

## A. Introduction

The Noise Element is a State-mandated component of the General Plan. The purpose of this element is to establish uniformity of policy and direction concerning actions to minimize or eliminate excessive noise. It includes objectives, policies, standards, criteria, programs, diagrams and maps which are to be considered when decisions are made affecting the noise environment.

## B. Noise Description

Noise is simply defined as unwanted sound. Physical health, psychological stability, social cohesion, property values and economic productivity are affected by excessive amounts of noise.

In addressing the regulation of noise to mitigate its negative effects, some quantification of noise intensity is required. Noise measurements are expressed in several ways, including the following.

- dB(A)      The A-Weighted Sound Pressure Level is the sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.
- Ldn          The Day-Night Noise Level is the average equivalent A-weighted sound level during 24-hour day obtained by adding ten decibels to the hourly noise levels measured during the night (from 10pm to 7am). In this way, Ldn takes into account the lower tolerance of people for noise during night-time periods.
- CNEL        The Community Noise Equivalent Level is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7pm to 10am and ten decibels to sound levels in the night before 7am and after 10pm
- SEL         The Sound Exposure Level is the noise exposure level accumulated during a given event, with reference to a duration of one second. More specifically, SEL in decibels is the level of the time-integrated, A-weighted squared sound pressure for a stated time interval or event, based on the reference pressure of 20 micronewtons per square meter and reference duration of one second. SEL is commonly used to calculate Ldn when the noise source consists of individual noise events, such as those caused by railroad line operations or aircraft overflights.
- Leq         The Equivalent Energy Level is the sound level corresponding to a steady state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.
- LMAX        The Maximum Sound Level is a statistical value that represents the highest maximum sound level reading during a given period.

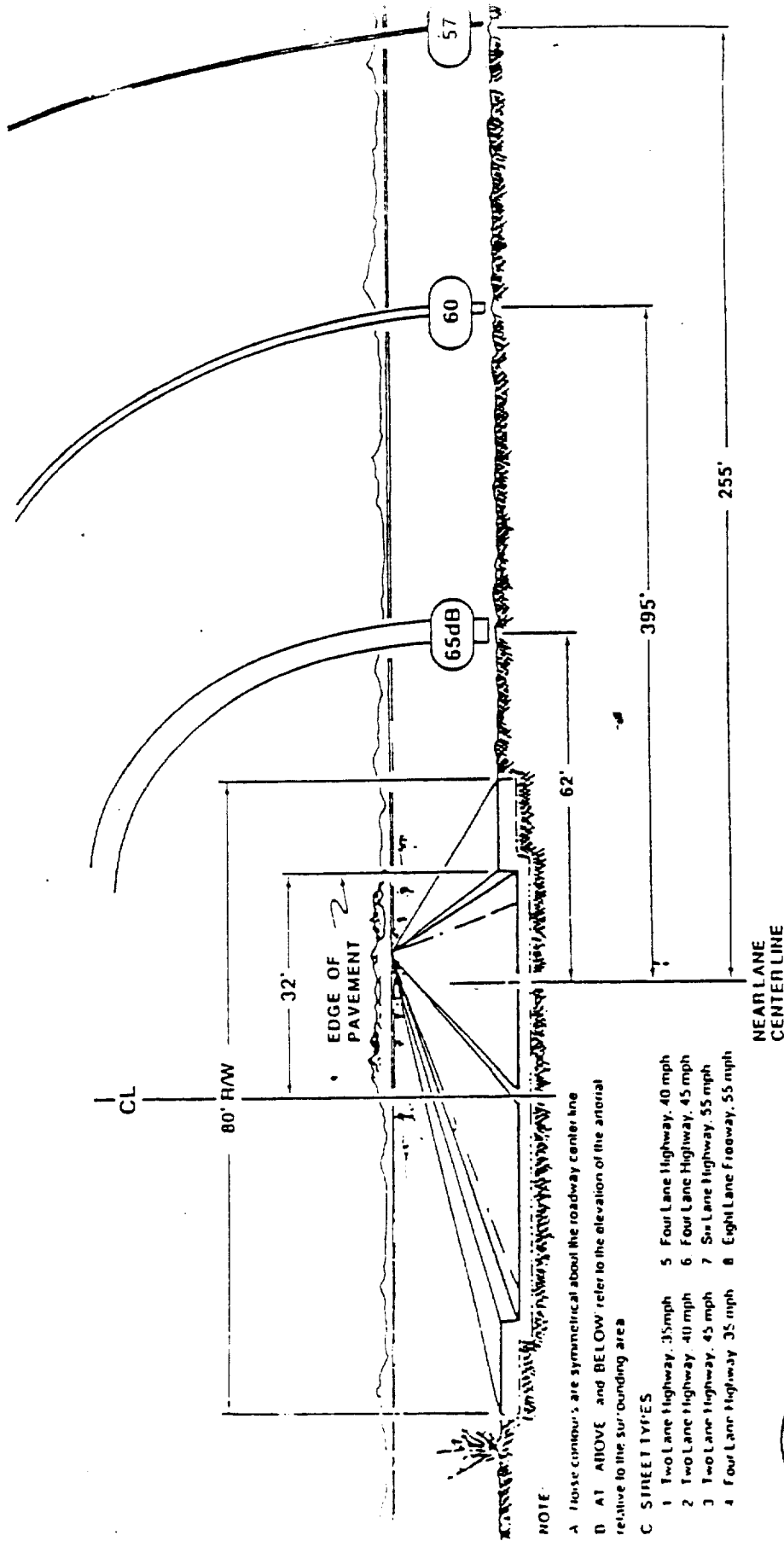
Ldn and CNEL are generally considered to be equivalent descriptors of the community noise environment within + 1.0 dB. State law requires that CNEL be used to quantify noise exposure resulting from the operation of civilian airports. Ldn is the descriptor preferred by the California Office of Noise Control and applied by all federal agencies.



# SECONDARY HIGHWAY

TYPICAL:	ARTERIAL REACH	ST.	TRUCK MIX	Ldn	DISTANCE TO CONTOURS, 1987
ROUTE 2	3	AT	6.7	1.3	5,700
W.O. Route 138	3	AT	6.7	1.3	5,700
					66.0
					255
					155
					62
					57dB
					60dB
					65dB
					70dB
					75dB
					80dB

CL 80' R/W 32' EDGE OF PAVEMENT 62' 395' 255'



- NOTE:**
- A Noise contours are symmetrical about the roadway center line
  - B AT ABOVE and BELOW refer to the elevation of the arterial relative to the surrounding area
  - C STREET TYPES
    - 1 Two Lane Highway, 35 mph
    - 2 Two Lane Highway, 40 mph
    - 3 Two Lane Highway, 45 mph
    - 4 Four Lane Highway, 35 mph
    - 5 Four Lane Highway, 40 mph
    - 6 Four Lane Highway, 45 mph
    - 7 Six Lane Highway, 55 mph
    - 8 Eight Lane Freeway, 55 mph



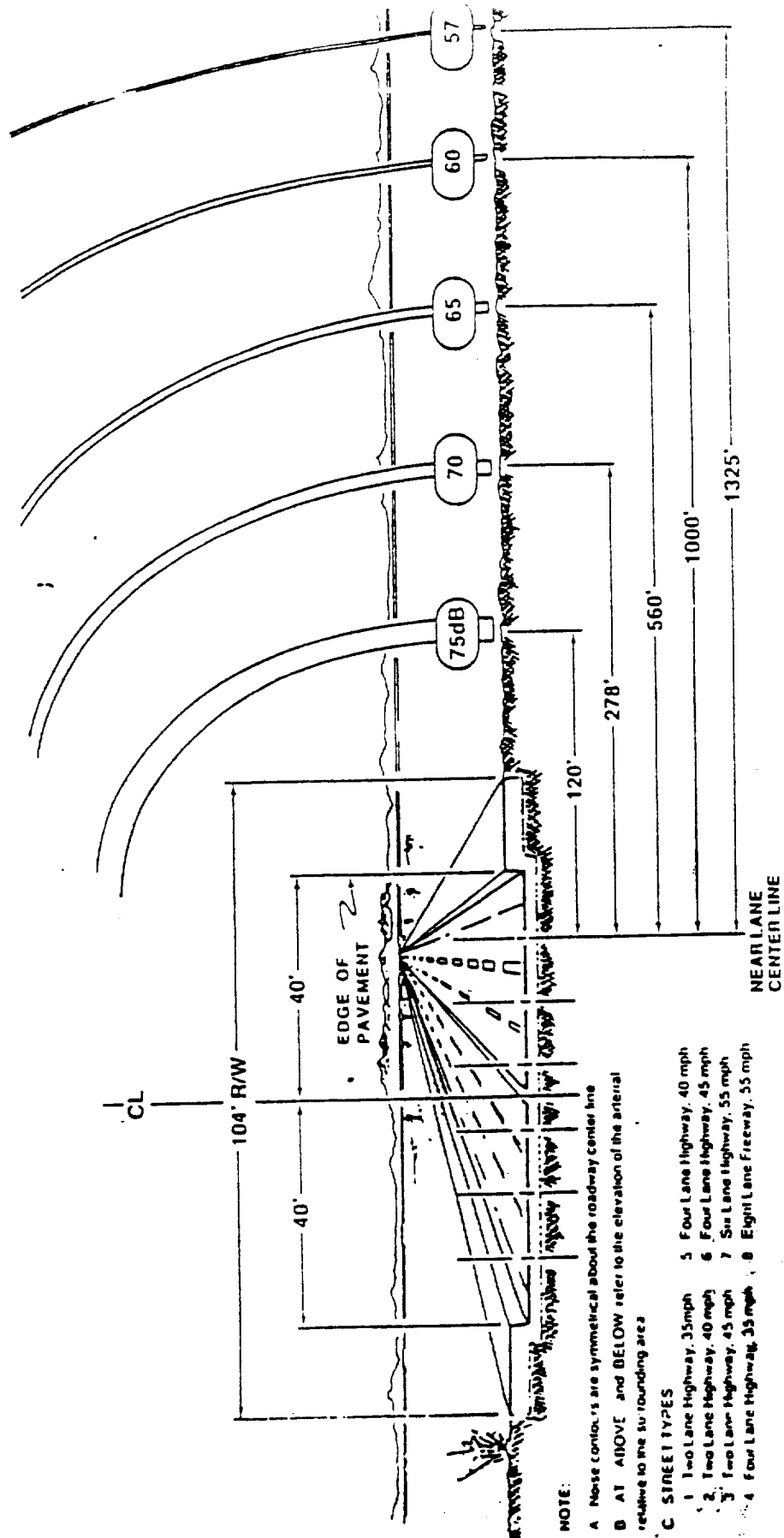
Typical Secondary Highway Cross Section with Ldn Contours Adjacent to the Roadway.  
 (For a complete listing of contour distances, refer to Tables 1-4.)

## Secondary Highway



# MAJOR HIGHWAY

TYPICAL: ARTERIAL REACH		ST.		TRUCK MIX		Ldn		DISTANCE TO CONTOURS, 1987					
ROUTE 15		TYPE	GRADE	% MTr	% HTr	ADT	(r=50')	(57dB)	(60dB)	(65dB)	(70dB)	(75dB)	(80dB)
N/O Route 215		7	AT	4.3	15.7	59,300	79.5	1325	1000	560	278	120	---



- NOTE:**
- A Noise contours are symmetrical about the roadway center line
  - B AT ABOVE and BELOW refer to the elevation of the arterial relative to the surrounding area
  - C STREET TYPES
    - 1 Two Lane Highway, 35mph
    - 2 Two Lane Highway, 40 mph
    - 3 Two Lane Highway, 45 mph
    - 4 Four Lane Highway, 35 mph
    - 5 Four Lane Highway, 40 mph
    - 6 Four Lane Highway, 45 mph
    - 7 Six Lane Highway, 55 mph
    - 8 Eight Lane Freeway, 55 mph



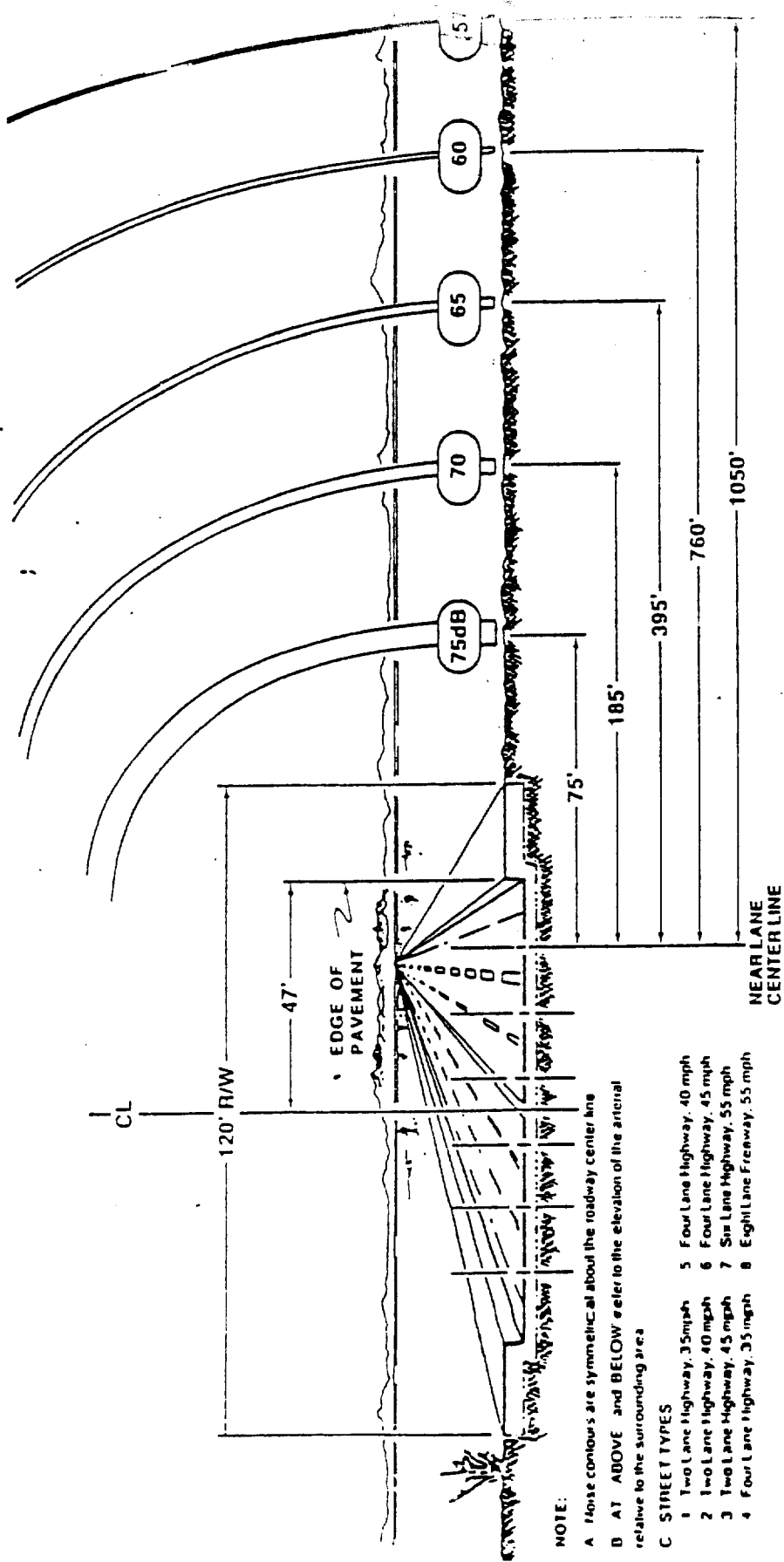
Typical Major Highway Cross Section with Ldn Contours Adjacent to the Roadway.  
(For a complete listing of contour distances, refer to Tables 1-4.)

Major Highway



# DIVIDED MAJOR HIGHWAY

TYPICAL: ARTERIAL REACH		ST.	TRUCK MIX	Ldn	DISTANCE TO CONTOURS, 1987								
ROUTE 10			% MTr	% HTr	ADT	in 50'	57dB	60dB	65dB	70dB	75dB	80dB	
N OR Riverside County Line		7	AT	5.4	8.1	48,400	77.0	1050	760	395	185	75	---



- NOTE:
- A Noise contours are symmetric about the roadway center line
  - B AT ABOVE and BELOW refer to the elevation of the arterial relative to the surrounding area
  - C STREET TYPES
    - 1 Two Lane Highway, 35 mph
    - 2 Two Lane Highway, 40 mph
    - 3 Two Lane Highway, 45 mph
    - 4 Four Lane Highway, 35 mph
    - 5 Four Lane Highway, 40 mph
    - 6 Four Lane Highway, 45 mph
    - 7 Six Lane Highway, 55 mph
    - 8 Eight Lane Freeway, 55 mph



Typical Divided Major Highway Cross Section with Ldn Contours Adjacent to the Roadway.  
 (For a complete listing of contour distances refer to Tables 1-4.)

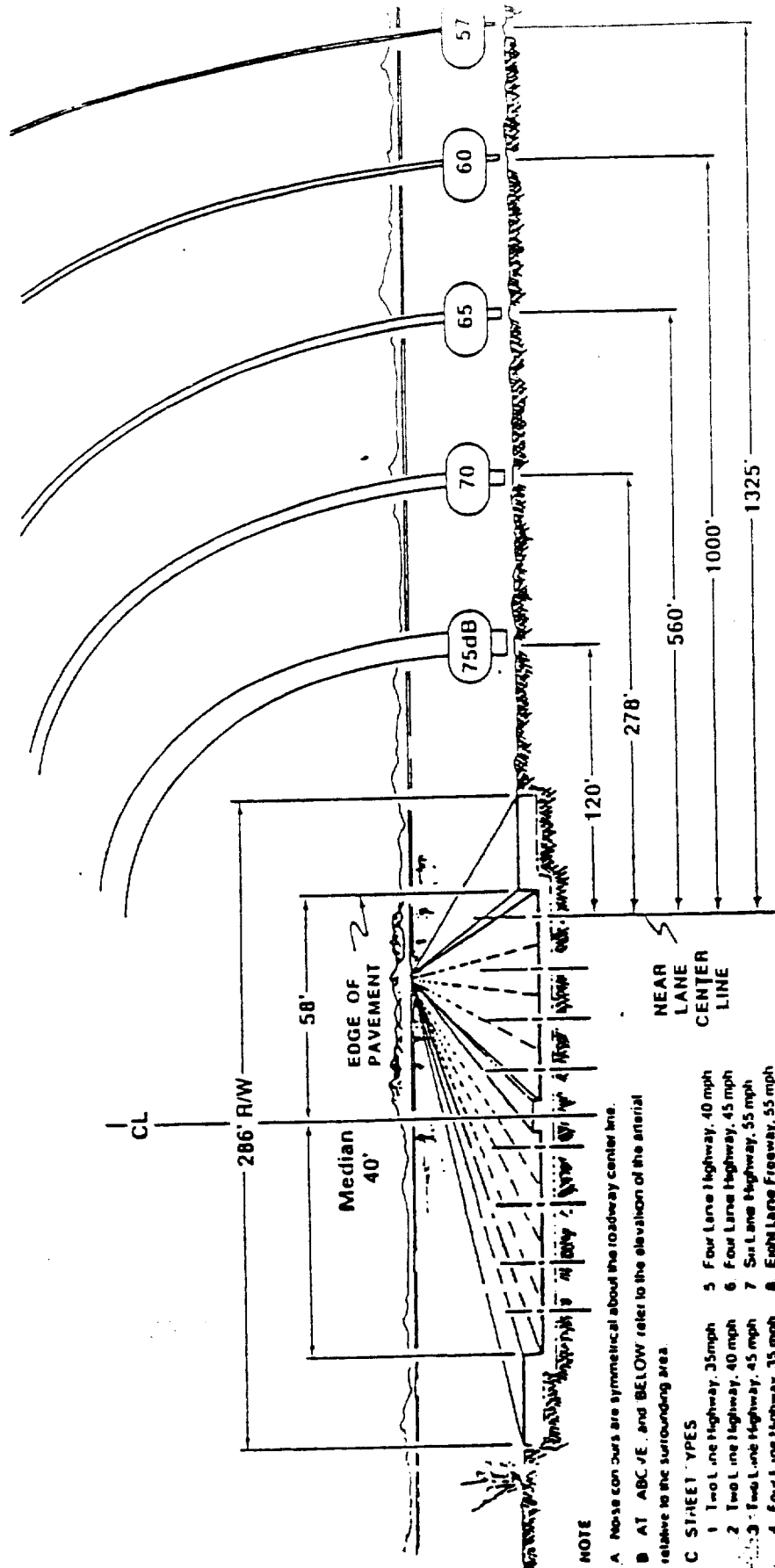
Divided Major Highway



# FREEWAY

ST.	TRUCK MIX	Ldn	DISTANCE TO CONTOURS, 1987							
TYPE	GRADE	%MTI	%HTI	ADI	50'	75dB	80dB			
0	AT	4.1	21.5	46,700	79.5	1325	1000	560	278	120

TYPICAL: ARTERIAL/REACH  
 ROUTE 15  
 S O Route 10



- NOTE**
- A. Noise contours are symmetrical about the roadway center line.
  - B. AT, ABOVE, and BELOW refer to the elevation of the arterial relative to the surrounding area.
  - C. STREET TYPES
    - 1. Two Lane Highway, 35 mph
    - 2. Two Lane Highway, 40 mph
    - 3. Two Lane Highway, 45 mph
    - 4. Four Lane Highway, 35 mph
    - 5. Four Lane Highway, 40 mph
    - 6. Four Lane Highway, 45 mph
    - 7. Six Lane Highway, 55 mph
    - 8. Eight Lane Freeway, 55 mph



Freeway

Typical Freeway Cross Section with Ldn Contours Adjacent to the Roadway.  
 (For a complete listing of contour distances refer to Tables 1-4.)



No airports are located in or adjacent to the City of Yucaipa, but aircraft noise is detected in the City due to overhead flight patterns. Noise from this source is currently considered insignificant, but may increase in the future.

**3. Noise Survey Results**

Through 1987 and 1988, noise measurements were obtained at 91 locations within San Bernardino County. These locations were chosen based upon their proximity to noise-producing activities, proximity to residences or other noise-sensitive land uses or some combination of these factors. They are representative of the noise which people experience in the vicinity of the following.

- a. Freeways and Highways
- b. Major and Secondary Arterials
- c. Rail Lines
- d. Railroad Classification Yards
- e. Airports
- f. Commercial/Industrial Areas
- g. Recreational Areas/Facilities

Of the 91 measurements, 16 were obtained over a 24-hour period, 28 were obtained during three periods per day (morning, midday and late afternoon) and 47 were recorded during a single midday period at noise-sensitive land uses (schools, libraries, etc.) or at specific noise generators. The tables and figures in this element are based on the results of this survey.

**4. Freeway and Highway Traffic Noise**

Ldn values at the closest residential locations bordering the 10 freeway are currently in the range of 70 to 75 dB. This range of levels is greater than is generally considered acceptable and may compromise the welfare of local residents.

**5. Traffic Noise from Major and Secondary Arterials**

The Ldn values at residential locations directly adjacent to most of the major and secondary arterials within the City currently exceed 65 dB. The noise exposure at these residential locations is considered to be excessive. Excessive noise levels of roads having an ADT (Average Daily Traffic) count of less than 5,000 generally fall within the public right-of-way, not affecting adjacent properties. Therefore, these are not included. **Table VIII-2** below provides a listing of representative arterials within the City and the Ldn measured or estimated (based on limit measurements) at adjacent residential locations.

**Table VIII-2  
Typical Traffic Noise Levels at Adjacent Residential Locations**

<u>Ldn on 70 to 75 dB</u>	<u>Ldn 65 to 70 dB</u>
Yucaipa Boulevard California Street	Bryant Street

**6. Aircraft Noise from Commercial Airports**

Aircraft noise is not expected to be an area of significant impact within Yucaipa as no existing commercial airports are near enough in proximity to the City to be the source of significant noise impacts.

**7. Aircraft Noise from Military Airports**

The nearest airport to the City of Yucaipa is ~~Norton Air Force Base~~, Redlands-Municipal Airport, northeast northwest of Mentone Redlands. However, the impact from this airport is not anticipated to be significant due to its distance from the City.

**8. Railroad and Classification Yard Noise**

There are no railroads or railroad facilities within the City.

**9. Rapid Transit**

There are no ground rapid transit systems within the City to be analyzed.

**10. Commercial/Industrial Noise**

In general, commercial/industrial noise within the City of Yucaipa is not considered to be a serious problem. However, where residential locations are adjacent to heavy industrial zones or trucking operations a significant impact may exist. Such impacts are primarily related to noise generated by loading dock operations, trucks entering and leaving the area and mechanical equipment located outside buildings. **Table VIII-3** below provides a summary of typical noise levels in the vicinity of commercial/industrial operations.

**Table VIII-3  
Typical Commercial/Industrial Noise Levels**

<u>Noise Source</u>	<u>Noise Levels</u>
Track and Cement Loading	83 dB(A) @ 60'
Metal Dropping	68 dB(A) @ 65'
Hammering, Airtools, Paging, Forklift Operations	73 dB(A) @ 200'
Batch Plant	N/A
Truck Loading, Compressor Operations	55 dB(A) @ 1,000'
Hammering, Airtools, Paging, Forklift Operations, Tow Truck	74 dB(A) @ 150'
Sawing and Forklift Operations	67 dB(A) @ 750'

The impact of normal construction activity during the daytime hours is considered nominal. However, late night and weekend disturbances caused by construction noise may cause a significant impact when experienced at nearby residential locations. An Leq and Ldn estimation procedure for construction noise activity is included as **Appendix H**, "Construction and Activity Noise Contour Methodology."

**11. Recreation**

Recreational uses can also produce excessive noise levels. In the City, such uses include shooting facilities, water sports areas and outdoor concerts, as well as the use of off-road vehicles. Typical noise levels for recreational sites are summarized in **Table VIII-4** below.

**Table VIII-4  
Typical Recreational Noise Levels**

<u>Type of Activity</u>	<u>Maximum Noise Levels</u>
Off-Road Vehicle Activity	76 dB(A) @ 100'
Fairs and Carnivals	60 dB(A) @ 1,500'
Motorcycle Riding	62.5 dB(A) @ 300'
Group Picnic Area	67 dB(A) @ 300'
Shooting Range	71.5 dB(A) @ 250'

- a. **Shooting Ranges**  
The noise level generated by a firearm will depend on the type of weapon, the amount of powder per case and the direction of discharge. The following measured noise levels are typical of the listed sources. (See also **Table VIII-4** above.)

<u>Weapon</u>	<u>Maximum Noise Level</u>
Shotgun, Remington Model 1100, 12 gauge, 26" barrel	84 dB(A) @ 3,000'
.38 Caliber Smith & Wesson 38 Special	66 dB(A) @ 3,000'
.30 Caliber Carbine, Ruger single action	65 dB(A) @ 3,000'

- b. **Off-Road Motorcycle Racing**  
Noise measurements taken for ten motorcycles in a pass-by at 50 feet have maximum sound levels ranging from 89 dB(A) at 50 feet for a 500 cc 2-stroke Honda to 77 dB(A) at 50 feet for a 250 cc 2-stroke Honda. Confined course riding also generates significant noise levels. Measurements indicate a maximum sound level of 77 dB(A) at 100 feet for ten motorcycles with displacement ranging from 250 cc to 600 cc. (See also **Table VIII-4** above.)

## 12. **Noise-sensitive Locations—Schools**

In general, existing noise levels at schools are not considered to be excessive. However, measurements indicate that Leq values may exceed 52 dB at the exterior facade of classrooms at Yucaipa Elementary School on California Street.

In addition, several other sources of noise affect City residents in their daily activities. They include the following.

- o Mechanical/Electrical Equipment  
(i.e., air conditioning, refrigeration units, swimming pool and spa pumps and filters, air compressors)
- o Power Tools  
(i.e., lawn mowers, leaf blowers, other gardening equipment)
- o Construction Activities  
(i.e., construction, repair, remodeling or grading)
- o Animal Noise (i.e., barking dogs)
- o Other Human-related Activity (i.e., loud parties, music, radio, television, children playing)

## **C. Future Trends**

### 1. **Mobile Noise Sources**

- a. **Motor Vehicles**  
As the City continues to develop, and predicted increases in traffic occur, motor vehicle noise will continue to be significant, even if individual vehicles eventually meet State noise standards. An increased use of mass transit systems and effective noise barriers may contribute to noise reduction. Future motor vehicle

noise contours projected for the year 2007, incorporating an assumed future motor vehicle noise reduction of 1.9 dB(A) are described in **Table VIII-5** below.

**Table VIII-5  
Future Noise Contours**

<u>Arterial</u>	<u>Grade</u>	<u>Ldn at 50'</u>	<u>60dB</u>	<u>Distance to Contours</u>		
				<u>65dB</u>	<u>70dB</u>	<u>75dB</u>
Route 10 at Yucaipa Blvd.	AT	82.0	1250	760	395	185
Bryant St. at Yucaipa Blvd.	AT	72.5	428	200	83	---
California St. at Ave. "E"	AT	68.0	215	90	---	---
Yucaipa Blvd. at 13th St.	AT	73.0	460	215	90	---

b. Aircraft

Although aircraft are becoming quieter, increased traffic and greater demand for new airport facilities may limit substantial progress in noise reduction efforts. The role of the ALUC in reconciling noise levels with land use compatibility is extremely important. Military supersonic and low altitude flight corridors should have a reduced impact on residents as a Bureau of Land Management exchange program removes residents from these areas.

**2. Stationary Noise Sources**

As the City continues to develop, it is expected that noise levels from stationary sources will increase. However, through the use of more comprehensive noise control measures, the enactment and enforcement of a noise ordinance and review during the development process, such impacts can be minimized.

**D. Noise Goals, Policies and Actions**

The overall purpose of the City of Yucaipa General Plan Noise Element is to protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise and to protect the economic base of the City by preventing the encroachment of incompatible land uses within areas affected by existing noise-producing uses.

The following General Plan goals for the Noise Element have been identified through a process of community review and were developed in conjunction with City staff, the General Plan Advisory Committee (GPAC), the Planning Committee and the City Council.

The corresponding policies focus on the prevention of new noise-related land use conflicts by requiring that all relevant development plans, programs and proposals be reviewed to determine whether such plans, programs and proposals adequately address noise and its potential affects. The information contained within this document should be used as a guideline for determining whether reported noise exposure or proposed noise mitigation measures are likely to achieve the desired results. Control of noise at the source and through the thoughtful location and orientation of receiving uses should be given preference over the control of noise at the path of transmission through the use of noise barriers.

**Goal N-1** Develop and adopt specific policies and an effective implementation program to abate and avoid excessive noise exposures in the City.

**Policies**

- A. Require effective noise mitigation measures be incorporated into the design of new noise-generating and new noise-sensitive land uses.
- B. Because excessive noise can interfere with sleep, speech and health, yet can be mitigated to acceptable levels through land use design requirements, the following actions shall be implemented.

**Actions**

- 1. Areas within the City shall be designated as “noise-impacted” if they are exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in **Tables VIII-6 and VIII-7**.
- 2. New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of **Tables VIII-6 and VIII-7**. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, churches and libraries.

**Table VIII-6  
Interior/Exterior Noise Level Standards  
Mobile Noise Sources**

Categories	Land Uses Uses	Ldn (or CNEL), dB	
		Interior <sup>1</sup>	Exterior <sup>2</sup>
Residential	Single & Multi-family Duplex	45	60 <sup>3</sup>
	Mobile Home	45	60 <sup>3</sup>
Commercial	Hotel, Motel, Transient Lodging	45	60 <sup>3</sup>
	Commercial Retail, Bank, Restaurant	50	---
	Office Building, R & D, Offices	45	65
Institutional/Public	Amphitheater, Hall, Auditorium, Theater	45	---
	Hospital, School, Church, Library	45	65
Open Space	Park	---	65

- 1 interior living environment excluding bathrooms, kitchens, toilets, closets and corridors
- 2 outdoor environment limited to private yards of single-family dwellings, multi-family private patios or balconies, mobile home parks, hospital/office building patios, park picnic areas, school playgrounds and hotel and motel and recreation areas
- 3 An exterior noise level of up to 65 dB Ldn (or CNEL) will be allowed, provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB Ldn (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed will necessitate the use of air conditioning or mechanical ventilation.

**Table VIII-7  
Hourly Noise Level Performance Standards  
Stationary and Other Locally-regulated Sources\***

Land Use Category	7 a.m. to 10 p.m.		10 p.m. to 7 a.m.	
	Leq	Lmax	Leq	Lmax
Residential or other Noise sensitive receivers	55 dB(A)	75 dB(A)	45 dB(A)	65 dB(A)

\*noise sources, which are not preempted from local noise control, including vehicles, operated on public roadways and aircraft in flight

3. When industrial, commercial or other land uses, including locally-regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of **Table VIII-6** within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of **Table VIII-6** at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.
  
4. Prior to approval of proposed development of new residential or other noise-sensitive land uses in a noise-impacted area or a new noise-generating use in an area which could affect existing noise-sensitive land uses, an acoustical analysis shall be required. The appropriate time for requiring an acoustical analysis is during the environmental review process so that noise mitigation can be an integral part of the project design. The acoustical analysis shall conform to the following requirements.
  - a. The analysis shall be the responsibility of the applicant.
  - b. The analysis shall be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
  - c. The analysis shall include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  - d. The analysis shall include estimated noise levels in terms of the descriptors shown in **Tables VIII-6 and VIII-7** for existing and project future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.

- e. The analysis shall include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent, single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
  - f. The analysis shall include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided.
5. The City of Yucaipa shall develop and employ procedures to ensure that requirements imposed pursuant to the finding of an acoustical analysis are implemented as part of the project review and building permit process.
  6. The City of Yucaipa shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that an acoustical analysis be prepared for all new developments of multi-family dwellings, condominiums, hotels and motels proposed for areas within the 60 dB Len (or CNEL) contour with a major noise source for the purpose of documenting that an acceptable interior noise level of 45 dB Len (or CNEL) will be achieved with the windows and doors closed. UBC Chapter 35 requires that common wall and floor/ceiling assemblies within multi-family dwellings comply with minimum standards for the transmission of airborne sound and structure-borne impact noise.
- C. Because City residents may be exposed to vehicular noise sources in excess of acceptable levels, the City shall actively support enforcement of existing sections of the California Vehicle Code relating to adequate vehicle mufflers and modified exhaust systems. The City shall also limit truck traffic in residential and commercial areas to designated truck routes, limit construction, delivery and through truck traffic to designated routes, and distribute maps of approved truck routes to City traffic officers.
  - D. Because the noise environment is dynamic, the City shall periodically review and update the Noise Element and effected portions of other General Plan elements to ensure that noise exposure information and specific policies are consistent with changing conditions within the City and with noise control regulations enacted after the adoption of this element.

**Goal N-2** Provide sufficient noise exposure information so that existing and potential noise impacts may be effectively addressed in the land use planning and project review processes.

**Policy**

- A. Because noise sources are transjurisdictional, the City of Yucaipa shall work to achieve maximum efficiency in abatement through inter- and intra-governmental coordination and public information through the following actions.

**Actions**

- 1. Consider the following noise mitigation measures in the design of new and the rebuilding of existing City streets and highways.
  - a. alignment
  - b. barriers
  - c. lateral separation
  - d. vertical profile
  - e. other appropriate noise attenuation techniques
- 2. Include in the capital improvements budget funds for construction of remedial mitigation measures for areas impacted by existing highways and streets according to the following priorities.
  - a. degree of sensitivity
  - b. excess of the maximum allowable standards
  - c. length of time the noise impact existed
  - d. number of residential units
- 3. Examine the existing and projected future noise environment when considering amendments to the circulation system.
- 4. Compile and publish a list of standardized noise mitigation measures.

**Goal N-3** Protect areas within the City where the present noise environment is within acceptable limits.

**Policies**

- A. Because City residents are exposed to levels considered to be excessive from stationary sources such as industrial, recreational and construction activities, as well as mechanical and electrical equipment, the City shall enforce the Hourly Noise Level Performance Standards for stationary and other locally-regulated sources (**Table VIII-7**) through the development and implementation of a noise ordinance that will conform to the following criteria.

**Actions**

- 1. The ordinance shall be consistent with this component of the General Plan and State law.
- 2. The ordinance shall include the development standards portion in the Development Code.
- 3. The ordinance shall establish a central authority ~~in the County Department of Environmental Health Services~~ with the

responsibilities of Noise Ordinance enforcement, noise monitoring, noise problems and programs.

4. The ordinance shall establish a City Noise Abatement Program including an ongoing evaluation program to catalog, evaluate and solve noise complaints, test noise reduction measures for effectiveness, refine mitigation measures and assemble and study programs from the Environmental Protection Agency (EPA), the State Resources Agency and other Federal, County and State-related programs for input into the City Noise Abatement Program.
5. The ordinance shall develop an implementation chart identifying the responsibilities of each City division involved in the noise-related review process.
6. The ordinance shall require any project (new construction or additions) to meet the City Noise Ordinance standards as a condition of building permit approval.
7. The ordinance shall require developers to depict on any appropriate development application review (i.e., zone change, subdivision, site approval, site plan and building plans) any potential noise sources known at the time of submission and mitigation measures that ensure these noise sources meet City Noise Ordinance Standards. Such sources include, but are not limited to, the following.
  - a. truck pick-up and loading areas
  - b. mechanical and electrical equipment such as air conditioning, swimming pools pumps and filters, spa pumps, etc.
  - c. exterior work areas
  - d. exterior nuisances such as speaker boxes and outdoor public address systems
8. The ordinance shall condition subdivision approval adjacent to any developed/occupied noise-sensitive land uses by requiring the developer to submit a construction-related noise mitigation plan to the City for review and approval prior to the issuance of grading permits. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project through the use of such methods as the following.
  - a. temporary noise attenuation fences
  - b. preferential location of equipment
  - c. use of current technology and noise suppression equipment

- B. Because City residents are exposed to vehicular noise sources in excess of acceptable levels, new equipment and vehicles purchased by the City of Yucaipa shall comply with noise level performance standards consistent with the best available noise-reduction technology.

### **Glossary of Terms**

<b>dB(A)</b>	The <u>A-Weighted Sound Pressure Level</u> is the sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.
<b>dB</b>	A <u>Decibel</u> is a unit for describing the amplitude of sound equal to twenty times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals. Because they are logarithmic, decibels are not additive. If two similar noise sources produce the same amount of noise (say, 100 dB each), the total noise level will be 103 dB, not 200 dB. An increase in noise level of 10 dB is generally perceived as being twice as loud.
<b>Ldn</b>	The <u>Day-Night Noise Level</u> is the average equivalent A-weighted sound level during 24-hour day obtained by adding ten decibels to the hourly noise levels measured during the night (from 10pm to 7am). In this way, Ldn takes into account the lower tolerance of people for noise during night-time periods.
<b>Noise Contour</b>	A <u>Noise Contour</u> is a line drawn about a noise source indicating constant levels of noise exposure. Noise contours represent lines of equal noise exposure, just as the contour on a topographic map represents lines of equal elevation. Ldn is the metric utilized herein to describe community exposure to noise.
<b>Noise-Sensitive Land Uses</b>	<u>Noise-Sensitive Land Uses</u> include, but are not limited to, residences, schools, libraries, hospitals, churches, offices, hotels, motels and outdoor recreational areas. These typify land uses where suitability is restricted by intrusive noises. Hence, they are termed "noise-sensitive." Noise-sensitivity factors include interference with speech communication, subjective judgment of noise acceptability and relative noisiness, need for freedom from noise intrusion and sleep interference criteria. The Land Use Element of this General Plan provides a description of the residential areas throughout the City and is considered the source for the inventory of noise-sensitive areas.