

NOISE ELEMENT



City of Lomita
General Plan Update

INTRODUCTION TO THE NOISE ELEMENT

The City of Lomita Noise Element outlines those factors affecting the noise environment in the City. Every day, people are subjected to noise associated with common day-to-day activities. The effects of noise generally depends on its loudness, duration, and the time of day. Intermittent and constant high levels of noise may lead to a variety of problems including physical stress, discomfort, and hearing damage. For this reason, decisions regarding land use and development need to consider noise in the environment.

This Noise Element describes the existing and future noise environment in Lomita. Noise control programs and measures designed to reduce ambient noise levels are identified along with relevant standards related to building design and land use compatibility.

The Noise Element identifies existing and projected traffic noise levels along major roadways in the City. Noise contours are used to illustrate noise levels in areas adjacent to the major roadways. In this way the Noise Element will serve as a guide for development and be effective in minimizing the potential for noise exposure. The Noise Element also identifies areas of the City which are not likely to be suitable locations for noise-sensitive land uses.

Relationship to the General Plan

The Lomita Noise Element characterizes the noise environment in the City and provides guidelines to limit community exposure to excessive noise levels. The Element follows the guidelines established by the Office of Noise Control of the State Department of Health Services and other requirements governing the scope and content of noise elements. California Government section 65302(f) states:

"A noise element shall identify and appraise noise problems in the community. The noise

element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels..."

The Lomita General Plan Noise Element consists of the following sections:

- ☐ The *Introduction to the Noise Element* provides an overview of the Element's purpose and scope.
- ☐ The *Noise Element Policies* section contains a listing of individual policies related to noise control.
- ☐ The *Noise Mitigation Plan* indicates those noise control programs and regulations which are effective in controlling noise exposure.
- ☐ The *Background for Planning* section identifies major noise sources in the City as well as those land uses which are more sensitive to noise. The section also characterizes the ambient noise environment through noise surveys and estimates of traffic noise.

NOISE ELEMENT POLICIES

The Noise Element seeks to accomplish the following goals through the implementation of the policies and noise control programs, regulations, and standards contained herein:

- ☐ To promote development and land use patterns which will be compatible in terms of land use and noise exposure;
- ☐ To consider the health effects of long-term exposure to excessive noise levels in the planning and review of future development or activities that typically generate high noise levels;
- ☐ To remain vigilant regarding those developments and activities located beyond

the City's boundaries which may affect the noise environment in Lomita; and

- ☐ To continue to implement those noise control standards and regulations which will be effective in reducing "noise pollution."

This Noise Element contains the following policies to assist in controlling noise generation and exposure in the City:

Noise Policy 1

Lomita, through implementation of the General Plan, will seek to locate noise sensitive land uses in areas subject to noise levels consistent with City established noise standards.

Noise Policy 2

Lomita will adhere to planning guidelines which include noise control for the interior space of new residential, commercial and industrial developments in areas of the City subject to high ambient noise levels. Noise levels for all residential units should be attenuated to a maximum interior noise level of 45 dB.

Noise Policy 3

In planning future development, the City will adhere to planning guidelines and regulations concerning noise control and mitigation of outdoor noise in residential developments.

Noise Policy 4

Noise control requirements will be considered in all new City equipment purchases.

Noise Policy 5

Lomita will continue to work with other agencies to enforce the state and federal occupational health and safety regulations concerning exposure to noise.

Noise Policy 6

Lomita will seek to reduce or eliminate unnecessary noise near noise sensitive areas, such as parks, residential areas, hospitals, libraries, convalescent homes, etc.

Noise Policy 7

Lomita will continue to monitor noise throughout Lomita and enforce the standards and regulations of the City's Noise Control Ordinance.

Noise Policy 8

Lomita will continue to review its policies and regulations regarding noise control and abatement.

Noise Policy 9

Lomita will continue to encourage the enforcement of noise control regulations such as the State Vehicle Code Noise Standards for automobiles, trucks, and motorcycles operating within the City, as well as any contractual agreements pertaining to noise control.

Noise Policy 10

Lomita will continue to support implementation and enforcement of noise control procedures for the Torrance Airport, including supporting those actions which minimize noise exposure associated with aircraft flyovers within the City.

Noise Policy 11

Lomita will work to ensure that noise attenuation standards set forth in the Airport Environs Land Use Plan for residential, commercial, and industrial development, within the planning boundaries for the Torrance Airport are adhered to.

Noise Policy 12

Lomita will work with surrounding cities to control noise created by current and/or future development along the City's boundaries.

NOISE MITIGATION PLAN

Short-term strategies for noise reduction in Lomita consist mostly of the enforcement of noise control guidelines and design measures to protect noise-sensitive areas from traffic noise. Long-term strategies for noise reduction will be contingent upon future development and land use planning, especially in those areas along major roadway and in areas which generally experience higher ambient noise levels.

Specific standards and programs designed to successfully implement the policies cited previously are described in this section of the Noise Element.

Noise Control Standards and Regulations

The federal government preempts local control of noise from aircraft operations, railroads, freeways, occupational noise, and federally-funded projects. The State controls vehicular noise at the time of manufacture and during operation on public roads, as well as noise from in the work place, classrooms, libraries, multi-family projects, motels and hotels. Agencies responsible for noise control include the Department of Housing and Urban Development, Department of Labor, the Environmental Protection Agency, the Federal Highway Administration, the State Department of Health, State Department of Transportation, and the State Department of Motor Vehicles.

Land Use Compatibility Guidelines

Lomita, through this Noise Element, will adopt guidelines which consider noise as an important factor in the planning of future residential development. Portions of the City are currently affected by high levels of traffic noise especially in those areas in close proximity to Pacific Coast Highway, Crenshaw Boulevard, and Lomita Boulevard. An acoustical analysis will be required for all new residential and condominium conversion projects within the 65 dB CNEL contour of major roadways. This analysis will indicate the existing and projected noise levels affecting potential development sites and the method(s) by which the noise is to be controlled or reduced to no more than 65 dB within the exterior living space, and no more than 45 dB within the interior living space of the homes.

The location and orientation of the residential buildings may be configured to minimize or eliminate a site's exposure to traffic noise. Other effective noise reduction measures include the use of berms, sound walls, and generous setbacks. Interior noise levels may be reduced to 45 dB or less by installing sound rated windows, insulating exterior walls and roofing systems, and by locating (or eliminating) vents, mail slots, etc., to minimize sound propagation into the home.

The State's Office of Noise Control has prepared "Guidelines for the Preparation and Content of Noise Elements of the General Plans." These

guidelines also address land use compatibility of noise sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or Ldn.

Residential uses are normally unacceptable in areas exceeding 70 dB CNEL and conditionally acceptable between 55 and 70 dB CNEL for low density single family, duplex, mobile homes, and between 60 and 70 dB CNEL for multi-family units. Schools, libraries, hospitals, and nursing homes are treated as noise sensitive land use requiring acoustical studies within areas exceeding 60 dB CNEL.

Commercial and professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL and are conditionally acceptable within 67 to 78 dB CNEL (for commercial/professional offices) and 70 to 80 dB CNEL (for industrial land uses). The City, through This General Plan, will consider those and use compatibility guidelines in the review of future development. Exhibit 7-1 illustrates noise compatibility standards for various land uses.

Lomita Noise Ordinance

The City of Lomita has developed standards for noise in its Noise Ordinance. Ordinance No. 132 (the City's Noise Ordinance) states that it is unlawful for any person to produce or cause noise which may disturb the peace, quiet and comforting of neighboring residents. Noise standards in the Ordinance are provided in Table 7-1.

Noise levels above 5 dB of these standards are considered violations of these standards. Construction noise in or near residential areas is also limited to the hours of 7:00 a.m. to 7:00 p.m. on weekdays, with noise levels greater than 35 dB not to be exceeded 25 percent of the time.

The City's Zoning Ordinance also requires that auto repair activities be conducted within an enclosed building. Other noise generating land uses also require a conditional use permit which incorporates noise mitigation measures which will be effective in reducing noise levels.

Table 7-1
Lomita Noise Control Ordinance

Land Use	Time	Noise Level	Correction
Residential	Day	65	
	Night	55	
Commercial and Industrial	Day	80	
	Night	70	
Type of Noise			Correction
Repetitive Impulsive Noise			-5
Steady whine, screech or hum			-5
Occurring from 5-15 minutes/hour			+5
Occurring from 1-5 minutes/hour			+10
Occurring less than 1 minute/hour			+20
Quieter zone standard shall be used for abutting zones. Source: Lomita Noise Regulations, 1972.			

Sound Transmission Control Standards

The California Administration Code, Title 24, Building Standards, Chapter 2.35 outline noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings. This section of the Government Code requires an interior noise level of 45 dB CNEL or less for residential projects. For residential buildings or structures within the 60 dB CNEL of an airport, or vehicular or industrial noise source, an acoustical analysis must be made to show compliance with the standards.

Occupational Health and Safety Act (OSHA)

In 1969 and 1970, the Department of Labor established occupational noise regulations through the Walsh Healey Public Contracts Act and set standards for noise exposure for all businesses engaged in interstate commerce through the Occupational Safety and Health Act (OSHA). OSHA standards are summarized in Table 7-2.

Table 7-2
Workplace (OSHA) Noise Level Standards

Duration-Hour Per Day	Sound Level, dBA
8	90
6	92
4	95
3	97
2	100
1	105

Source: Department of Labor Occupational Noise Exposure Standards, Code of Federal Regulations, Title 29, Chapter XVII Part 1910, Subpart G, 36 FR 10466, May 29, 1971, as amended and corrected through June 19, 1983.

California Occupational Noise Control Standards

The California Code of Regulation, Title 8, Industrial Relations, Chapter 4, as revised and effective September 28, 1984, outlines permissible noise exposure at a work place, as shown in Table 7-3.

Table 7-3
State Occupational Noise Control Standards

Sound Level dB(A)	Permitted Hours of Exposure
90	8 hours/day
95	4 hours/day
100	2 hours/day
105	1 hour/day
110	0.5 hour/day

Source: California Code of Regulation, Title 8, Industrial Relations, Chapter 4, as revised and effective September 28, 1984.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL-LOW DENSITY SINGLE FAMILY, DUPLEX MOBILE HOMES						
RESIDENTIAL- MULTI FAMILY						
TRANSIENT LODGING- MOTELS, HOTELS						
SCHOOLS, LIBRARIES CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS, COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING, UTILITIES, AGRICULTURE						

LEGEND



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.



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.

CONSIDERATIONS IN DETERMINATION OF NOISE-COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL, or L_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL, or L_{dn}.

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic and occurs less frequently. Therefore, different sources yielding the same community noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the siting of airports or the Act, one of which is to encourage land use compatible with the 65dB CNEL criterion wherever feasible and in order to facilitate the siting of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65dB should be discouraged and considered located within normally unacceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a shown noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL, or L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

EXHIBIT 7-1 NOISE AND LAND USE COMPATIBILITY

Source: Blodgett/Bayliss Associates

Federal Highway Works Administration (FHWA)

The FHWA has established design standards for different land uses. These standards apply to the planning and design of federally-funded highway projects, and are expressed in terms of both Equivalent Noise Level (Leq) and L₁₀ (see Table 7-4).

Table 7-4
FHWA Noise Abatement Criteria

Land Use	Leq, dBA	L ₁₀ , dBA
Tracts of land in which serenity and quiet are of extraordinary significance i.e., parks and open spaces	57 (Exterior)	60 (Exterior)
Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals	67 (Exterior)	70 (Exterior)
Developed lands, properties or activities not included above	72 (Exterior)	75 (Exterior)
Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.	52 (Interior)	55 (Interior)

Source: Department of Transportation, Federal Highway Administration Highway Noise Control Standards and Procedures, Title 23, Code of Federal Regulations, Chapter 1, Subchapter J, Part 772. 38. FR 15953, June 19, 1973, as amended through May 29, 1979.

Noise Control Act Standards

The Housing and Urban Development Agency (HUD) has established standards for HUD subsidized housing. These standards are identified in Table 7-5.

Table 7-5
HUD Noise Level Standards

Land Use Suitability	Ldn (CNEL)	Special Approvals and Requirements
Acceptable	<65 dB	None
Normally Unacceptable	65 dB - 75 dB	Special environment clearance & 5 dB add'l attenuation for building within 65 - 70 dB Ldn and 10 dB add'l attenuation for building w/in 70 dB - 75 dB Ldn
Unacceptable	75 dB +	Submission of environmental impact statement.

Source: HUD Environmental Criteria and Standards, Title 24, Code of Federal Regulations, Part 51, at 44 FR 40860, July 12, 1979; amended by 49 FR 880.

California Motor Vehicle Code

The State of California has adopted noise standards for areas not regulated by the federal government. State standards regulate noise levels of motor vehicles and motor boats, establish noise impact boundaries around airports, regulate freeway noise affecting classrooms, sound transmission control, occupational noise control, and identify noise insulation standards.

The California Motor Vehicle Code sets operational noise limits according to the type of vehicle and date of manufacture. Table 7-6 describes noise standards for vehicle operation at various speeds.

**Table 7-6
State Motor Vehicle Noise Standards**

Operation of Vehicle	35 mph or less	36 to 45 mph ²	Over 45 mph ²
A motor vehicle with a manufacturer's gross vehicle weight rating of 6,000 lbs + & any combination of vehicles towed by such a vehicle.	82 dBA	--	--
A motor vehicle with a manufacturer's gross vehicle weight rating of 10,000 lbs + & any combination of vehicles towed by such a vehicle.	--	86 dBA	90 dBA
A motorcycle other than a motor driven cycle.	77 dBA	82 dBA	86 dBA
Any other motor vehicle and any combination of vehicle towed by such a vehicle.	74 dBA	76 dBA	82 dBA

¹ On streets with a grade not exceeding $\pm 1\%$

² On any street

Source: Excerpts from the California Motor Vehicle Code, 1988.

Federal Airport Noise Standards

Noise standards in Title 21, Public Works, Chapter 25, Division of Aeronautics, of the same code require compatible land uses within a criterion CNEL contour for airports. Compatible and incompatible land uses have been identified for areas within an airport's 65 dB CNEL. Occupational Noise Control Standards are also found in Title 8, Industrial Relations, Chapter 4 of the state Administrative Code. These standards indicate permissible noise level exposure at the work place in terms of permitted hours per workday.

Incompatible land uses within the 65 dB CNEL include: single-family dwellings, multiple-family dwellings, trailer parks, schools of standard construction, and hospitals. Compatible land uses within the 65 dB CNEL include: agricultural, airport uses, industrial uses, commercial uses, open space, and high rise apartments. High-rise apartments must be provided adequate protection against exterior noise has been included in the

design and construction, along with a central air conditioning system. Adequate protection means the noise reduction (exterior to interior) shall be sufficient to assure that interior community noise equivalent level in all habitable rooms does not exceed 45 dB during aircraft operations.

Noise Control Programs

There are a number of programs directly related to noise control which will continue to be implemented or will be created as part of the General Plan's implementation. These programs are described below.

Acoustical Analysis

The City will require that applications for new single-family and multiple-family residential units on sites located within a CNEL contour of 65 dBA or greater (as indicated in the Noise Element) include an acoustical analysis. This analysis will determine the nature and extent of measures that will be required to reduce interior ambient noise levels to 45 CNEL. These noise control measures must reduce noise levels within the interior living space of the units to a CNEL of 45 dBA. These requirements are consistent with Federal guidelines established by the Department of Housing and Urban Development (HUD) and the State's guidelines for land use and noise exposure. The initial step of the program's implementation will involve the preparation of a map indicating areas of concern. Noise contour mapping was completed as part of the preparation of this element. City staff will determine whether a noise analysis will be required for future development by referring to this map. In the event a noise analysis is needed, the nature and extent of any requisite mitigation will be based on the results of the noise study.

Design Review

The City shall continue to implement its current design review procedures. The purpose of the design review process is to ensure that building design, architecture, and site layouts are compatible with surrounding development. Through the design review process, noise compatibility and potential design solutions that will be effective in reducing potential noise exposure will be included in those issues considered during the design review process.

Environmental Review

The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). Environmental review shall be provided for major projects and those that will have a potential to adversely impact the environment. Issue areas that will be addressed in the environmental analysis includes noise exposure, noise generation, and mitigation measures that will be effective in reducing or eliminating potential noise impacts. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures.

Implications of the Land Use Plan on the Noise Environment

Based on the projected traffic volumes on City streets, the future noise environment in the City was estimated through the use of the Federal Highway Administration's Noise Prediction Model. Table 7-7 indicates the distance of the 70, 65, and 60 CNEL contours from the roadway centerline and the noise level at 50 feet from the centerline. Noise contours are shown in Exhibit 7-2. Residential land uses should be located, as much as possible, within areas that are compatible with the City's noise guidelines (areas located outside the 65 CNEL).

Table 7-7
Future Traffic Noise

Roadway Segment	65 CNEL	60 CNEL	55 CNEL	dBA @50'
Lomita Blvd.	95	282	884	65.53
Narbonne Ave	--	111	345	61.91
PVDN	89	258	810	65.16
Western Ave	68	203	639	64.60
Crenshaw Ave.	107	320	1006	66.10
Pacific Coast Highway	121	366	1153	66.69

a Does not consider any construction to the noise path

b Traffic noise levels for receptors within 50 feet of the roadway centerline would require a specific analysis to determine the CNEL Values.

Source: Blodgett/Baylosis Associates, 1997.

BACKGROUND FOR PLANNING

Characteristics of Noise

This section of the Noise Element discusses the characteristics of noise, the existing noise environment in the City, and stationary and mobile sources of noise.

Every day, people are subject to a multitude of sounds in the urban environment. Many of these sounds are by-products of day-to-day activities. The type of annoyance produced by sound depends on its loudness, duration, time of day, impulse character, pure tone content, variability, the season of the year, and the community. Individual annoyance is relative and variable.

Community noise levels are measured in terms of the A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Additional units of measurement have been developed to evaluate the longer term characteristics of sound. One of the more common noise measurements uses statistical samples in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level that is exceeded 10 percent of the time. The L_{50} noise level represents the median noise level; half the time, noise exceeds this level, and half the time noise is less than this level. The L_{90} noise level represents the background noise since it is the noise level experienced 90 percent of the time. The equivalent noise level (L_{eq}) is a single-number representation of the fluctuating sound level in decibels over a specified period of time. It is a sound-energy average of the fluctuating level.

The Community Noise Equivalent Level (CNEL) is the noise measurement that represents an average of all measured noise levels obtained over a specified period of time. The L_{dn} scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighting refers to the fact that noise during certain sensitive time periods such as the late

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evening and early morning hours. The CNEL scale includes an additional 5 dB adjustment to sounds occurring in the evening (7:00 p.m. to 10:00 p.m.) and an addition of 10 dB to sounds occurring in the late evening and early morning hours (between 10:00 p.m. and 7:00 a.m.). Ldn and CNEL are generally considered to be equivalent descriptors of the community noise environment and are within +/- 1.0 dB. Representative noise sources and sound levels are shown in Exhibit 7-3.

Noise in the City is created by vehicular noise along major roadways and aircraft flyovers to and from Torrance Airport. Stationary noise sources in Lomita are concentrated in the commercial areas on Pacific Coast Highway, Western Avenue and Lomita Boulevard.

Some industrial activities may result in high noise levels when machinery is in operation. Commercial and business activities, clients and patrons are the main sources of noise along Pacific Coast Highway, Narbonne Avenue, Western Avenue, Lomita Boulevard and other commercial corridors. Residential areas contribute resident gatherings and activities, vehicles and operating household equipment to the ambient noise environment. Schools create their own type of noise from buses, students, school activities, and outdoor games. Certain activities are particularly sensitive to noise. These include sleeping, studying, reading, leisure and other activities requiring relaxation or intense concentration.

Hospitals and convalescent homes, churches, libraries, schools, and child care facilities are considered noise-sensitive uses and are best located away from noise sources. Residential areas are also recommended away from noise-impact areas. In Lomita, noise-sensitive land uses include local schools and child care facilities, churches, the Lomita Library, and residential areas. Residential developments and mobile home developments are located along Lomita Boulevard, Crenshaw Boulevard, and Narbonne Avenue, three of the City's major thoroughfares, and may be subject to vehicular noise throughout the day. Pacific Coast Highway and Western Avenue are a major source of noise. Since these roadways are lined with commercial land uses, the

City's residential areas are separated from the vehicular noise on these roadways by 200 to 500 feet of commercial land uses and structures.

Community Noise Survey

A community noise survey was conducted by Blodgett/Baylosis Associates on Tuesday, February 11, 1997 between 10:00 a.m. and 2:00 p.m. to document the existing noise environment. Seven locations were selected for the surveys and noise was metered for a 10 minute interval at each site. The noise measurement results are representative samples of developed residential, commercial, and light industrial areas. The noise measurement results should be used as a general guideline or indication of noise levels within the community. A summary of the noise measurements is shown in Table 7-8. The noise measurement locations are depicted in Exhibit 7-4.

Table 7-8
Existing Noise Levels (dBA)

Site Location	L _{max}	L ₁₀	L ₃₃	L ₅₀	L ₉₀
Lomita Blvd at Lomita Dr.	119	104	101	99	90
Lomita School	131	101	97	95	93
Lomita Park	111	102	96	92	83
PCH/Pennsylvania	130	113	105	104	97
Fleming School	137	107	99	97	91
P.C.H./Narbonne	124	115	111	110	105
PVDN/Western	130	109	105	104	99

L_{max} maximum sound level recorded

L₁₀ sound level exceeded 10% of the time

L₃₃ sound level exceeded 33% of the time

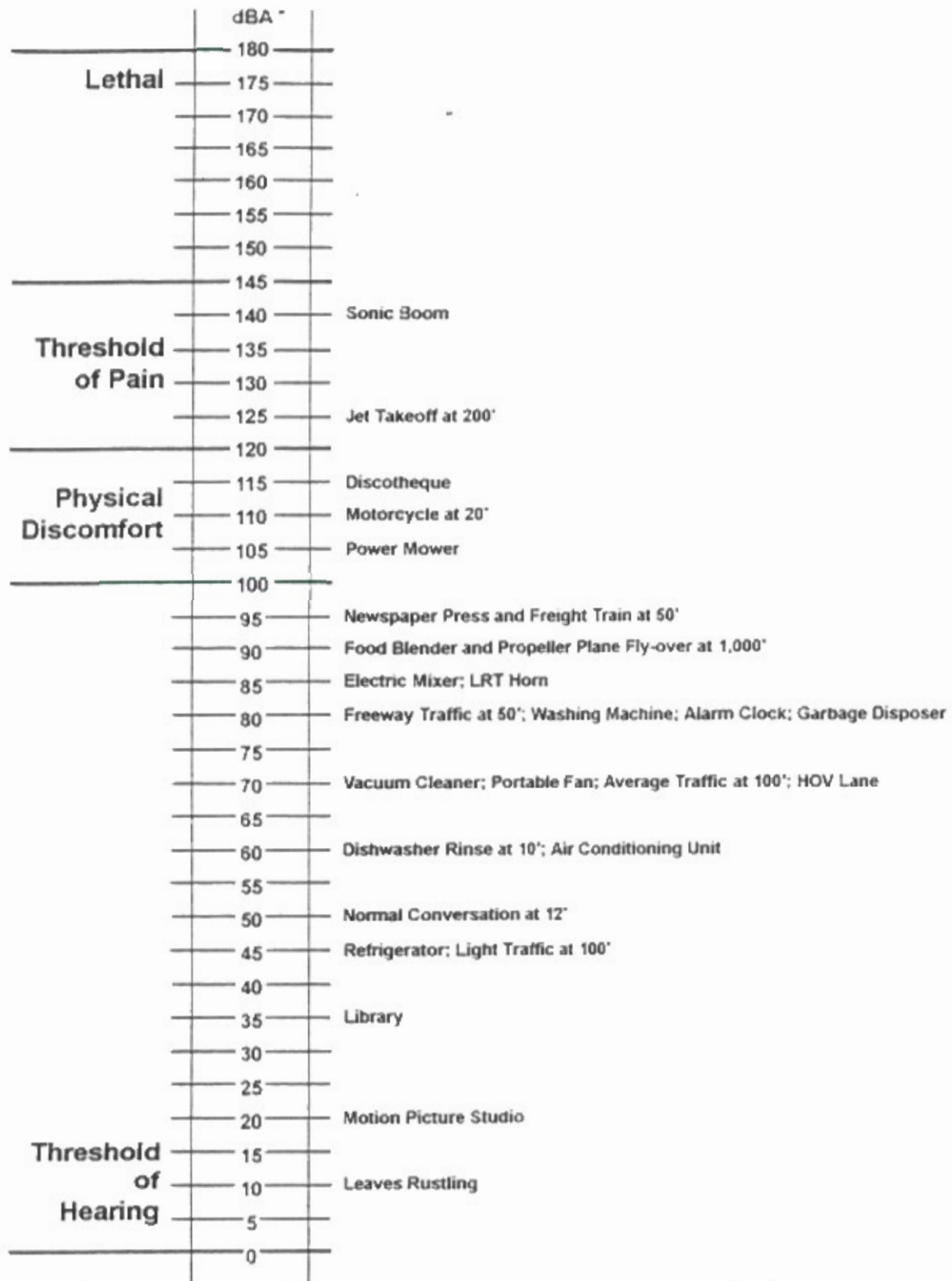
L₅₀ sound level exceeded 50% of the time

L₉₀ sound level exceeded 90% of the time (also considered as the background noise level)

Source: Blodgett/Baylosis Associates, 1997.



EXHIBIT 7-2
FUTURE NOISE CONTOURS
 Source: Blodgett/Bayfosis Associates



*The unit of sound is the decibel (dB). The loudness of sound is typically measured using a sound meter, the A-Scale of which corresponds closely to the way the human ear perceives sound. Thus the sound level for noise evaluations is frequently expressed in dBA.

EXHIBIT 7-3 TYPICAL NOISE LEVELS

Source: Blodgett/Baylosis Associates

Traffic Noise Levels

Noise along transportation corridors is highest near the roadway and decrease as the distance from the roadway (noise source) increases. Thus, they may be shown as contours representing equal noise exposures along the roadway. The contours provide a visualization of estimates of sound level. Land forms and manmade structures have very complex effects on sound transmission and on noise contours. Generally, solid barriers between a source and receiver, such as hills, berms and walls absorb and/or reflect noise resulting in a quieter environment. Where barriers or land forms do not interrupt the sound transmission path from source to receiver, the contours generally prove to be good estimates of average noise level. In areas where barriers or land forms interrupt the sound transmission, the noise contours typically overestimate the extent to which a source intrudes into the community.

The roadway noise contour data for Lomita were generated with the Federal Highway Administration's Highway Traffic Noise Prediction Model, U.S. Department of Transportation (1978). Model input data included existing average daily traffic volumes, day/evening/night percentages of autos, medium, and heavy trucks; vehicle speeds; ground attenuation factors; and roadway widths. The distances from the roadway centerline to the 60, 65 and 70 dB CNEL contours for the existing conditions (1996) are provided in Table 7-9.

As indicated in Table 7-9, Pacific Coast Highway (SR-1), Crenshaw Boulevard and Lomita Boulevard are the major generators of noise within Lomita, generating more than 65 CNEL at 50 feet from the roadway's centerline. All other streets generate less than 65 CNEL at 50 feet from the roadway's centerline. Noise contours along major roadways are shown in Exhibit 7-5. These contours do not consider the presence of structures, berms, and trees and other barriers along the noise path.

Table 7-9
Existing Roadway Noise Levels

Roadway Segment	Distance From Roadway Centerline to CNEL (in feet) ^a			CNEL @ 50' from Centerline
	65 CNEL	60 CNEL	55 CNEL	
Lomita Blvd.	87	253	794	65.07
Narbonne	-	101	310	61.45
PVDN	81	233	728	64.69
Western	63	183	574	64.14
Crenshaw	97	288	904	65.63
Pacific Coast Highway	110	329	1036	66.22

^a Does not consider any obstructions to the noise path.

^b Traffic noise levels for receptors within 50 feet of the roadway centerline would require a site-specific analysis to determine the CNEL values.

Source: Blodgett/Bayliss Associates, 1997.

Airport Noise

The Torrance Municipal Airport is located just west of Crenshaw Boulevard and the City limits, between Lomita Boulevard and Pacific Coast Highway. This airport is a general aviation airport used by private aircraft and helicopters. Approximately 189,000 take off and landing operations occurred at this airport in 1995, with slightly fewer operations in 1996. As shown in Exhibit 7-6, the City of Lomita is not located within the noise impact areas of the Torrance Airport, although overflights from this airport are sources of transportation related noise in the City of Lomita. Helicopters that fly over the City also generate noise levels ranging from 85 to 95 dBA.

Noise from this airport and from aircraft flyovers affects the surrounding areas, as shown in Exhibit 7-5. Noise levels greater than 60 dB CNEL are generally confined within the airport property. Even the 60 CNEL noise contour does not extend west of Crenshaw Boulevard due to an active noise abatement program and due to decreasing aircraft operations at the airport. But the flight patterns of the aircraft using Torrance Airport extend over the western section of the City and may affect residential areas between Crenshaw and Arlington, including Hathaway Park.



1 NOISE MEASUREMENT LOCATIONS

EXHIBIT 7-4 **NOISE MEASUREMENT LOCATIONS**

Source: Blodgett/Baylous Associates



EXHIBIT 7-5
TRAFFIC NOISE

Source: Blodgett/Baylosis Associates