52	63
Walnut Creek WTP Entrance ¹	55	—	—	—
St. Stephen Catholic Church ¹	46	—	—	—
Buena Vista Avenue and San Luis Road ¹	61	—	—	—
Larkey Reservoir ¹	49	—	—	—
1334 Summit Road ¹	54	—	—	—

Sources: East Bay Municipal Utility District. Walnut Creek Water Treatment Plant Pretreatment Project Draft Environmental Impact Report (SCH # 2022020573). Prepared by Woodard and Curran. 2023.

Notes:

¹ Only a daytime measurement was collected at this location.

Table 7. Mitchell Townhomes Project Noise Survey

Location Description	Measures Leq (dBA)
Driveway entrance to 2730 Shadelands Drive parking lot	62.2
Driveway entrance to 2151 Oak Grove Road building parking lot	60.6
Grass lawn adjacent to 2813 Mitchell Drive parking lot driveway entrance	63.8
Driveway entrance to 2795 Mitchell Drive	64.5
Driveway entrance to 2730 Shadelands Drive parking lot	62.2

Sources: City of Walnut Creek. Mitchell Townhomes Project Draft EIR (SCH # 2024110923). Prepared by FirstCarbon Solutions. 2025.

Transportation Noise Sources

Noise from existing aviation, roadway, and rail sources is described below.

Aviation

Buchanan Field Airport is approximately 2.75 miles north of the city boundary. The city is not within the noise contours of the airport.⁷ Noise levels from the airport are below 55 dBA CNEL in Walnut Creek, and the airport is not a major contributor to ambient noise levels. The John Muir Health Medical Center at 1601 Ygnacio Valley Road operates a helipad for medical emergencies. The time and frequency of helicopter operations is dependent on medical need, but helicopter overflights result in intermittent noise exposure to the surrounding area.

Roadways

As shown in **Table 5**, measured noise levels along the I-680 corridor range from 51 dBA to 71 dBA, at distances of 100 feet or more. Other major corridors include Ygnacio Valley Road, Treat Boulevard, Bancroft Road, Civic Drive, Olympic Boulevard, Tice Valley Road, and Oak Grove Road. **Table 8** shows the existing noise levels generated by representative city roadways. Ambient noise levels are calculated using standard noise modeling equations adapted from the Federal Highway Administration noise prediction model. The modeling calculations take into account the posted vehicle speed, average daily traffic volume, and the

⁷ Contra Costa County Airport Land Use Commission. 2000. Contra Costa County Airport Land Use Compatibility Plan. December 13, 2000.

estimated vehicle mix. The noise model assumes that roadways would experience a decrease of approximately three dBA for every doubling of distance from the roadway. Traffic data were provided by Fehr & Peers as part of traffic counts conducted for the Mobility ECR.⁸ Modeling input is provided in **Appendix B: Existing Vehicle Noise Calculations**.

As shown in **Table 8**, existing noise levels on roadways with more than 5,500 average daily traffic (ADT) exceed the normally acceptable noise compatibility standard of 60 dBA CNEL for single-family residences, schools, and other NSLU at 50 feet from the roadway centerline. Roadways with more than 12,000 ADT exceed the normally acceptable noise compatibility standard of 65 dBA CNEL for multi-family residences and tourist accommodations. Roadways with more than 20,000 ADT typically exceed the normally acceptable noise compatibility standard of 70 dBA CNEL for commercial and office uses. Ambient vehicle noise is the main contributor to the city's noise environment.

Railroad

BART operates passenger rail service to and from Walnut Creek. The city is served by the BART Yellow Line, which extends from Antioch to San Francisco International Airport, including a stop at the Walnut Creek Station at 200 Ygnacio Valley Road. Trains arrive and depart the Walnut Creek station approximately every 10 minutes during weekdays, and 20 minutes on weekends. The rail line traverses the city from north to south, roughly along the I-680 corridor, until crossing the I-680 corridor and extending west along State Route 24 at the I-680 and State Route 24 interchange. According to the Plan Bay Area 2050+ Draft EIR prepared by the Metropolitan Transportation Commission and Association of Bay Area Governments (SCH #2025010348), noise levels from rail operations can range from 62 dBA CNEL to 81 dBA CNEL at approximately 50 feet from tracks.⁹ Two locations of the I-680 Northbound Express Lane Completion Project were monitored with and without pass-by of a BART train. The BART pass-by resulted in noise levels 4 to 7 dBA higher than noise levels without train noise, indicating the BART noise is audible above vehicle traffic noise even on major roadways. The BART line contributes ambient noise that may be normally acceptable to multi-family residences in some locations along the track alignment but generally results in noise levels that are conditionally acceptable or unacceptable for NSLU in proximity to the alignment.

⁸ Fehr & Peers. 2026. Mobility Element Existing Conditions Report.

⁹ Association of Bay Area Governments and Metropolitan Transportation Commission. 2015. Plan Bay Area 2050+ Draft Environmental Impact Report (SCH #20S25010348). Prepared by Ascent.

Table 8. Existing Noise Contours

Roadway	Segment	ADT	Speed Limit	Number of Lanes	Noise Level (dBA CNEL) ¹	Contour Distance to Centerline (feet)			
						70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Ygnacio Valley Road	Between Oakland Boulevard and California Boulevard	47,212	30	6	74	92	197	425	916
Ygnacio Valley Road	Between Homestead and Marchbanks/ Tampico	63,251	40	6	78	170	365	787	1,696
Ygnacio Valley Road	East of Oak Grove Road	41,697	55	5	78	170	366	788	1,698
Treat Boulevard	Between Carriage and Bancroft Road	40,702	40	6	75	107	231	499	1,074
Geary Road	West of Main Street	15,362	35	2	67	—	72	156	335

Table 8. Existing Noise Contours

Roadway	Segment	ADT	Speed Limit	Number of Lanes	Noise Level (dBA CNEL) ¹	Contour Distance to Centerline (feet)			
						70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
North Main Street	Between San Luis Road and Geary Road	19,197	35	4	70	—	101	217	467
Bancroft Road	South of Treat Boulevard	27,775	40	4	72	64	139	299	644
Civic Drive	Between Ygnacio Valley Road and Broadway	21,223	30	4	66	—	62	135	290
Mt. Diablo Boulevard	Between Bonanza and California Boulevard	18,440	30	4	68	—	74	158	341
North Main Street	South of Ygnacio Valley Road	16,554	30	4	66	—	54	117	251
Olympic Boulevard	West of I-680 Southbound Ramps	22,051	35	4	69	—	90	193	416

Table 8. Existing Noise Contours

Roadway	Segment	ADT	Speed Limit	Number of Lanes	Noise Level (dBA CNEL) ¹	Contour Distance to Centerline (feet)			
						70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Olympic Boulevard	Between Alpine and California Boulevard	21,930	30	3	67	—	64	137	296
Parkside Drive	Between Broadway and Civic Drive	11,987	30	4	66	—	60	128	276
Rudgear Road	East of Broadway	10,554	35	2	65	—	50	109	234
South Broadway	North of Newell	15,961	30	4	67	—	70	150	324
Tice Valley Road	South of Rolling Hills Drive	20,579	35	4	76	130	280	603	1,299
California Boulevard	Cole Avenue and Civic Drive/Trinity	15,482	35	4	68	—	82	177	381

Table 8. Existing Noise Contours

Roadway	Segment	ADT	Speed Limit	Number of Lanes	Noise Level (dBA CNEL) ¹	Contour Distance to Centerline (feet)			
						70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Oak Grove Road	Between City Limits and Mitchell Drive/ Peachwillow	24,446	40	4	71	57	123	264	569
San Luis Road	West of Buena Vista Avenue	5,452	25	2	59	—	—	46	98
Bancroft Road	North of Treat Boulevard	17,338	40	4	70	47	101	218	470

Sources: Appendix B.

Notes: ADT = Average daily traffic

¹ Noise level at 50 feet from roadway centerline

Land Use Noise Sources

The city is largely developed, including various housing densities, commercial, office, education, medical, and tourist facilities. As indicated by noise monitoring for the Walnut Creek Water Treatment Plant Pretreatment Project Draft EIR and Mitchell Townhomes Project Draft EIR, noise levels away from major roadways remain compatible with sensitive receptors. The potential for existing development to result in localized impacts related to construction and operation is described below.

Construction

Construction occurs intermittently throughout the city as a result of new development, maintenance, and redevelopment. Operation of heavy-duty construction equipment and use of large trucks for hauling generates noise that can expose nearby receptors to elevated noise levels and disrupt communication and routine activities. The magnitude of the impact depends on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Sound levels from typical construction equipment range from 60 to 90 dBA Leq at 50 feet from the source.¹⁰ **Table 9** provides typical construction equipment noise levels reported by the Federal Transit Administration. The City's existing Noise Ordinance, Section 4-6.203(f), limits construction to the hours of 7:00 a.m. and 6:00 p.m. on weekdays that are not holidays to minimize nuisance impacts from construction noise.

Table 9. Construction Equipment Noise Emission Levels (dBA)

Equipment	Typical Noise Level 50 Feet from Source (dBA)	Equipment	Typical Noise Level 50 Feet from Source (dBA)
Air compressor	80	Pile-driver (impact)	101
Backhoe	80		
Ballast equalizer	82	Pile-driver (sonic)	95
Ballast tamper	83	Pneumatic tool	85
Compactor	82	Pump	77

¹⁰ Federal Highway Administration. 2008. Roadway Construction Noise Model, Version 1.1.2008.

Table 9. Construction Equipment Noise Emission Levels (dBA)

Equipment	Typical Noise Level 50 Feet from Source (dBA)	Equipment	Typical Noise Level 50 Feet from Source (dBA)
Concrete mixer	85	Rail saw	90
Concrete pump	82	Rock drill	95
Concrete vibrator	76	Roller	85
Crane, derrick	88	Saw	76
Crane, mobile	83	Scarifier	83
Dozer	85	Scraper	85
Generator	82	Shovel	82
Grader	85	Spike driver	77
Impact wrench	85	Tie cutter	84
Jackhammer	88	Tie handler	80
Loader	80	Tie inserter	85
Paver	85	Truck	84

Sources: Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual*. 2018.

Operation

Noise from typical land development includes mechanical equipment (such as heating, ventilation, and air conditioning systems), truck deliveries and loading, operation of equipment for maintenance (such as trash pickup and landscape equipment), and intermittent nuisances from human activity such as loud music or car alarms.

Exposure to nuisance noise may occur more often in higher density and higher activity areas, particularly where non-residential and residential uses are adjacent to each other. Downtown Walnut Creek is a vibrant activity area with various commercial and entertainment opportunities, including frequent events and festivals, located near the Walnut Creek BART station. Given this, the area is an opportunity for mixed-use infill development with access to transit, as outlined in the North Downtown and West Downtown Specific Plans. The proximity of residential and

higher-activity commercial uses presents an ongoing land use compatibility consideration as the City accommodates mixed-use and infill development.

The City's existing Noise Ordinance, Specific Plans, and Zoning Code seek to minimize conflict between uses, including zoning requirements for the Downtown Mixed-Use District. Noise Ordinance Section 4-6.203(g) limits operation of residential or commercial maintenance equipment, such as landscape equipment, to daytime hours. The Zoning Code and development plans also include specific performance standards to minimize nuisance noise. For example, the application for a Conditional Use Permit for an establishment that includes alcohol beverage sales must include a finding that the establishment will not result in adverse noise. Examples from Specific Plans include the Private Design Development Guideline in the West Downtown Specific Plan to locate trash enclosures away from adjacent buildings to minimize noise, and the North Downtown Specific Plan Design Guideline to screen loading and service areas to address noise impacts.^{11, 12}

Conclusion

Walnut Creek is an active community that experiences noise from the movement of people and goods, mechanical equipment, and nuisance noise from existing development, and intermittent construction noise from new development. The primary noise sources in the city are vehicle traffic and Bay Area Rapid Transit (BART) operations. The City's existing Noise Element establishes noise compatibility guidelines that are consistent with state guidance. Outside of major transportation corridors, the city's ambient noise conditions are generally compatible with new sensitive receptor development, such as residences. Based on the data presented in this report, the existing noise environment is generally compatible with surrounding land uses and does not typically interfere with quality of life. Even in heavily traveled areas, noise levels remain in the range that can generally be attenuated through measures such as building and construction practices to provide interior noise levels compatible with sensitive uses. Together, these existing conditions, noise compatibility guidelines, and the City's framework of General Plan policies, ordinances, and development plans provide context for considering how noise and land use compatibility may be addressed in the General Plan Update.

¹¹ City of Walnut Creek. 2018. West Specific Plan. September 4, 2018.

¹² City of Walnut Creek. 2024. North Downtown Specific Plan. Updated May 7, 2024.

Appendix A: Terms and Definitions

A receptor's response to a given noise may vary depending on the sound level, duration of exposure, character of the noise sources, time of day during which the noise is experienced, and activity affected by the noise. Activities most affected by noise include rest, relaxation, recreation, study, and communication. Therefore, different measures of noise exposure have been developed to quantify the extent of the effects from various noise levels. For example, some measures consider the 24-hour noise environment of a location by using a weighted average that penalizes noise levels during normal relaxation and sleeping hours. Other measures consider an average noise level over a specified period, accounting for both ambient noise and a steady-state noise source occurring during a portion of the averaging period.¹³ Common indices for measuring community noise levels are defined below:

- **L_{max}**, maximum noise level, is the highest instantaneous noise level during a specified time period.
- **L_{min}**, minimum noise level, is the lowest instantaneous noise level during a specified time period.
- **L_x**, a statistical descriptor, is the noise level exceeded X% of a specified time period. For example, L10 represents the noise level that exceeds 10% of the specified time period. Other values such as 50 and 90 are also commonly used.
- **Leq**, equivalent energy level, provides an average acoustical or sound energy content of noise measured during a prescribed period such as 1 minute, 15 minutes, 1 hour, or 8 hours. The sound level may not be constant over the measured time period, but the average dB sound level, given as dBA Leq, contains an equal amount of energy as the fluctuating sound level.
- **L_{dn}**, day-night average noise level, is a 24-hour weighted average with a 10 dBA penalty applied to the nighttime hours of 10:00 p.m. to 7:00 a.m. This penalty attempts to account for the fact that nighttime noise levels are potentially more disturbing than equal daytime noise levels.
- **CNEL**, community noise equivalent level, is a 24-hour average that applies weights to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times (when relaxation and sleep typically occur). A +5 dBA weighting is applied to sound occurring between 7:00 p.m. and 10:00 p.m., and a +10 dBA weighting is applied to sound occurring between 10:00 p.m. and 7:00 a.m. L_{dn} and CNEL are typically within one dBA of each other and, for most intents and purposes, are interchangeable.

¹³ Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

- **SEL**, sound exposure level, represents the acoustical energy during a single noise event, such as an aircraft overflight, compressed into a period of one second and expressed in dB. SEL is useful in comparing the acoustical energy of different events involving different source characteristics. For example, overflights from different types of aircraft result in different responses from receptors. Some aircraft may not be as loud as other aircraft, but the duration of exposure is longer. SEL combines the effects of time and noise level so that events can be compared.

Other terminology used in this report:

- **Noise contours** are lines drawn surrounding a noise source indicating equal levels of noise exposure. In this report, contour lines are used to indicate noise exposure from roadways. The lines show the calculated exposure area for noise level increments. Similar to topographic lines, contour lines show areas with the same level of noise exposure from a given source.
- **Ambient noise** refers to the composite of noise from all audible noise sources at a given location. Noise may include nearby and distant sources, such as nearby equipment operation and a distant major roadway. Ambient noise level is the usual or typical noise level in a specific area.
- **NSLU**, noise-sensitive land use, refers to land uses that may be subject to stress or interference from excessive noise. NSLUs typically include schools, hospitals, rest homes, rehabilitation centers, mental care facilities, residences, churches, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Individual locations are referred to as sensitive receptors.

The dB level of a sound decreases (or attenuates) as the distance from the source of that sound increases. For a single point source such as a piece of mechanical equipment, the sound level normally decreases by approximately six dBA for each doubling of distance from the source. Sound that originates from a linear, or “line,” source, such as vehicular traffic, attenuates by approximately three dBA per doubling of distance. Other contributing factors that affect sound reception include ground absorption, natural topography that provides a barrier, meteorological conditions, or presence of human-made obstacles such as buildings and sound barriers.¹⁴

¹⁴ Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

Appendix B: Existing Vehicle Noise Calculations

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TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: Existing Conditions
Project Name: Walnut Creek Noise Element

Background Information

Model Description:	FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.			"-" = contour is located within the roadway right-of-way. Distance is from the centerline of the roadway segment to the receptor location.
Source of Traffic Volumes:	Fehr & Peers 2026 (ADT, lanes, speed limit), City of Walnut Creek 2025 General Plan Technical Appendix (truck %)			
Community Noise Descriptor:	L _{dn} :	CNEL:	X	
Assumed 24-Hour Traffic Distribution:	Day	Evening	Night	
Total ADT Volumes	77.70%	12.70%	9.60%	
Medium-Duty Trucks	87.43%	5.05%	7.52%	
Heavy-Duty Trucks	89.10%	2.84%	8.06%	

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway					Traffic Volumes					Ref. Energy LeveDist				Ld			Ln			DISTANCE TO CONTOUR (2)														
						Medium Trucks	Heavy Trucks	CNEL at 50 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc Dist	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total	70 CNEL	65 CNEL	60 CNEL	55 CNEL		
Ygnacio Valley Road Between Oakland Blvd. & California	6	10	47,212	30	0.5	2.0%	2.0%	74	92	197	425	916	50	36,684	5,996	4,532	826	841	48	27	71	76	62.5	73.1	80.3	2.1	69.2	63.5	70.7	73.5	66.3	55.9	60.6	67.6	61.3	54.0	61.5	64.8	92	197	425	916
Ygnacio Valley Road Between Homestead & Marchbanks/Tampico	6	20	63,251	40	0.5	1.5%	1.5%	78	170	365	787	1,696	50	49,146	8,033	6,072	830	845	48	27	71	76	67.4	76.3	81.2	3.2	75.2	66.6	71.5	77.2	72.3	59.0	61.4	72.8	67.4	57.2	62.3	68.9	170	365	787	1696
Ygnacio Valley Road East of Oak Grove Road	5	20	41,697	55	0.5	1.0%	1.0%	78	170	366	788	1,698	50	32,399	5,296	4,003	365	372	21	12	31	34	72.7	79.9	83.8	1.9	76.1	63.9	67.9	77.0	73.2	56.3	57.8	73.4	68.3	54.4	58.7	68.9	170	366	788	1698
Treat Boulevard Between Carriage & Bancroft	6	15	40,702	40	0.5	1.0%	1.0%	75	107	231	499	1,074	50	31,625	5,169	3,907	356	363	21	12	31	33	67.4	76.3	81.2	2.6	72.7	62.3	67.2	74.1	69.7	54.7	57.1	70.1	64.9	52.8	58.0	65.9	107	231	499	1074
Geary Road West of Main Street	2	15	15,362	35	0.5	1.5%	1.5%	67	-	72	156	335	50	11,936	1,951	1,475	201	205	12	7	17	19	65.1	74.8	80.0	0.1	64.3	56.5	61.8	66.7	61.4	48.9	51.6	62.0	56.5	47.0	52.5	58.3	34	72	156	335
North Main Street Between San Luis & Geary	4	15	19,197	35	0.5	2.0%	2.0%	70	-	101	217	467	50	14,916	2,438	1,843	336	342	19	11	29	31	65.1	74.8	80.0	0.9	66.0	59.4	64.7	68.9	63.1	51.8	54.6	63.9	58.2	50.0	55.5	60.4	47	101	217	467
Bancroft Road South of Treat Boulevard	4	5	27,775	40	0.5	1.5%	1.5%	72	64	139	299	644	50	21,581	3,527	2,666	364	371	21	12	31	34	67.4	76.3	81.2	0.5	68.9	60.3	65.2	70.9	66.0	52.7	55.1	66.5	61.1	50.8	56.0	62.6	64	139	299	644
Civic Drive Between Ygnacio Valley Road & Broadway	4	0	21,223	30	0.5	0.5%	0.5%	66	-	62	135	290	50	16,490	2,695	2,037	93	95	5	3	8	9	62.5	73.1	80.3	0.3	64.1	52.3	59.5	65.6	61.1	44.7	49.3	61.5	56.2	42.8	50.3	57.4	29	62	135	290
Mount Diablo Boulevard Between Bonanza & California	4	20	18,440	30	0.5	1.0%	1.0%	68	-	74	158	341	50	14,328	2,342	1,770	161	164	9	5	14	15	62.5	73.1	80.3	1.1	64.2	55.4	62.7	66.8	61.2	47.9	52.5	61.9	56.4	46.0	53.4	58.4	34	74	158	341
N. Main Street South of Ygnacio Valley Road	4	0	16,554	30	0.5	1.0%	0.5%	66	-	54	117	251	50	12,863	2,102	1,589	145	74	8	2	12	7	62.5	73.1	80.3	0.3	63.0	54.2	58.4	64.7	60.0	46.6	48.2	60.5	55.1	44.7	49.2	56.4	25	54	117	251
Olympic Boulevard West of I-680 SB Ramps	4	5	22,051	35	0.5	1.0%	1.0%	69	-	90	193	416	50	17,134	2,801	2,117	193	196	11	6	17	18	65.1	74.8	80.0	0.5	66.3	56.6	61.9	68.0	63.3	49.0	51.8	63.8	58.4	47.2	52.7	59.7	42	90	193	416
Olympic Boulevard Between Alpine & California	3	5	21,930	30	0.5	1.0%	0.5%	67	-	64	137	296	50	17,040	2,785	2,105	192	98	11	3	16	9	62.5	73.1	80.3	0.2	64.1	55.2	59.5	65.8	61.0	47.7	49.3	61.5	56.2	45.8	50.2	57.5	30	64	137	296
Parkside Drive Between Broadway & Civic	4	15	11,987	30	0.5	1.5%	1.5%	66	-	60	128	276	50	9,314	1,522	1,151	157	160	9	5	14	14	62.5	73.1	80.3	0.9	62.1	55.1	62.3	65.6	59.1	47.5	52.1	60.1	54.2	45.6	53.1	57.0	28	60	128	276
Rudgear Road East of Broadway	2	0	10,554	35	0.5	1.0%	1.0%	65	-	50	109	234	50	8,200	1,340	1,013	92	94	5	3	8	9	65.1	74.8	80.0	-0.1	62.5	52.9	58.2	64.2	59.6	45.3	48.0	60.0	54.7	43.4	48.9	56.0	23	50	109	234
S. Broadway North of Newell	4	10	15,961	30	0.5	1.5%	1.5%	67	-	70	150	324	50	12,402	2,027	1,532	209	213	12	7	18	19	62.5	73.1	80.3	0.7	63.1	56.1	63.3	66.6	60.1	48.5	53.2	61.2	55.3	46.7	54.1	58.1	32	70	150	324
Tice Valley Road South of Rolling Hills Drive	4	60	20,579	35	0.5	1.0%	1.0%	76	130	280	603	1,299	50	15,990	2,614	1,976	180	183	10	6	15	17	65.1	74.8	80.0	8.2	73.7	64.0	69.3	75.4	70.7	56.5	59.2	71.2	65.9	54.6	60.1	67.1	130	280	603	1299
California Boulevard Cole Ave and Civic/Trinity	4	5	15,482	35	0.5	2.0%	2.0%	68	-	82	177	381	50	12,030	1,966	1,486	271	276	16	9	23	25	65.1	74.8	80.0	0.5	64.7	58.1	63.4	67.6	61.7	50.5	53.2	62.6	56.8	48.7	54.2	59.1	38	82	177	381
Oak Grove Road Between City Limits and Mitchell/Peachwillow	4	10	24,446	40	0.5	1.0%	1.0%	71	57	123	264	569	50	18,994	3,105	2,347	214	218	12	7	18	20	67.4	76.3	81.2	0.7	68.6	58.2	63.1	70.0	65.6	50.6	52.9	66.0	60.7	48.7	53.9	61.8	57	123	264	569
San Luis Road West of Buena Vista Ave	2	0	5,452	25	0.5	1.0%	1.0%	59	-	-	46	98	50	4,236	692	523	48	49	3	2	4	4	59.4	71.1	78.7	-0.1	55.5	47.7	55.5	58.8	52.5	40.1	45.3	53.4	47.6	38.3	46.2	50.3	10	21	46	98
Bancroft Road North of Treat Blvd	4	5	17,338	40	0.5	1.5%	1.5%	70	47	101	218	470	50	13,472	2,202	1,664	227	232	13	7	20	21	67.4	76.3	81.2	0.5	66.9	58.3	63.2	68.8	63.9	50.7	53.0	64.4	59.0	48.8	53.9	60.5	47	101	218	470