CHAPTER 6
NOISE

VISION 2025 GENERAL PLAN DOWNEY, CALIFORNIA

ADOPTED 1-25-2005

Downey Vision 2025
Chapter 6. Noise Chapter

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INTRODUCTION

Noise can be defined as unwanted sound and is known to have several adverse effects on people. The most critical impact of noise exposure is hearing loss. Other effects are speech interference, sleep interference and annoyance.

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NOISE EXPOSURE

Issue 6.1. Persons who live, work, or visit Downey may be exposed to excessive noise.

Sound may be described in terms of the loudness (amplitude) and the frequency (pitch). The standard unit of measurement of loudness is the decibels (dB). Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dB(A)) was developed to measure sound in a manner similar to the way the human hearing responds. Studies have documented the adverse effect of noise on human health. Based on these studies, the following criteria has been developed for establishing noise limits that can avoid adverse health effects.

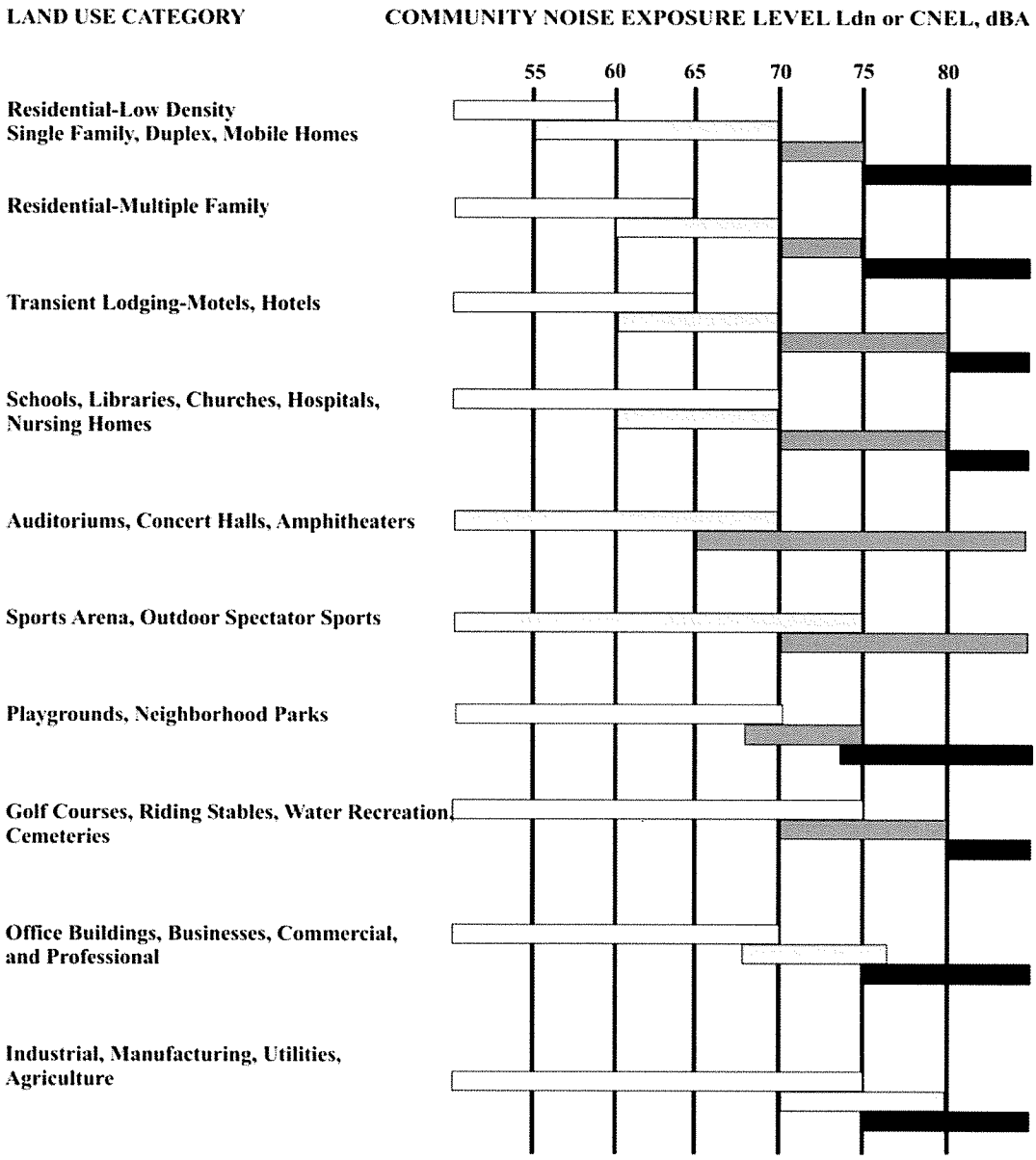
FIGURE 6-1.1
MAXIMUM LIMITS TO MAXIMIZE ADVERSE NOISE IMPACTS

Objective	Maximum db(A) Range
Prevent Hearing Loss	75-80
Prevent Physiological Effects (Other than Hearing Loss)	65-75
Prevent Speech Interference	50-60
Address People's Subjective Preference for Noise Control	45-50
Prevent Sleep Interruption	35-45

Source: California General Plan Guidelines, 2000

The db(A) only reports noise from a single source or combination of sources at a point in time. A number of noise scales have been developed to quantify noise exposure over a period of time. One example is the Community Noise Equivalent Level. The State of California uses the Community Noise Equivalent Level (CNEL) for noise standards and guidelines. A CNEL measurement is an average of all the sounds that occur during a 24-hour day. A 5-decibel penalty is added to sound levels occurring between 7 p.m. and 10 p.m. and a 10-decibel penalty is added to sound levels occurring between 10 p.m. and 7 a.m. The 5 and 10 decibel penalties are applied to account for increased noise sensitively during the evening and nighttime

FIGURE 6-1.2
NOISE/ LAND USE COMPATIBILITY MATRIX



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

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy..

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable:
New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

Source: California Office of Noise Control

hours. Since CNEL represents noise exposure averaged on a daily basis, people do not hear a CNEL value but do hear individual noise events.

The major concern with noise is its effect on noise-sensitive uses, whose activities are most likely to be interrupted or impaired by noise generation. Typical examples of noise sensitive land uses include residences, schools, parks, hospitals, daycare centers, and public assembly areas. The acceptable noise levels for sensitive uses has been identified as a maximum of 60 db(A) outside and a maximum of 45 db(A) inside. When sensitive land uses are located in areas affected by noise from other land uses or traffic noise (as shown by the map on Figure 6-2), acoustical reports may identify insulation and other construction methods that can reduce noise impacts to acceptable levels.

FIGURE 6-1.3
ACCEPTABLE NOISE LEVELS FOR LAND USES

Land Use	Interior	Exterior
Residential	45 db (A) and below	60 db (A) and below
Schools, parks, and other non-residential noise-sensitive land uses	45 db (A) and below	60 db (A) and below
Commercial	65 db (A) and below	-
Industrial	70 db (A) and below	-

NOTES:
All noise levels are CNEL, Community Noise Equivalent Level.
Interior noise levels based on windows closed.
Exterior areas for residential limited to rear yards of single-family uses, and patios/balconies and common recreational areas of multiple-family uses. Exterior areas for schools limited to playgrounds areas, picnic areas, and other areas of frequent human use.

FIGURE 6-1.4
NOISE CONTOUR MAP

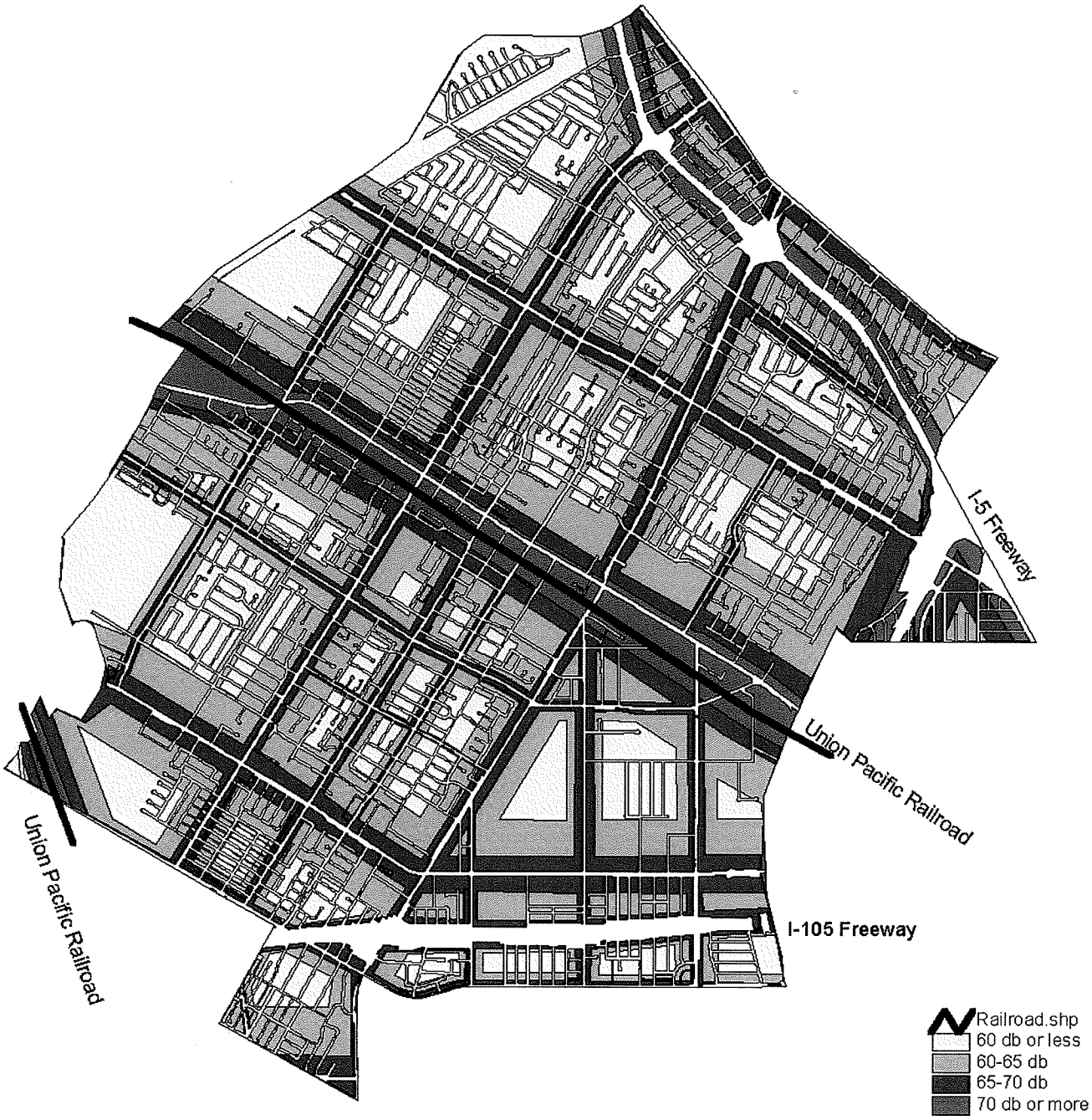


FIGURE 6-1.5 – PAGE 1 OF 6
DISTANCES TO STREETS AT CERTAIN NOISE LEVELS

Roadway	Segment	70 CNEL	65 CNEL	60 CNEL
Telegraph Road	West City Limits - Paramount	90	285	910
	Paramount - Lakewood	105	335	1,050
	Lakewood – I-605	100	325	1,025
Gallatin Road	Paramount – Downey	<50	55	175
	Downey - Brookshire	<50	70	220
Florence Avenue	West City Limits – Old River School	120	380	1,205
	Old River School - Paramount	135	420	1,335
	Paramount – Downey	115	360	1,145
	Downey – Brookshire	100	310	980
	Brookshire – Lakewood	105	340	1,070
	Lakewood – I-605	120	375	1,185
Firestone Boulevard	West City Limits – Old River School	90	280	880
	Old River School - Paramount	75	235	745
	Paramount – Downey	75	240	755
	Downey – Brookshire	80	245	780
	Brookshire – Lakewood	95	310	975
	Lakewood – Woodruff (South)	100	315	995
	Woodruff (South) – Stewart & Gray	100	310	985
	Stewart & Gray – East City Limits	125	400	1,270
Stewart & Gray Road	West City Limits – Old River School	<50	90	285
	Old River School - Paramount	50	160	505
	Paramount – Downey	50	165	525
	Downey – Brookshire	<50	115	370
	Brookshire – Lakewood	<50	145	460
	Lakewood – Bellflower	60	190	595
	Bellflower - Woodruff	65	205	655
	Woodruff – East City Limits	50	165	525
Imperial Highway	West City Limits – Old River School	110	340	1,080
	Old River School - Paramount	105	335	1,060
	Paramount – Downey	105	335	1,065
	Downey – Brookshire	95	310	975
	Brookshire – Lakewood	105	340	1,070
	Lakewood – Clark	155	485	1,530
	Clark - Bellflower	115	355	1,130
	Bellflower - Woodruff	115	360	1,145
	Woodruff – East City Limits	105	330	1,040
I-5 Freeway		-	650	1,400
I-105 Freeway		-	570	1,230
I-605 Freeway		-	665	1,430

Note: measurements are to the centerline of the roadway
Note: freeway measurements adjusted for intervening structures

FIGURE 6-1.5 – PAGE 2 OF 2
DISTANCES TO STREETS AT CERTAIN NOISE LEVELS

Roadway	Segment	70 CNEL	65 CNEL	60 CNEL
Gardendale Street	West City Limits – Paramount	<50	65	200
	Paramount – Downey	<50	60	195
	Downey – Brookshire	<50	70	230
	Brookshire – Lakewood	<50	90	280
	Lakewood – Clark	<50	65	205
	Clark – Bellflower	<50	70	220
	Bellflower - Woodruff	<50	70	215
	Woodruff – East City Limits	<50	<50	80
Old River School Road	Florence – Firestone	50	155	490
	Firestone – Stewart & Gray	<50	140	445
	Stewart & Gray – Imperial	<50	95	300
Paramount Boulevard	Telegraph – I -5	115	355	1,125
	I-5 – Gallatin	110	350	1,105
	Gallatin – Florence	115	360	1,140
	Florence – Firestone	105	360	1,130
	Firestone – Stewart & Gray	115	285	900
	Stewart & Gray – Imperial	90	290	915
	Imperial – Gardendale	90	295	930
Downey Avenue	Gallatin – Florence	95	55	180
	Florence – Firestone	<50	60	190
	Firestone – Stewart & Gray	<50	85	270
	Stewart & Gray – Imperial	<50	100	315
	Imperial – Gardendale	<50	80	245
Brookshire Avenue	Gallatin – Florence	<50	55	170
	Florence – Firestone	<50	100	315
	Firestone – Stewart & Gray	60	190	595
	Stewart & Gray – Imperial	<50	105	330
	Imperial – Gardendale	<50	60	190
Lakewood Boulevard	Telegraph – I-5	95	300	945
	I-5 – Gallatin	100	320	1,015
	Gallatin – Florence	90	290	915
	Florence – Firestone	120	385	1,210
	Firestone – Stewart & Gray	105	330	1,050
	Stewart & Gray – Imperial	115	365	1,160
	Imperial – Gardendale	190	600	1,900
Clark Avenue	Lakewood – Imperial	<50	90	290
	Imperial – Gardendale	<50	135	425
Bellflower Boulevard	Lakewood – Stewart & Gray	60	190	605
	Stewart & Gray – Imperial	80	250	790
	Imperial – I-105	100	310	985
	I-105 – Foster	100	315	1,000
Woodruff Avenue	Firestone – Stewart & Gray	85	260	825
	Stewart & Gray – Imperial	75	230	725
	Imperial – Gardendale	75	230	730

Note: measurements are to the centerline of the roadway

Goals, Policies, and Programs

Goal 6.1. Protect persons from exposure to excessive noise.

Policy 6.1.1. Minimize noise impacts onto noise-sensitive uses.

- Program 6.1.1.1. Enforce noise standards
- Program 6.1.1.2. Ensure that new developments within areas with exterior noise at unacceptable levels are designed to maintain interior noise levels at acceptable levels.
- Program 6.1.1.3. Continue to enforce provisions prohibiting construction activities during noise-sensitive hours.
- Program 6.1.1.4. Encourage the use of different construction methods, including insulation, for new developments to reduce noise impacts generated by other land uses and traffic.
- Program 6.1.1.5. Discourage the establishment of noise-sensitive land uses within areas where noise cannot be mitigated.
- Program 6.1.1.6. Consider the establishment of a program to retrofit to acceptable noise levels, noise-sensitive land uses within areas with exterior noise are at unacceptable levels.

Policy 6.1.2. Update the City's noise standards

- Program 6.1.2.1. Review periodically the Noise Chapter of the Municipal Code and establish new noise performance standards as necessary.
- Program 6.1.2.2. Evaluate amending the code to reduce the maximum permissible noise levels above ambient levels.

NOISE GENERATION -MOBILE

Issue 6.2. Noise is generated by various modes of transportation.

Noise sources may either be a "line source" (such as a heavily traveled highway) or a "point source" (such as stationary engine or compressor). In Downey, noise is primarily generated by a line source, vehicular traffic along roadways. However, trains and aircraft also generate a substantial amount of noise.

Vehicular traffic generates noise on all roadways from freeways and major roads to local residential streets. Noise is generated by vehicular traffic when vehicles travel at high speeds, motorists use their horns or play stereos or radios at loud volumes, vehicle engines gear up, or brakes skid. Noise is also affected by the type of road pavement and the type of vehicle, with large trucks and motorcycles generating higher than typical noise levels.

Train-related noise in Downey is generated by not only by trains traveling at high speeds, but by switching movements, use of horns, and road crossing signals. Downey has three train lines traversing the city: The Union Pacific Railroad line parallel to Firestone Boulevard, the Union Pacific Railroad line approximately along Garfield Avenue, and the MTA Green Line Light Rail along the I-105 Freeway. Local governments have little direct control over rail traffic since federal, state, and regional agencies preempt local control of railroads. The City can, however, make those agencies aware of its concern over the generation of excessive noise.

The amount of noise generated by aircraft traffic is significant since Downey lies under the fight path to Los Angeles International Airport (LAX). In a normal day, more than 75 flights an hour go over Downey en route to LAX. In addition, unplanned flights, such as helicopters, contributes to noise. Local governments have little direct control over air traffic since federal, state, and regional agencies preempt local control of noise emissions from aircraft. The City can, however, make those agencies aware of its concern over the generation of excessive noise.

Goals, Policies, and Programs

Goal 6.2. Protect persons from exposure to excessive noise generated by various modes of transportation.

Policy 6.2.1. Reduce noise generated by vehicular traffic.

- Program 6.2.1.1. Coordinate with and encourage Caltrans to install and maintain freeway sound walls especially providing sound walls for the south side of the I-5 Freeway east of Lakewood Boulevard adjacent to Dennis the Menace Park.

- Program 6.2.1.2. Enforce regulations to require truck traffic to use designated truck routes in the City.

- Program 6.1.1.3. Continue to work with the Metropolitan Transportation Authority and other transit agencies towards minimizing noise impacts by discouraging the use of local residential streets as transit routes.

- Program 6.2.1.4. Enforce the State motor vehicle noise standards for cars, trucks and motorcycles through coordination with the Downey Police Department and the California Highway Patrol.

- Program 6.2.1.5. Review City operations to ensure that noise from its own actions, such as refuse collection, street cleaning, and transit, are reduced to the lowest possible level and lessen the contribution to noise pollution.

- Program 6.2.1.6. Enforce speed limits on local residential streets to discourage the use of local residential streets by business and commuter through traffic.

- Program 6.2.1.7. Promote the use of alternative fuel vehicles that result in reduced noise generation than standard gasoline vehicles.

Policy 6.2.2. Support measures to reduce noise generated by railroad traffic.

- Program 6.2.2.1. Coordinate with the railroad companies in developing and implementing noise reduction methods in their operations.

- Program 6.2.2.2. Encourage railroad companies to develop and implement programs to minimize train pass-by and switching movement noise, and the use of horns, especially near noise sensitive areas and during the night.

- Program 6.2.2.3. Coordinate with the railroad companies to maintain rubberized railroad crossings at intersections.

- Program 6.2.2.4. Promote the eventual grade separation of the Union Pacific Railroad Line, parallel to Firestone Boulevard.

Policy 6.2.3. Promote reducing noise generated by air traffic.

- Program 6.2.3.1. Co-ordinate with the Federal Aviation Administration, the Division of Aeronautics and the Los Angeles County Airport Land Use Commission to develop guidelines for addressing airplane and helicopter noise, including unplanned flights.

- Program 6.2.3.2. Recommend that the Federal Aviation Administration (FAA) divert air traffic from the Downey flight path.

- Program 6.2.3.3. Monitor plans for expansion of the LAX Airport as they relate to reducing air traffic over Downey.

- Program 6.2.3.4. Promote the creation of new regional airports to mitigate increase in flights over Downey en route to LAX.

- Program 6.2.3.5. Develop an ordinance relating to the siting of helicopter landing pads in the city.

NOISE GENERATION - STATIONARY

Issue 6.3. Noise is generated by certain land uses.

Noise generated form stationary sources include machinery, air conditioning systems, compressors, amplified sounds, and loud voices. The most problematic of stationary sources are those related to industrial and commercial activities, especially when in proximity to residential and other noise sensitive uses. Such activities should be discouraged form locating in proximity to noise sensitive uses whenever possible.

The high demand for property in Downey has resulted in increased construction, which often generated more noise in residential neighborhoods and other parts of the city. Construction is restricted to certain hours of the day to provide relief for surrounding properties. Residential and other noise-sensitive land uses also may generate noise through air conditioning systems, amplified sounds (stereos), pets, car alarms, landscape maintenance equipment, and outdoor children play. Excessive noise is regulated by the Noise Chapter of the Downey Municipal Code.

Goals, Policies, and Programs

Goal 6.3. Minimize noise impacts on noise-sensitive land uses.

Policy 6.3.1. Minimize the amount of noise generated by land uses.

- Program 6.3.1.1. Discourage proposed land uses from generating noise at acceptable levels.
- Program 6.3.1.2. Ensure that existing land uses that are generating noise beyond the acceptable levels reduce noise levels to acceptable levels.
- Program 6.3.1.3. Concentrate land uses that generate high amount of traffic at locations where local residential streets will not be used as through traffic routes, thus creating more traffic-related noise.

- Program 6.3.1.4. Consider noise impacts generated by schools, churches, and other similar noise-sensitive uses.

- Program 6.3.1.5. Discourage loading doors, windows, and other openings on buildings from facing residential and other noise-sensitive land uses.

- Program 6.3.1.6. Discourage the placement of air conditioning equipment, electric generators, or other noise-generating equipment in close proximity to adjacent properties.

- Program 6.3.1.7. Encourage that activities are maintained indoors to reduce noise impacts onto adjacent properties.

- Program 6.3.1.8. Amend the code to expanding the list of land uses prohibited from locating adjacent to residential zones and those that require a conditional use permit to be established adjacent to residential zones based on the potential of increasing ambient noise levels.

- Program 6.3.1.9. Concentrate construction activities producing the most noise during midday hours to minimize impacts onto nearby residents.

- Program 6.3.1.10. Encourage the use of noise-suppression equipment.