CHAPTER 5

NOISE ELEMENT

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CHAPTER 5

NOISE ELEMENT

INTRODUCTION

Noise that is experienced by people who did not produce it is "second-hand sound," and is among the most pervasive pollutants today. Like second-hand smoke, it has detrimental effects on people who had no part in creating it.
- Noise Pollution Clearinghouse, 2004

Excessive noise can disrupt our lives. Noise can interrupt our conversations, thoughts, and leisure activities. Noise sensitivity varies depending on the time of day, its duration and pitch, and preferences of individuals. Despite this variability, most residents agree that too much noise or the wrong type of noise can be irritating and interfere with sleep, speech, recreation, and tasks that require concentration or coordination. Therefore, noise not only decreases environmental quality but can also adversely affect our physical and mental health.

In Torrance, street and freeway traffic represent the primary source of noise. The I-405 Freeway, which traverses the northeastern portion of the City, presents concerns where it runs adjacent to residential neighborhoods and schools. Other significant sources of noise include arterial roadways and intersections, the Santa Fe Railroad, and Torrance Municipal Airport.

Because Torrance is largely built out and the street system well developed, the City faces challenges in separating noise-sensitive land uses from primary noise sources. Thus, the Noise Element establishes policies to guard against creation of any new noise/land use conflicts and to minimize the impact of existing noise sources on the community.

RELATIONSHIP TO OTHER GENERAL PLAN ELEMENTS

Land use relationships and noise associated with roadways, train traffic, and operations at Torrance Municipal Airport represent the focus of community noise concerns. Therefore, policies in this Noise Element are tied most closely to policies and programs set forth in the Land Use and Circulation Elements. For example, community noise standards affect the location or treatment of proposed new land uses, such as uses within the noise contours of the airport. With regard to the local road network, this Element contains noise contour maps that identify anticipated noise levels associated with future traffic volumes, and includes policies and programs intended to reduce adverse noise conditions.

SCOPE AND REQUIREMENTS OF THE NOISE ELEMENT

In recognition of the adverse health effects associated with excessive noise, the California Government Code, Section 65302(f) very specifically identifies the types of community noise to be addressed in the General Plan. The Noise Element addresses noise sources from:

- Highways and freeways
- Primary arterials and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Commercial, general aviation, heliport, and military airport operations, aircraft over-flights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operations
- Local industrial plants, including, but not limited to, railroad classification yards
- Other stationary ground noise sources identified by local agencies as contributing to the community noise environment

1. MEASURING NOISE

Noise is often described as unwanted or irritating sound. Defining noise with a single unit of measure is difficult because noise consists of several components — pitch, loudness, and duration — and because noise includes subjective qualities. At the objective level, scientists have developed the A-weighted sound pressure level, or dB(A), to describe the loudness of a sound or sound environment based on the sensitivity of the human ear. At 60 dB(A), noise

impairs the ability to hear speech, and sound levels over 40 to 45 dB(A) can disturb sleep. A person's likelihood of hearing loss strongly increases at prolonged exposure to sound levels over 85 dB(A). To provide some perspective on the relative loudness of various types of noise, Table N-1 lists common sources of noise and their approximate noise levels.

Table N-1
Typical Noise Levels

Common Outdoor Activities	Noise Level in dB(A)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 1,000 feet	100	
	90	
Diesel Truck at 50 feet at 50 mph		Food Blender at three feet
	80	Garbage Disposal at three feet
Noisy Urban Area, Daytime		
Gas Lawn Mower at 3 feet	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night
		Concert Hall (background sound)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Table N-2136.2 of California Department of Transportation's Traffic Noise Analysis Protocol (October 1998).

Table N-2 describes State criteria for minimizing harmful noise effects.

Table N-2
State Criteria for Minimizing Adverse Noise Effects on Humans

Objective	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.

Acousticians have developed noise metrics to account for the fact that noise during nighttime hours can be more bothersome than daytime noise. The noise metrics apply a weighted ambient noise level average over a 24-hour period, and assigns "penalties" to noise that occurs between 10:00 P.M. to 7:00 A.M. These metrics are defined as either the Community Equivalent Noise Level (CNEL) or Day-Night Level (Ldn).

Figure N-1 shows common CNEL and Ldn noise exposure levels at different locations. The highest dB(A) level is listed for the area next to a freeway, which has a noise exposure level of 85 dB(A). The lowest dBA level is listed for a farm, which is 40 dB(A). The figure also indicates that 65 dB(A) is the common standard for noise level in outdoor residential areas, and 45 dB(A) is the common standard for the interior of residences

The objectives and policies in this element aim to meet the City's overarching goal for noise regulation in the City of Torrance:

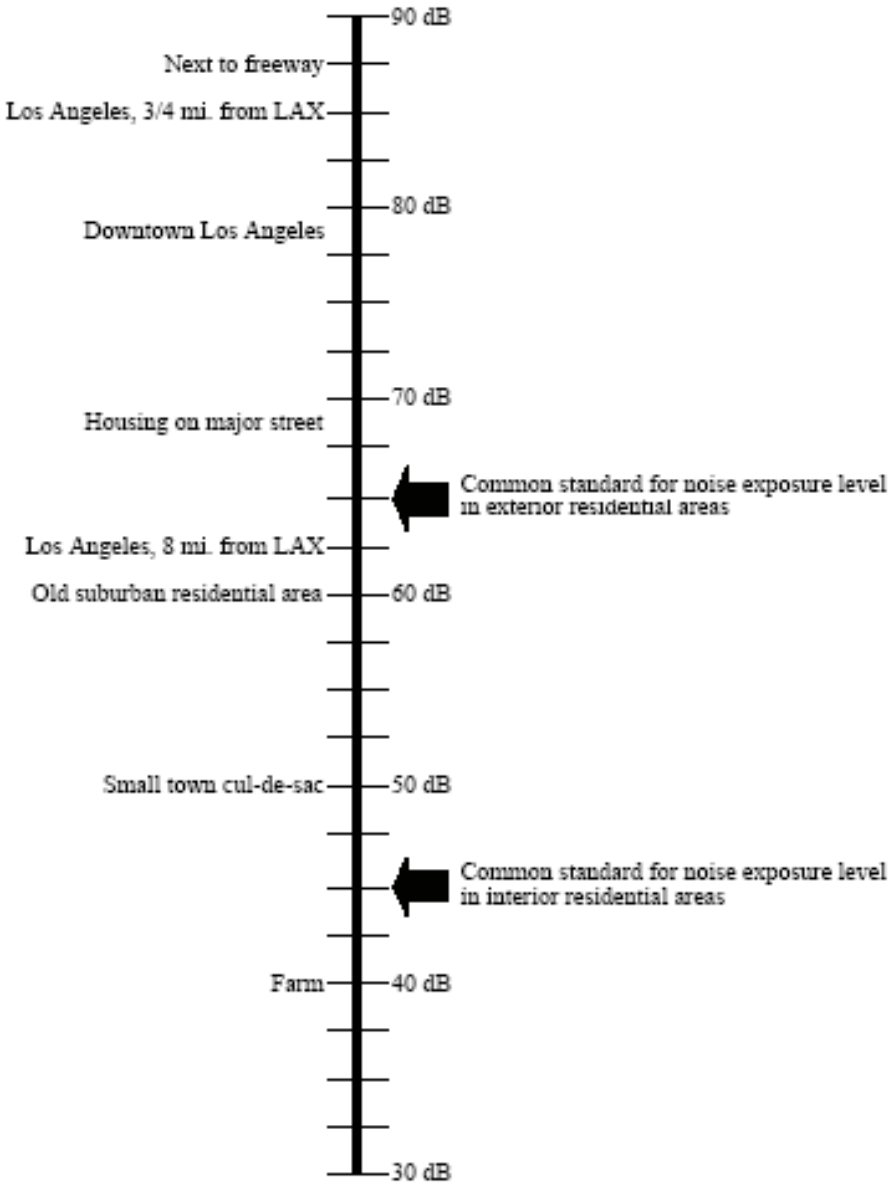
GOAL: Minimize exposure of residents to noise

2. BASELINE NOISE CONDITIONS

The community noise environment can be described using contours derived from monitoring major sources of noise. Noise contours are analogous to topographic contours on a map showing terrain. Just as topographic contours illustrate elevations of the ground surface, noise contours define noise levels at particular locations. The contours generally represent average noise levels, such as the CNEL or Ldn, based on major noise sources in the community. The contours assist in setting policies for distribution of land uses and establishment of development standards.

A study of baseline noise sources and levels was completed in August, 2006. Noise level measurements were collected during a typical weekday at 20 locations throughout Torrance. Criteria for site selection included geographical distribution, land uses suspected of noisy activities, and proximity to transportation facilities and sensitive receptor locations. The primary purpose of noise monitoring was to establish a noise profile for the community that could be used to determine areas of concern.

Figure N-2 shows noise contours for noise conditions in Torrance in 2006. The contours account for the many noise sources in the City, including I-405, arterial and collector roadways, train operations along the Santa Fe Railroad, the Honeywell facility, and Torrance Airport. Each source is described in greater detail in Figure N-1.



Source: Wieland Associates, Inc., July 2006.

Figure N-1:
Common CNEL and Ldn Noise Exposure Levels at Various Locations

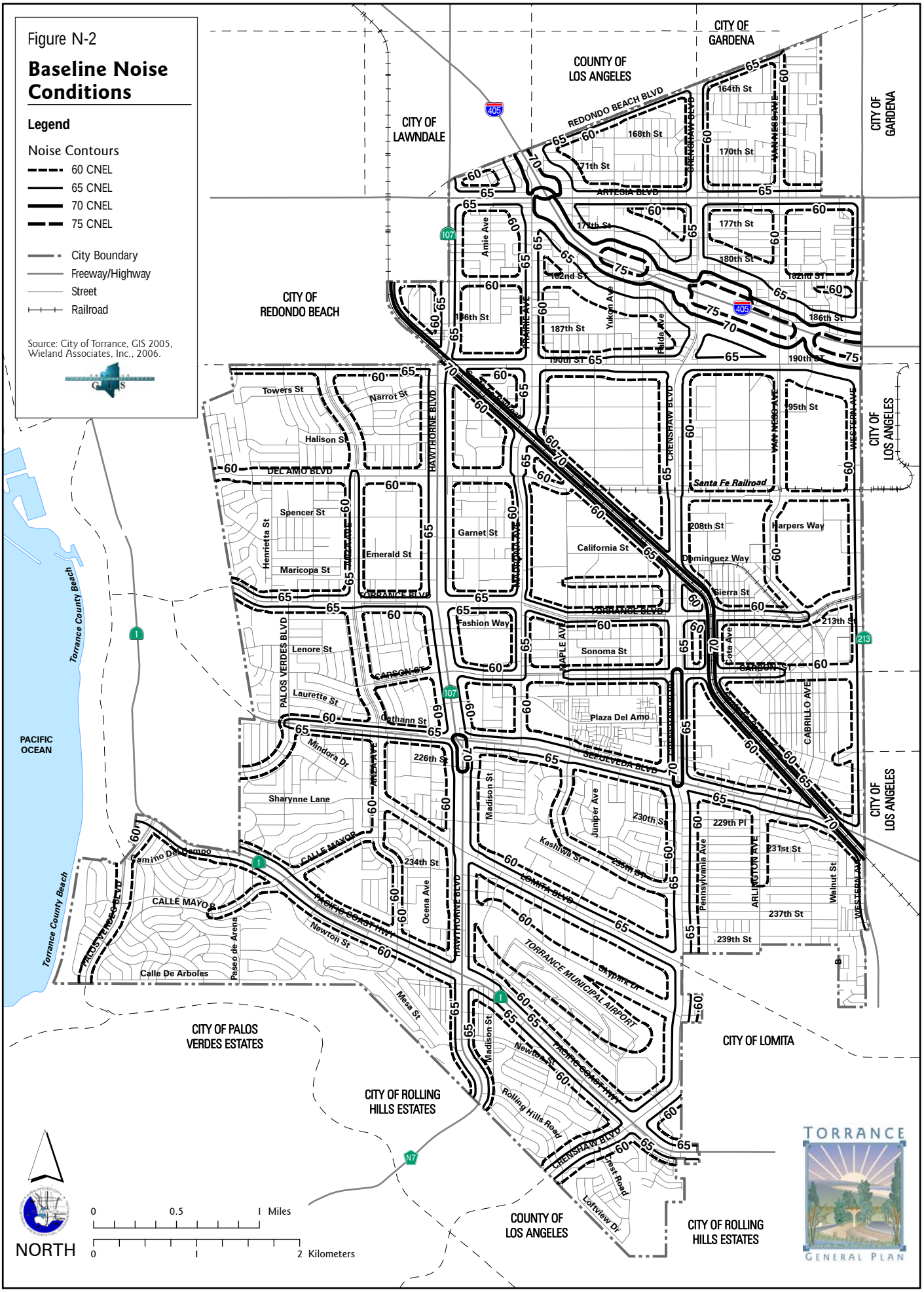


Figure N-2
Baseline Noise Conditions
Legend
Noise Contours
60 CNEL
65 CNEL
70 CNEL
75 CNEL
City Boundary
Freeway/Highway
Street
Railroad
Source: City of Torrance, GIS 2005, Wieland Associates, Inc., 2006.
CITY OF GARDENA
COUNTY OF LOS ANGELES
CITY OF LAWNDALE
CITY OF REDONDO BEACH
CITY OF LOS ANGELES
CITY OF PALOS VERDES ESTATES
CITY OF ROLLING HILLS ESTATES
CITY OF LOMITA
COUNTY OF LOS ANGELES
CITY OF ROLLING HILLS ESTATES
PACIFIC OCEAN
Torrance County Beach
REDONDO BEACH BLVD
ARTESIA BLVD
DEL AMO BLVD
TORRANCE BLVD
CARSON ST
SEPULVEDA BLVD
PACIFIC COAST HWY
CRENSHAW BLVD
HAWTHORNE BLVD
PALOS VERDES BLVD
NORMANDIE AVE
VERMONT AVE
WESTERN AVE
VAN NESS AVE
ARLINGTON AVE
Santa Fe Railroad
CALLE MAYOR
Camino De Encanto
Calle De Arboles
Paseo de Arena
Newton St
Mesa St
Skypark Dr
TORRANCE MUNICIPAL AIRPORT
Rolling Hills Road
Crest Road
Loftview Dr
Towers St
Narrot St
Halison St
Spencer St
Maricopa St
Emerald St
Garnet St
California St
Harpers Way
Dominguez Way
Sierra St
Fashion Way
Sonoma St
Plaza Del Amo
Lenore St
Laurette St
Gathann St
Mindora Dr
Sharynne Lane
226th St
230th St
231st St
234th St
235th St
237th St
239th St
229th Pl
164th St
168th St
170th St
171th St
177th St
180th St
182nd St
186th St
187th St
190th ST
195th St
208th St
213th St
Amie Ave
Yukon Ave
Flida Ave
Henrietta St
Madison St
Juniper Ave
Kashiwa St
Ocena Ave
Pennsylvania Ave
Walnut St
Foto Ave
Cabrillo Ave
0
0.5
1 Miles
0
1
2 Kilometers
NORTH
TORRANCE
GENERAL PLAN

2.1 TRANSPORTATION-RELATED NOISE

2.1.1 I-405 FREEWAY

Interstate 405 crosses the northeastern portion of Torrance and is busy for most daylight hours. Traffic levels create noise conditions in excess of 65 CNEL along the freeway's path. As noted in Figure N-1, this is generally considered the threshold noise level for residential use. Figure N-2 shows that several residential neighborhoods and public facilities are exposed to high noise levels from freeway traffic.

As freeways are under the jurisdiction of Caltrans, this State agency is responsible for addressing noise abatement issues where Caltrans' activities have created adverse noise conditions, pursuant to the Streets and Highway Code. Consistent with Section 216 of the Code, Caltrans has, for example, implemented a School Noise Abatement Program that takes measures to reduce classroom interior noise levels to below 52 dB(A). Yukon Elementary, located immediately north of I-405 between Crenshaw Boulevard and Prairie Avenue, is exposed to noise levels of 75 dB(A) and higher; the school has benefitted from soundproofing and air-conditioning as part of this program.[1] As regional traffic continues to increase, freeway noise mitigation will continue to be a key policy issue for Torrance.

2.1.2 MAJOR ROADWAYS

Residents whose homes either abut or are in proximity to major roadways may experience high noise levels during peak commute hours. Generally, Torrance's historic land use patterns have resulted in commercial and industrial land uses along arterial roadways. Also, the noise contours shown on Figure N-2 indicate that roadway noise generally does not exceed 65 CNEL. As of 2006, the only roadway sections with noise levels at or above 65 CNEL were Crenshaw Boulevard between Carson Street and Sepulveda Boulevard and the intersection of Sepulveda Boulevard and Hawthorne Boulevard.

2.1.3 SANTA FE RAILROAD

In Torrance, noise from the Santa Fe Railroad is sporadic because trains do not run continuously throughout the day. However, when trains do run through the City, they are as noisy as peak hours of automobile and truck traffic. Freight trains pass through Torrance daily in route to and from Long Beach. Figure N-2 indicates that, compared to noise effects of I-405, a limited buffer area surrounding the railroad is exposed to noise levels of 60 CNEL or higher.

[1] Caltrans District 7, Project Information, Soundwalls.
http://www.dot.ca.gov/dist07/aboutdist7/projects/soundwalls_02/index.php?strpg=noise

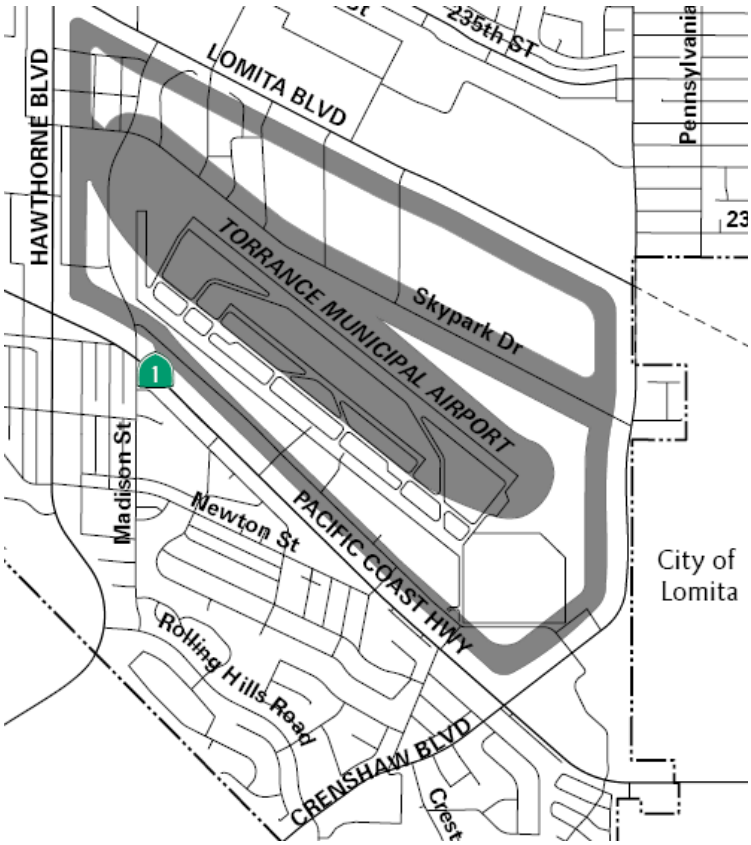


Figure N-3:
Noise Conditions, Torrance Airport

A few residential uses near the intersection of Torrance Boulevard and the railroad line are adversely impacted by railroad noise.

2.1.4 TORRANCE MUNICIPAL AIRPORT (ZAMPERINI FIELD)

Torrance Municipal Airport is a general aviation facility that accommodates both propeller and jet aircraft (although jet traffic is limited by the fact that jet fuel is not sold at the airport). The Torrance Municipal Code includes stringent noise standards intended to make the airport compatible with adjacent land uses. The airport follows the Federal Aviation Administration's (FAA) land use restrictions, which regulate land uses surrounding airports and flight paths. In addition to safety concerns, these restrictions also restrict incompatible land uses near airports because of noise concerns. The City also has adopted a strict Airport Noise Abatement Program. Noise monitors report excessive aircraft noise to City staff, and staff works with pilots to find ways to meet the established noise limits.

The City's Noise Abatement program has resulted in reduced noise complaints from aircraft activity at Torrance Airport.

Figure N-3 indicates that critical noise contours associated with Torrance Airport do not impact any residential neighborhoods. In fact, most of the 60 dBA noise contour is confined to airport property, although properties along the north most sections of Skypark Drive are marginally affected by noise. The majority of noise affecting the rest of Skypark Drive, Hawthorne Boulevard, and Pacific Coast Highway is automobile related.

Adjacent to Torrance Airport, Robinson Helicopter manufactures civil helicopters. Helicopter noise often may be more irritating than noise from other aircraft because helicopters operate at low altitudes and therefore produce more noise. Robinson Helicopter adheres to the City's noise standards to ensure that late-night helicopter operations are limited.

2.2 NON-TRANSPORTATION NOISE

Non-transportation noise sources include various activities in commercial and industrial districts, which may include potential stationary noise sources.

As a matter of practice, the City reviews all development applications to identify issues of concern, including potential noise exposure and generation. An acoustical analysis is required for projects that could have potentially adverse noise effects on sensitive receptors such as schools, hospitals,

churches, and residential neighborhoods. Mitigating features or conditions must be included in a project when significant noise impacts are identified.

Other sources of community noise are often associated with ordinary daily activities such as property maintenance and construction. Excessive noise from lawnmowers, leaf blowers, mechanical equipment, power tools, and the like can generate complaints when noise-generating activities occur in the evening or during restful weekend hours. The City's noise standards will be implemented to help maintain optimal interior and exterior noise levels within residential areas.

3. FUTURE NOISE CONDITIONS

As Torrance is largely developed, new development over time will be limited to the recycling of uses to slightly higher densities and intensities at limited locations. The long-established land use patterns generally will not change. More intense development will be focused along major corridors, such as Hawthorne Boulevard.

Over the long term, noise conditions in Torrance are not anticipated to change significantly from the baseline conditions modeled in 2006. Future noise contours have been developed based on anticipated traffic volumes, rail traffic, airport operations, and general land use activity. These contours assist in the review of land use and development proposals. Figure N-4 presents the projected noise contours and noise impact areas.

Overall, the increase in noise over the life of the General Plan is minimal. The primary stationary noise sources — Torrance Municipal Airport and major industrial operations — will continue to exist. Roadway noise along major roads such as Hawthorne Boulevard and Crenshaw Boulevard will increase slightly due to increase in traffic volumes mostly attributable to regional growth. Small entryway segments of Torrance Boulevard and Carson Street at the east end of the City will also experience minimal increases in noise. A small segment of Prairie Avenue just north and south of the I-405 will also experience an increase in noise levels attributable to expected traffic growth along the I-405. Areas that are expected to experience increased noise levels are primarily limited to non-residential areas. Most residential areas will not experience noise levels above baseline conditions with the exception of two short segments of Palos Verdes Boulevard (the segment from Torrance Boulevard to Sepulveda Boulevard and a segment just north of Calle Mayor).

Table N-3 establishes the noise/land use compatibility criteria Torrance will use in determining whether a new use is appropriate within a given noise environment.

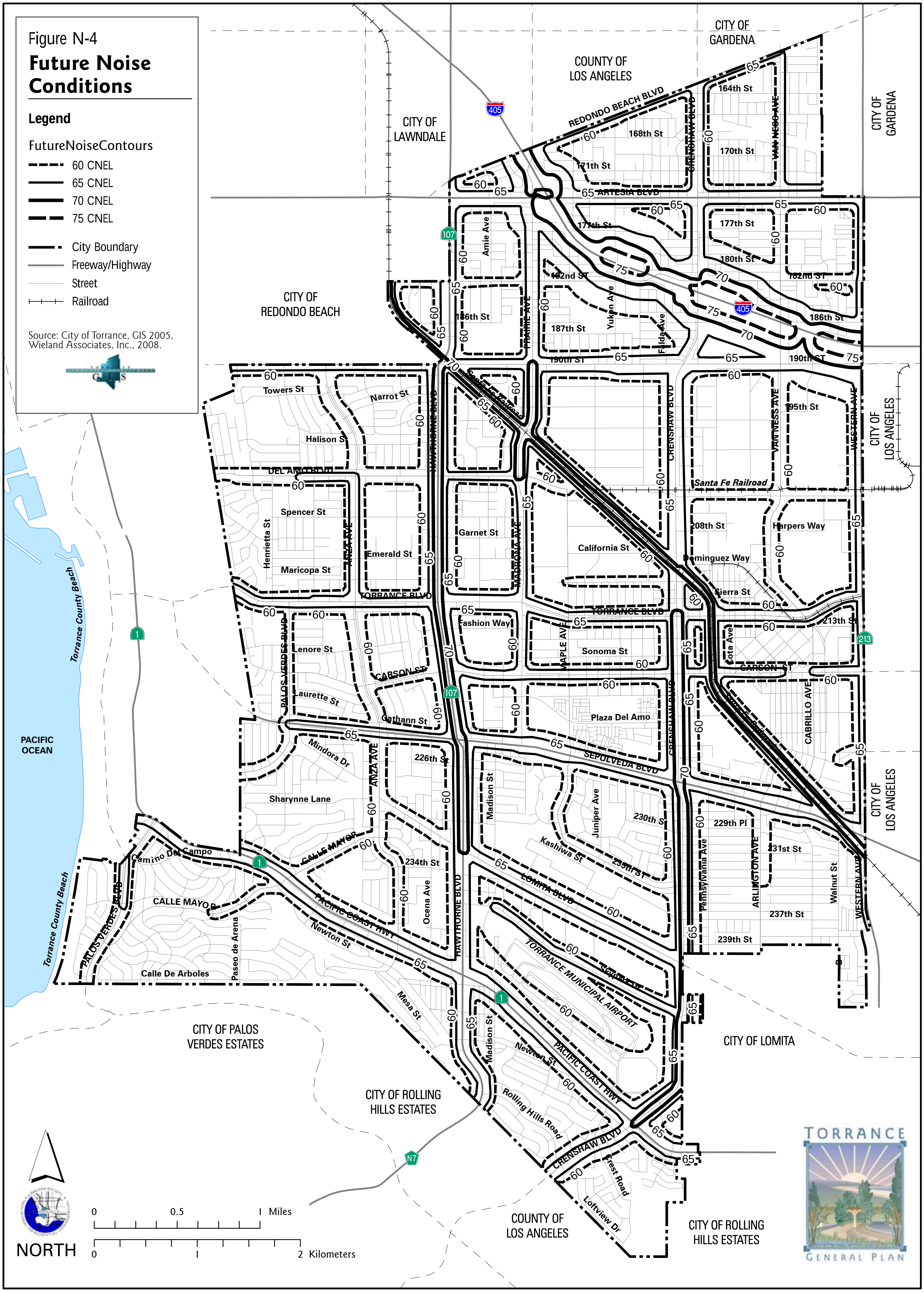


Figure N-4
Future Noise Conditions
Legend
FutureNoiseContours
60 CNEL
65 CNEL
70 CNEL
75 CNEL
City Boundary
Freeway/Highway
Street
Railroad
Source: City of Torrance, GIS 2005, Wieland Associates, Inc., 2008.
CITY OF GARDENA
COUNTY OF LOS ANGELES
CITY OF LAWNDALE
CITY OF REDONDO BEACH
CITY OF LOS ANGELES
PACIFIC OCEAN
Torrance County Beach
CITY OF PALOS VERDES ESTATES
CITY OF ROLLING HILLS ESTATES
CITY OF LOMITA
REDONDO BEACH BLVD
ARTESIA BLVD
CRENSHAW BLVD
HAWTHORNE BLVD
TORRANCE BLVD
CARSON ST
SEPULVEDA BLVD
PACIFIC COAST HWY
LOMITA BLVD
TORRANCE MUNICIPAL AIRPORT
WESTERN AVE
DEL AMO BLVD
PALOS VERDES BLVD
Plaza Del Amo
Santa Fe Railroad
0
0.5
1 Miles
0
1
2 Kilometers
NORTH
TORRANCE
GENERAL PLAN

Table N-3
Torrance Noise/Land Use Compatibility Guidelines

Property Receiving Noise		Maximum Noise Level Ldn or CNEL, dB(A)	
Type of Use	Land Use Designations	Interior	Exterior
Residential[3]	Low Density Residential Low Medium Density Residential Medium Density Residential	45	60/65[1]
	Medium High Density Residential	45	65 / 70[2]
	High Density Residential	45	70[1]
Commercial and Office	General Commercial Commercial Center	--	70
	Residential Office	50	70
Industrial	Business Park Light Industrial Heavy Industrial	55	75
Public and Medical Uses	Public/Quasi-Public/Open Space	50	65
	Hospital/Medical	50	70
Airport	Airport	--	70

1. The normally acceptable standard is 60 db(A). The higher standard is acceptable subject to inclusion of noise-reduction features in project design and construction.
2. Maximum exterior noise levels up to 70 dB CNEL are allowed for Multiple-Family Housing.
3. Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60 dB(A) CNEL.

These compatibility criteria serve as guidelines. For example, an acoustical analysis must be prepared when noise-sensitive land uses are proposed within noise impact areas. The analysis must show that the project is designed to attenuate noise to meet the City's noise standards in order to receive approval. If the project design does not meet the noise standards, mitigation can be recommended in the analysis. If the analysis demonstrates that the noise standards can be met by implementing the mitigation measures, the project can be approved conditioned upon implementation of the mitigation measures.

4. NOISE ABATEMENT

Recognizing the need to protect residents from noise, the City has adopted specific regulations for noise produced by transportation sources, trains, and aircraft. These regulations offer protection to residents and users of facilities like schools and libraries, where noise can have particularly disruptive impacts, while also balancing the need of industry and commuters to make a reasonable amount of noise associated with commerce and industry during a workday.

4.1 NOISE ABATEMENT PROGRAMS

4.1.1 AIRPORT NOISE ABATEMENT PROGRAM

The City's Noise Abatement Program, which is enforced by the Environmental Division of the Community Development Department, provides for on-going monitoring of aircraft noise. City ordinances do not allow aircraft landing on or taking off from the airport to exceed a Single Event Noise Exposure Level (SENEL) of 88 dB(A) or a maximum sound level of 82 dB(A), measured at ground level outside the extended airport boundaries. The program imposes even more restrictive noise limits for night flights.

Established in 1977, the noise abatement program has dramatically decreased noise complaints related to airport operation. The airport program relies on noise monitors in areas of the community under aircraft flight paths. If an aircraft exceeds specified noise limits, pilots are notified by the City. The City also aims to be proactive in stemming aircraft noise complaints by working with pilots to test noise levels and find ways to safely get planes in and out of the airport without exceeding the established noise limits. This type of aircraft noise mitigation is possible for most aircraft using the airport. Since the inception of the noise abatement program, the variety of aircraft using the airport has become noticeably quieter, and the number of noise violations per operations has decreased over the years to well below one percent. The majority of noise violations are made by transient aircraft.

Since its inception almost 20 years ago, the program has become one of the most effective programs in the country, and has been used as a model by other cities and airports. The program significantly decreased aircraft noise violations from between 4.5 to 5 percent of operations in 1976 to less than one percent by 1987.[2] Noise violations have been reduced to less than 0.2 percent of total airport operations. Through this program, the City has successfully balanced the airport's needs with the community's requirements for a livable environment.

[2] "History of Noise Abatement Program" memo, presented to the Airport Commission on April 9, 1987

4.1.2 MUNICIPAL CODE NOISE AND LAND USE COMPATIBILITY REGULATIONS

Quality of life is tied to living in an environment where we can carry out daily activities without the interference and harmful effects from excessive noise. The Municipal Code has noise guidelines that stress the importance of protecting indoor and outdoor noise environments. Protecting sensitive receptors and residential neighborhoods is particularly important, and the City has established maximum acceptable noise levels within noise zones.

Municipal Code, Division 4: Public Health and Welfare (Chapter 6 - Noise Regulation) establishes noise level limits in most residential areas of 50 to 55 db(A) between 7:00 A.M. to 10:00 P.M., and 45-50 db(A) between 10:00 P.M. to 7:00 A.M., depending on location. The regulations establish regions with differing noise regulations, as indicated on Figure N-5.

- Region 1 includes the predominantly industrial areas in and around the refineries and industrial uses on the western edge of the City.
- Region 2 includes the area in and around the airport and includes the commercial and industrial uses south of Lomita Boulevard and north of Pacific Coast Highway.
- Region 3 encompasses the residential neighborhoods south of Pacific Coast Highway and west of Hawthorne Boulevard.
- Region 4 includes the remainder of the City.

Acceptable noise levels are lower for neighborhoods in Region 3. Noise levels in most of the City's industrial and commercial areas cannot exceed 60 dB(A) during the day or 55 dB(A) during the night. The ordinance offers flexibility in the areas surrounding the oil refineries (Region 1), where noise levels cannot exceed 70 dB(A) during the day or 65 dB(A) at night.

Understanding that certain types of noise are more harmful and annoying, the City's noise regulations penalize certain types of noise sources by lowering the permitted decibels allowed. In other cases such as those where noise is not continuous and occurs only during a very limited timeframe or duration, decibel limits can be higher.

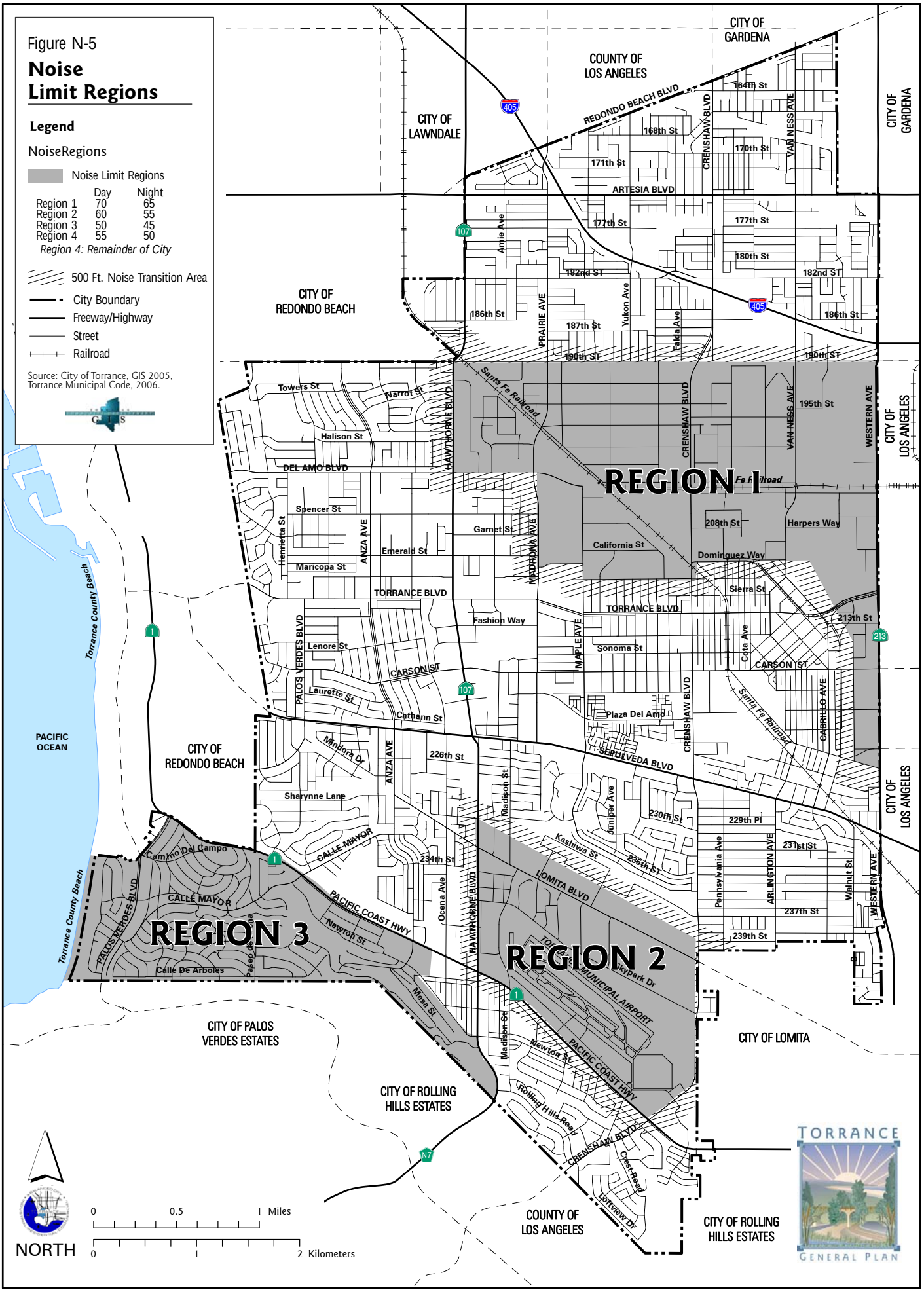


Figure N-5
Noise Limit Regions
Legend
NoiseRegions
Noise Limit Regions
Day Night
Region 1 70 65
Region 2 60 55
Region 3 50 45
Region 4 55 50
Region 4: Remainder of City
500 Ft. Noise Transition Area
City Boundary
Freeway/Highway
Street
Railroad
Source: City of Torrance, GIS 2005, Torrance Municipal Code, 2006.
REGION 1
REGION 2
REGION 3
CITY OF GARDENA
COUNTY OF LOS ANGELES
CITY OF LAWNDALE
CITY OF REDONDO BEACH
CITY OF LOS ANGELES
PACIFIC OCEAN
CITY OF PALOS VERDES ESTATES
CITY OF ROLLING HILLS ESTATES
CITY OF LOMITA
REDONDO BEACH BLVD
ARTESIA BLVD
TORRANCE BLVD
CARSON ST
PACIFIC COAST HWY
CRENSHAW BLVD
HAWTHORNE BLVD
PALOS VERDES BLVD
ANZA AVE
MAPLE AVE
VAN NESS AVE
WESTERN AVE
SEPULVEDA BLVD
LOMITA BLVD
DEL AMO BLVD
Santa Fe Railroad
Torrance County Beach
TORRANCE MUNICIPAL AIRPORT
NORTH
0 0.5 1 Miles
0 1 2 Kilometers
TORRANCE GENERAL PLAN

Table N-4
Noise Conditions Correction to the Limits, (in Decibels)

1	Noise contains a steady, audible tone, such as a whine, screech or hum	-5
2	Noise is a repetitive impulsive noise, such as hammering or riveting	-5
3	If the noise is not continuous, one of the following corrections to the limits shall be applied:	
a	Noise occurs less than 5 hours per day or less than 1 hour per night	+5
b	Noise occurs less than 90 minutes per day or less than 20 minutes per night	+10
c	Noise occurs less than 30 minutes per day or less than 6 minutes per night	+15
4	Noise occurs on Sunday morning (between 12:01 A.M. and 12:01 P.M. Sunday)	-5

City of Torrance Municipal Code

For construction work, the ordinance limits the use of power construction tools or equipment for construction work adjacent to residential areas. With regard to railroad noise, the ordinance places restrictions on night-time operations and the decibel level of train whistles.

4.1.3 MOTOR VEHICLE NOISE

As Figure N-4 indicates, noise from vehicles traveling along Torrance's roadways will continue to represent the primary noise source in the community. The City has very limited ability to abate vehicle-related noise at a local level. The State of California establishes noise limits for vehicles, and at the local level, the City can cite any driver on City streets whose vehicle exceeds the limits. This applies to engine and exhaust system noise, as well as any noise from inside the vehicle that can be heard (or felt) beyond the vehicle.

With regard to freeway noise, as discussed above, Caltrans is responsible for noise abatement. The City's best defense against exposing any additional residents or noise-sensitive uses to I-405 noise is to apply the noise/land use compatibility criteria set forth in Table N-3 in the review of development applications.

4.2 NOISE GOALS AND POLICIES

The City's goals and policies regarding noise aim to minimize adverse noise impacts and to preserve the high quality of life for City residents. Torrance will maintain a peaceful environment by identifying noise impacts and mitigating noise problems through acoustical treatments and appropriate land use policies.

Transportation routes represent the predominant noise source in Torrance. Sounds emitted from automobiles, aircraft, and rail can be mitigated through sound barriers, and with regard to Torrance Municipal Airport and rail activities, strict enforcement of Municipal Code provisions that pertain to noise abatement.

OBJECTIVE N.1:	To identify noise pollution and establish effective noise abatement methods
Policy N.1.1:	Continue to strictly enforce the provisions of the City's Noise Ordinance to ensure that stationary noise, traffic-related noise, railroad noise, airport-related noise, and noise emanating from construction activities and special events are minimized.
Policy N.1.2:	Maintain a workable, reasonable, and effective noise ordinance. Update the ordinance as necessary to respond to community noise issues.
Policy N.1.3:	Seek grants and loans for noise abatement projects.
Policy N.1.4:	Minimize unnecessary outdoor noise through enforcement of the noise ordinance and through permit processes that regulate noise-producing activities.

OBJECTIVE N.2:	To minimize transportation-related noise impacts
Policy N.2.1:	Enforce all local noise regulations pertaining to motor vehicle operations.
Policy N.2.2:	Prioritize locations for implementing noise reduction, such as residential areas near major roads or areas near railroads.
Policy N.2.3:	Require developers and business owners to minimize noise impacts associated with on-site motor vehicle activity through the use of noise-reduction features (e.g., berms, walls, well-designed site plans).
Policy N.2.4:	Ensure that all new development within the identified noise contours of Torrance Municipal Airport will be compatible with existing and projected airport noise levels.
Policy N.2.5:	Minimize airport operations-related noise violations by maintaining the City's Noise Abatement Program.

OBJECTIVE N.3:	To minimize noise incompatibilities between land uses
Policy N.3.1:	Review industrial, commercial, or other noise-generating land use proposals for compatibility with nearby noise-sensitive land uses, and require that appropriate mitigation be provided.
Policy N.3.2:	Require the inclusion of noise-reducing design features for developments near noise-sensitive land uses.

Policy N.3.3:	Encourage dense, attractive landscape planting along roadways and adjacent to other noise sources to increase absorption of noise.
Policy N.3.4:	Work with property and business owners to avoid or resolve noise incompatibilities in commercial or industrial areas.

OBJECTIVE N.4:	To research and implement new means of noise abatement
Policy N.4.1:	Encourage and support efforts by the State of California to abate noise pollution by using stricter quantitative noise standards, shorter compliance time governing operation of all types of motor vehicles, etc.
Policy N.4.2:	Maintain open lines of communication between the City and all federal, State, and County agencies involved in noise abatement.
Policy N.4.3:	Educate residents and businesses of the effects of noise pollution, ways they can assist in noise abatement, and noise abatement programs within the City.
Policy N.4.4:	Support legislation at all levels of government that enhances local authority over noise sources.