PLEASE NOTE:

This copy of Ordinance No. 196.11 is a “redlined” version for your convenience. Text additions are designated by an underline and text deletions are designated with a strikethrough.

REGULAR

NUMBER: 196.11

TITLE: AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MILPITAS AMENDING CHAPTER 213 OF TITLE V OF THE MILPITAS MUNICIPAL CODE RELATING TO DAYTIME RESIDENTIAL ZONE NOISE LEVELS

HISTORY: This Ordinance was introduced (first reading) by the City Council at its meeting of _____, upon motion by_____ and was adopted (second reading) by the City Council at its meeting of _____, upon motion by _____. The Ordinance was duly passed and ordered published in accordance with law by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Mary Lavelle, City Clerk

APPROVED:

_____
Jose S. Esteves, Mayor

APPROVED AS TO FORM:

_____
Michael J. Ogaz, City Attorney

RECITALS AND FINDINGS:

WHEREAS, the Milpitas Noise Ordinance is codified in Title V, Chapter 213, Section V-213-2 of the Milpitas Municipal Code; and

WHEREAS, the Milpitas Noise Ordinance currently prohibits any person in any district zoned for residential use to make, continue or cause to be made or continued any disturbing noise between the hours of 10:00 p.m. in the evening to 7:00 a.m. in the morning; and

WHEREAS, the Milpitas Noise Ordinance does not regulate disturbing noise in any district zoned for residential use between the daytime hours of 7:00 a.m. in the morning and 10:00 p.m. in the evening; and

WHEREAS, the City of Milpitas has received a number of complaints regarding noise levels in residential zoned districts and wishes to amend the Milpitas Noise Ordinance to regulate any disturbing noise level that impacts public health and safety and the quality of life in residential areas; and

WHEREAS, the Planning Division completed an environmental assessment for the project in accordance with the California Environmental Quality Act (CEQA), and recommends that the City Council determine this project is exempt under CEQA Guidelines Section 15061(b)(3) since there are no potential environmental impacts from regulating day and evening time noise levels.

NOW, THEREFORE, the City Council of the City of Milpitas does ordain as follows:

SECTION 1. RECORD AND BASIS FOR ACTION

The City Council has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to the City Council. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

SECTION 2. AMENDMENT OF MILPITAS MUNICIPAL CODE CHAPTER 213 OF TITLE V

Sections V-213-1 through V-213-3 of the Milpitas Municipal Code are hereby repealed in their entirety and replaced with the text below to read as follows:

V-213-1 Declaration of Intent

The Council finds and declares that excessive sound and excessive vibration caused by sound are a hazard to public health and welfare, safety and the quality of life in residential areas; that persons living in residential areas are entitled to the reasonable use and enjoyment of their property without exposure to excessive sound and vibration ~~during evening and early morning hours~~; that everyone's right to use and enjoy their~~his~~ property must be exercised with respect to the right of ~~his~~their neighbor to use and enjoy ~~his~~their property; that the regulation of excessive sound and vibration in residential areas of the City of Milpitas is necessary to accomplish this purpose.

V-213-2 Definitions

2.01 "Ambient Noise Level" as used herein in this Chapter means the continuous equivalent-energy level (Leq) measured for a minimum of three (3) minutes, or until the Leq remains within a one (1) dB spread, and with the noise issue at silent. If the measuring instrument does not integrate the Leq instantaneously, the ambient shall be the average noise level displayed on the meter.

2.02 “Construction Site” as used herein in this Chapter means any site preparation, assembly, erection, substantial repair, alteration or similar action on any property.

2.03 “Decibel (dB)” as used herein in this Chapter means a unit for measuring the amplitude of sound, equal to twenty (20) times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) micro-pascals.

2.04 ~~The term~~ "~~d~~Disturbing ~~n~~Noise" as used herein in this Chapter means any sound or vibration caused by sound which occurs with such intensity, frequency or in such a manner as to disturb the peace and quiet of ~~any~~ reasonable person of normal sensitivity residing in that area. It shall include, but not be limited to noise from the following sounds (this enumeration not being exclusive but only illustrative):

(1) The use, operation, playing of any radio, television, musical instrument or instruments, phonograph, stereo, loud speaker, sound amplifier or other device for the production or reproduction of sound with louder volume than is necessary for hearing for any person or persons who are in the room, vehicle or chamber in which such machine or device is operated and who are voluntary listeners thereto.
(2) The sounding of any horn or signal device or siren except as a danger warning.
(3) The operation of any machinery or tool.
(4) The continuous or recurrent acceleration of a motor vehicle or other engine while stationary ("revving" the engine).
(5) Yelling, shouting, hooting, whistling, ~~or~~ singing, or similar types of noise ~~on a public street~~.

2.05 “Emergency” as used herein in this Chapter means any occurrence or set of circumstances involving actual or imminent physical danger, crisis, trauma, or property damage which demands immediate action.

2.06 “Equivalent Energy Level (Leq)” as used herein in this Chapter means the level of a steady state of noise that has the same sound energy as a given time-varying noise.

2.07 “Holiday” as used in this Chapter means New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

2.0~~83~~ ~~The term~~ "~~p~~Person" as used herein in this Chapter means any individual, association, partnership, corporation or other private or public entity~~entity~~.

~~2.04 Construction Site a construction site for the purpose of this chapter is a parcel of real property on which any building or related improvement of road, walkway, pool or landscape, construction is taking place or to which construction materials, supplies or implements are delivered in connection with such construction activities.~~

~~2. 05 Emergency shall mean any occurrence or set of circumstances involving actual or imminent physical danger, crisis, trauma, or property damage which demands immediate action.~~

~~2.06 Holiday means New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.~~

2.0~~97~~ “Weekdays” as used herein in this Chapter shall mean any Monday through Friday~~,~~ that is not a holiday as defined herein.

2.107 "Weekends" as used herein in this Chapter shall mean Saturdays and Sundays, that are not holidays as defined herein.

V-213-3 Unlawful to Create or Permit Disturbing Noise

(a) Residential Zone Regulations.

3.01 It shall be unlawful for any person in any district zoned for residential use (under the provisions of Chapter 10, Title XI of the Milpitas Municipal Code) to make, continue, maintain, permit or cause to be made, continued, maintained, or permitted ~~to be made or continued~~ any ~~d~~Disturbing ~~n~~Noise ~~between the hours of 10:00 p.m. in the evening to 7:00 a.m. in the morning~~ that increases the noise exposure level by three (3) dB over the local ambient noise level measured from the property line of the noise source, or more than 65 dB measured from the property line of the noise source, whichever is more restrictive.

3.02 It shall be unlawful for any person who owns, possesses, or controls any real property in any district zoned for residential use (under the provisions of Chapter 10, Title XI of the Milpitas Municipal Code) to make, continue, maintain, permit or cause to be made, continued, maintained or permitted ~~to be made or continued~~ any ~~d~~Disturbing ~~n~~Noise that increases the noise exposure level by three (3) dB over the local ambient noise level measured from the property line of the noise source, or more than 65 dB measured from the property line of the noise source, whichever is more restrictive.

~~between the hours of 10:00 p.m. in the evening to 7:00 a.m. in the morning which is made within 100 feet of any building or place regularly used for sleeping purposes; and, disturbs any person(s) within hearing distance.~~

3.03 Notwithstanding any other provision of this Chapter and in addition thereto, it is unlawful for any person or any person who owns, possesses, or controls real property in any district zoned for residential use (under provisions of Chapter 10, Title XI of the Milpitas Municipal Code) to make, continue, maintain, permit, or cause to be made, continued, maintained or permitted any Disturbing Noise. It shall be prima facie violation of this Section if any Disturbing Noise is audible during the hours of 10:00 p.m. to 7:00 a.m. from a distance of fifty (50) feet from the property line of the noise source or from a distance of one hundred feet (100) from any nonstationary noise source. It shall also be prima facie violation of this Section if any Disturbing Noise is audible during the hours of 7:01 a.m. to 9:59 p.m. from a distance of one hundred feet (100) from the property line of the noise source or any nonstationary noise source.

3.043 The above prohibition against making, continuing, maintaining or permitting~~causing to be made or continued~~ any ~~d~~Disturbing ~~n~~Noise in any district zoned for residential use shall not apply to the authorized collection of solid waste, recyclables, and/or yard trimmings by an authorized collector beginning at 6:00 a.m.

(b) Site Construction Regulations.

3.05 No person shall engage or permit others to engage in construction of any building or related road or walkway, pool or landscape improvement or in the construction operations related thereto, including, delivery of construction materials, supplies, or improvements on or to a construction site except within the hours of 7:00 a.m. to 7:00 p.m. on weekdays and weekends. No construction work shall be conducted or performed on the holidays indicated in Section V-213-2-2.05 of this ~~c~~Chapter.

~~(c)~~ 3.06 Exemption from Off-Site Construction Regulations.

Exempt from the Off-Site Construction Regulations of this article are as follows:

(1) Emergency construction and repair that is necessary for protection of life and property,
(2) Operation preempted from local regulation by state law, such as construction of public school buildings,
(3) Furnishing utility-type service including construction and maintenance of utility facilities,
(4) Any work on an existing single-family or duplex (two-family) dwelling undertaken by the property owner,
(5) Operation to construct and maintain facilities within the public right-of-way as deemed necessary by the Public Works Director, and
(6) Any other circumstances where the City Manager deems that an exemption would be appropriate.

Sections V-213-4 through V-213-5 of the Milpitas Municipal Code are hereby repealed in their entirety and replaced with the text below to read as follows:

V-213-4 Public Nuisance~~Determination of Violation~~

~~(a) Notice of Violation. Notwithstanding Section V-213-5 and except in the case, after a verbal or written warning of a violation has been given, the City is satisfied that a person is acting in good faith and with deliberate speed to comply with Section V-213-3(b), a continuing violation of Section V-213-3(b) shall be cause for either a citation and stop work notice, an infraction as specified in Section V-213-5, or an abatement order issued by the City of Milpitas pursuant to Section I-20-4 of the Milpitas Municipal Code.~~

~~b) Public Nuisance.~~The Council finds and declares that a violation of this Chapter shall constitute a public nuisance~~ if said violation disturbs the peace and quiet of one (1) or more persons in at least two (2) households~~.

V-213-5 Violation as Infraction

In addition to such other remedies as are provided by law, ~~T~~the violation of this Chapter ~~shall~~ may constitute an infraction under the provisions of I-1-4.09-1, I-1-4.09-2 and I-1-4.09-3 of the Milpitas Municipal Code.

SECTION 4. SEVERABILITY

The provisions of this Ordinance are separable, and the invalidity of any phrase, clause, provision or part shall not affect the validity of the remainder.

SECTION 5. EFFECTIVE DATE AND POSTING

In accordance with Section 36937 of the Government Code of the State of California, this Ordinance shall take effect thirty (30) days from and after the date of its passage. The City Clerk of the City of Milpitas shall cause this Ordinance or a summary thereof to be published in accordance with Section 36933 of the Government Code of the State of California.

Appendix C

The existing noise environment in Milpitas was characterized by a noise monitoring and measurement program conducted between Tuesday, November 30 and Wednesday, December 1, 1993. All measurements and monitoring employed Larson Davis Model 700 digital programmable noise monitors. These devices were housed in weatherproof containers, and programmed to digitally record the noise environment at each location, at half - second intervals, throughout the noise monitoring period. Two control sites were selected: Site 1 was along I-880, 180 feet east of the roadway centerline, north of Route 237; Site 2 was located along I-680, 160 feet east of the roadway centerline, west of Shirley Drive. Each of these monitoring systems operated concurrently during an identical time period between November 30 and December 1, 1993. The detailed monitoring data results are attached and summarized in Table C1

Four additional 1-minute duration noise measurements were at the other four measurement locations (sites 3, 4, 5 and 6 on November 30; see Table C-1). The description of each measurement location is given in the table along with summary noise measurement results.

Table C-1 is followed by background information on noise and physiological responses to noise.

Fundamental Concepts of Community Noise

Background

Three aspects of community noise are important in determining subjective response:

- Level (i.e., magnitude or loudness) of the sound.
- The frequency composition or spectrum of the sound.
- The variation in sound level with time.

Airborne sound is a rapid fluctuation of air pressure and local air velocity. Sound levels are measured and expressed in decibels (dB) with 0 dB roughly equal to the threshold of hearing.

The frequency of a sound is a measure of the pressure fluctuations per second measured in units of hertz (Hz). Most sounds do not consist of a single frequency, but are comprised of a broad band of frequencies differing in level. The characterization of sound level magnitude with respect to frequency is the sound spectrum. A sound spectrum is often described in octave bands which divide the audible human frequency range (i.e., from 20 to 20,000 Hz) into ten segments. Figure D-1 shows a range of sound spectra for various types of sound over the audible hearing range.

Table C-1
Summary of Noise Measurements for the City of Milpitas
Tuesday, 30 November 1993 – Wednesday, 1 December 1993

Site	**Location**	**Date/Time**	**L_{eq}**	**L_{10}**	**L_{50}**	**L_{90}**	**DNL**
1	I-880, 180 ft east of roadway centerline, north of Route 237	30 November – 1 December 1993 Noon	73	75	72	62	77
2	I-680, 160 ft. east of roadway centerline, west of Shirley Drive	30 November – 1 December 1993 Noon	75	77	74	65	79
3	Landess Ave., 50 feet north of roadway centerline, across from Paris Way	30 November 1993 1:40-1:55PM	66	70	62	52	70*
4	Dixon Landing Rd., 65 ft. south of roadway centerline, west of Milmont Dr.	30 November 1993 Noon – 12:15PM	68	72	65	60	72*
5	Piedmont Rd., 40 ft. west of turning lane centerline, 2271 Mesa Verde Dr.	30 November 1993 1:30 -1:45PM	64	69	57	44	68*

Site	Location	Date/Time	L_{eq}	L_{10}	L_{50}	L_{90}	DNL
6	N. Milpitas Blvd., 65 ft. east of turning lane centerline north of Arbor Ln.	30 November 1993 12:30-12:45PM	69	72	66	61	73*

* These DNL values are extrapolated from shorter-duration measurements.

Frequency Weighting

Many rating methods exist to analyze sound of different spectra. The simplest method is generally used so that measurements may be made and noise impacts readily assessed using basic acoustical instrumentation. This method evaluates all frequencies by using a single weighting filter that progressively de-emphasizes frequency components below 1000 Hz and above 5000 Hz. This frequency weighting, shown in Figure D-2, reflects the relative decreased human sensitivity to low frequencies and to extreme high frequencies. This weighting is called A-weighting and is applied by an electrical filter in all U.S. and international standard sound level meters. Some typical A-weighted sound levels are presented in Figure D-3.

Noise Exposure

Noise exposure is a measure of noise over a period of time, whereas noise level is a single value at an instant in time. Although a single sound level may adequately describe community noise at any instant in time, community noise levels vary continuously. Most community noise is produced by many distant noise sources, which produce a relatively steady background noise having no identifiable source. These distant sources change gradually throughout the day and include traffic, wind in trees, and distant industrial activities. Superimposed on this slowly varying background is a succession of identifiable noise events of brief duration. These include nearby activities such as single vehicle passbys or aircraft flyovers which cause the community noise level to vary from instant to instant.

A single number called the equivalent sound level or L_{eq} is used to describe noise varying over a period of time. The L_{eq} is the average noise exposure level over a period of time (i.e., the total sound energy divided by the duration). It is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period. The L_{eq} is useful in describing noise over a period of time with a single numerical value.

Discrete short duration transient noise events, such as aircraft flyovers, may be described by their maximum A-weighted noise level or by their sound exposure level (i.e., SEL). The SEL value is the preferred descriptor because measured results may be more reliably repeated and because the duration of the transient event is incorporated into the measure (thereby better relating to subjective response). Maximum levels of transient events vary with instantaneous propagation conditions while a total energy measure, like SEL, is more stable. The SEL of a transient event is a measure of the acoustic energy normalized to a constant duration of one second. Figure D-4 shows this relationship. The SEL differs from the L_{eq} in that it is the constant sound level containing the same acoustic energy as a one-second event, whereas the L_{eq} is the constant sound level containing the same acoustic energy over the entire measurement period. The SEL may be considered identical to the California standard Single Event Noise Exposure Level (i.e., SENEL).

SEL values may be summed on an energy basis to compute L_{eq} values over any period of time. This is useful in modeling noise in areas exposed to numerous transient noise events, such

as communities around airports. Hourly L_{eq} values are called Hourly Noise Levels (i.e., HNL values).

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime. Most household noise also decreases at night, and exterior noise intrusions become more noticeable. People are more sensitive to noise at night than during other periods of the day.

To account for human sensitivity to nighttime noise, the DNL (or L_{dn}) descriptor was adopted by the Environmental Protection Agency to describe community noise exposure from all sources. The DNL is called the day-night sound level and represents the 24-hour A-weighted equivalent sound level with a 10-dB penalty added for the nighttime noise between 10:00 pm to 7:00 am.

In California, the Community Noise Equivalent Level (CNEL) is the adopted standard. DNL and CNEL are typically computed by energy summation of HNL values, with the proper adjustment applied for the period of evening or night. The CNEL is computed identically to the DNL but with the addition of a 5-dB penalty for evening (i.e., 7:00 pm to 10:00 pm) noise. The CNEL value is typically less than 1 dB above the DNL value. Figure D-5 shows the adjustments applied for the DNL and CNEL measures. Noise exposure measures such as L_{eq}, SEL, HNL, DNL, and CNEL are all A-weighted, with units expressed in decibels (dB).

Subjective Response to Noise

The effects of noise on people can be classified into three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction.
- Interference with activities such as speech, sleep, and learning.
- Physiological effects such as anxiety or hearing loss.

The sound levels associated with community noise usually produce effects only in the first two categories. No universal measure for the subjective effects of noise has been developed, nor does a measure exist for the corresponding human reactions from noise annoyance. This is primarily due to the wide variation in individual attitude regarding the noise source(s).

An important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable it is. Therefore, a new noise source will be judged more annoying in a quiet area than it would be in a noisier location.

Knowledge of the following relationships is helpful in understanding how changes in noise and noise exposure are perceived.

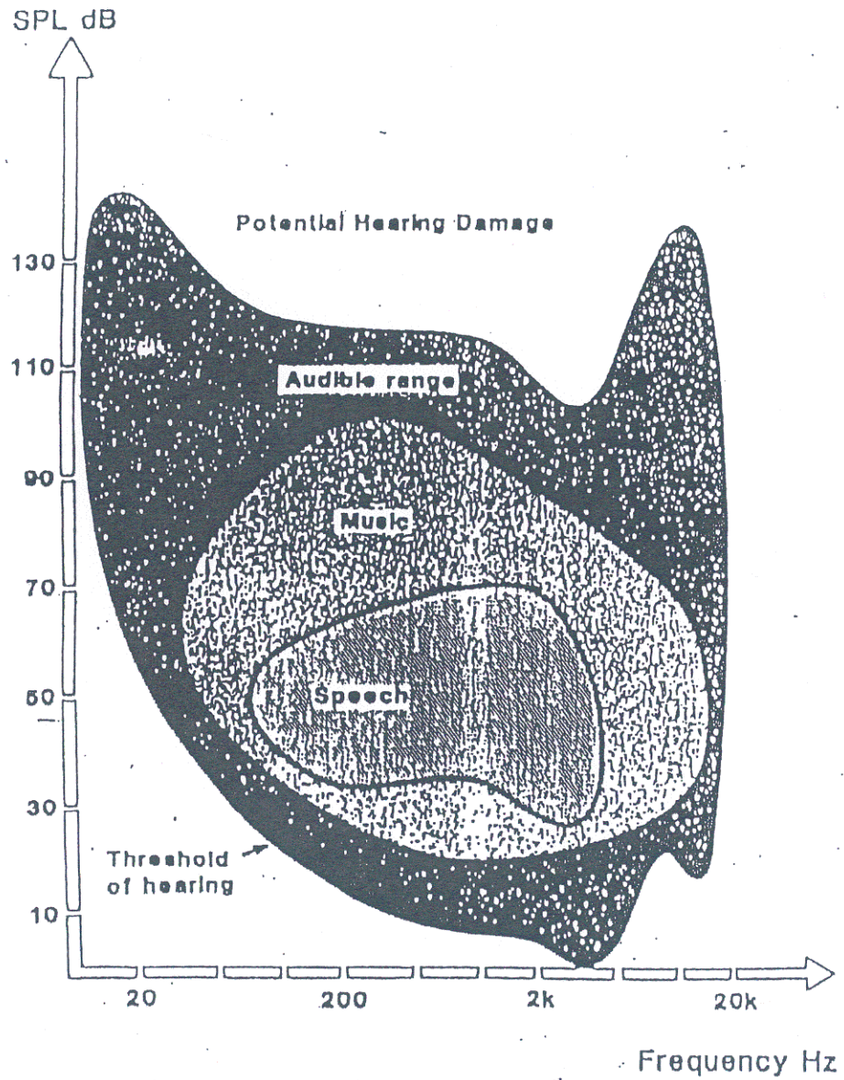
- Except under special conditions, a change in sound level of 1 dB cannot be perceived.

- Outside of the laboratory, a 3-dB change is considered a just-noticeable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10-dB change is subjectively heard as an approximate doubling in loudness and almost always causes an adverse community response.

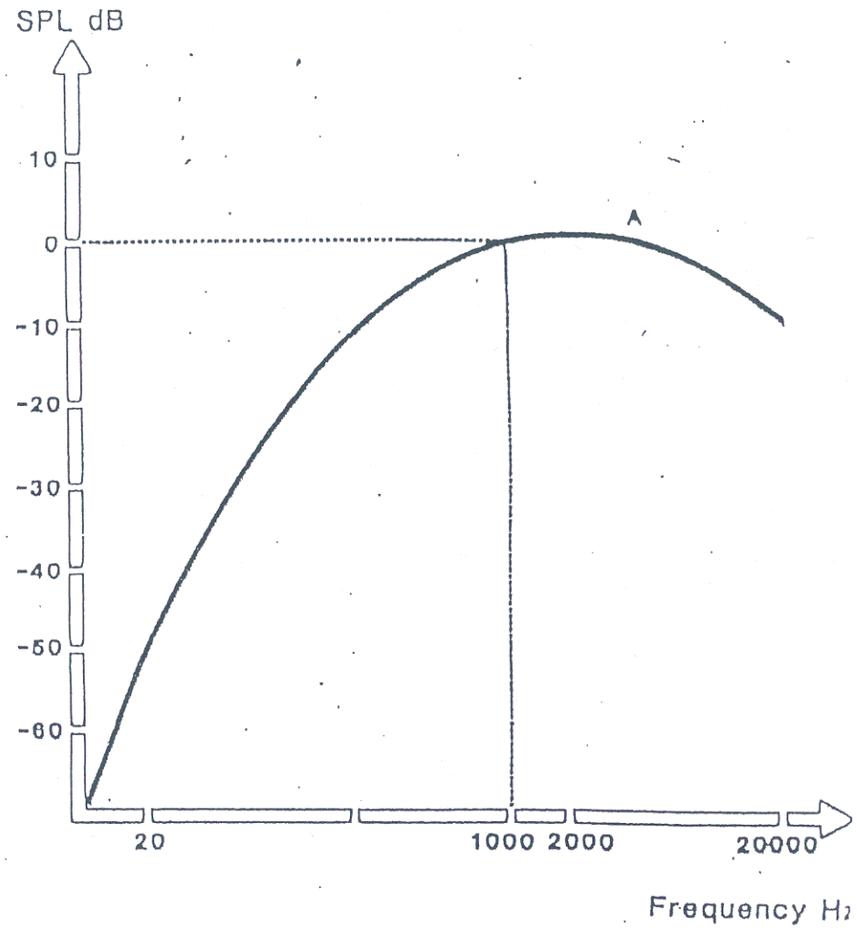
Combination of Sound Levels

Because we perceive both the level and frequency of sound in a non-linear way, the decibel scale is used to describe sound levels. The frequency scale is also measured in logarithmic increments. Decibels, measuring sound energy, combine logarithmically. A doubling of sound energy (for instance, from two identical automobiles passing simultaneously) creates a 3-dB increase (i.e., the resultant sound level is the sound level from a single passing automobile plus 3 dB). The rules for decibel addition used in community noise prediction are:

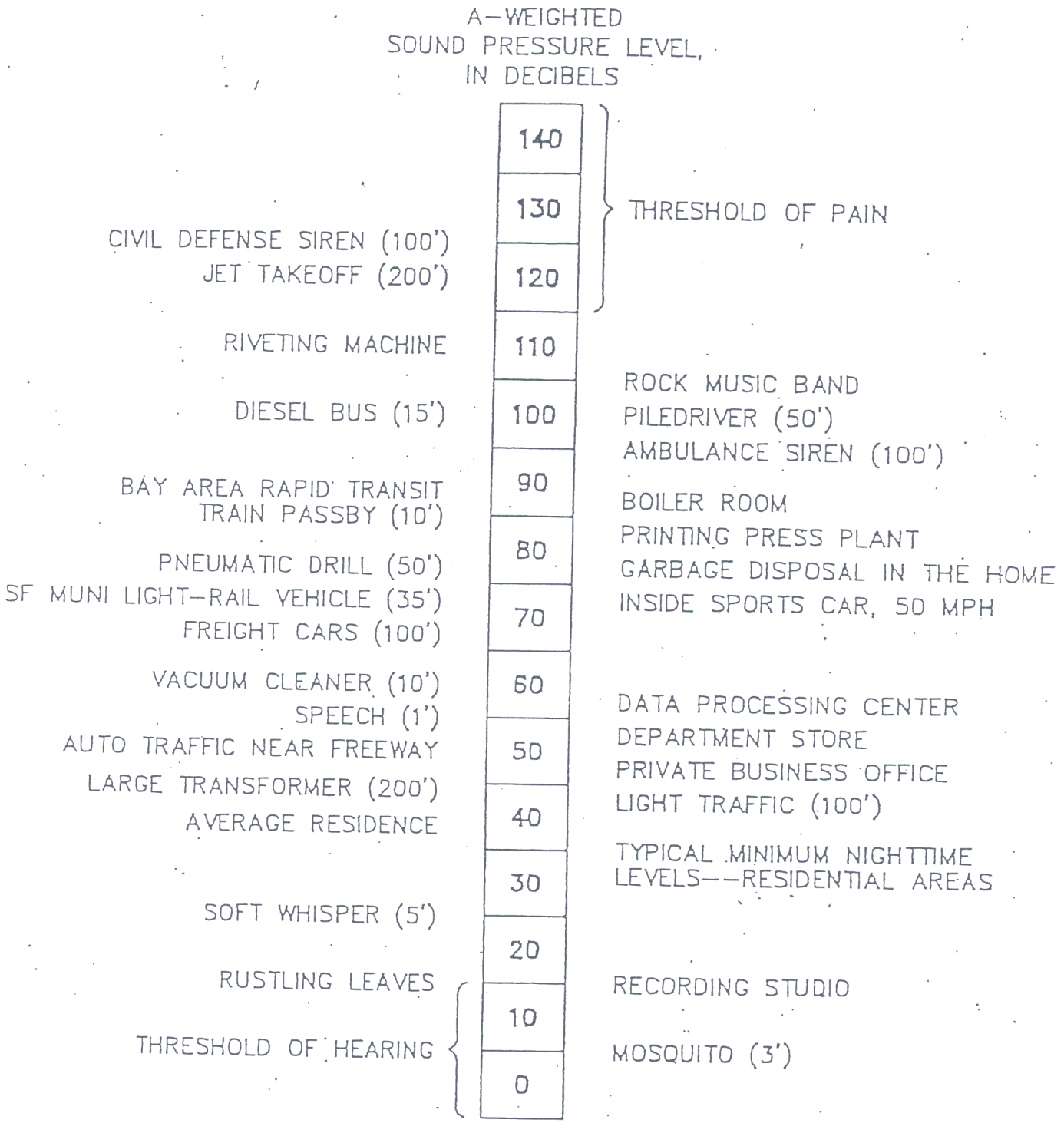
- If two sound levels are within 1 dB of each other, their sum is the highest value plus 3 dB.
- If two sound levels are within 2 to 4 dB of each other, their sum is the highest value plus 2 dB.
- If two sound levels are within 5 to 9 dB of each other, their sum is the highest value plus 1 dB.
- If two sound levels are greater than 9 dB apart, the contribution of the lower value is negligible and the sum is simply the higher value.



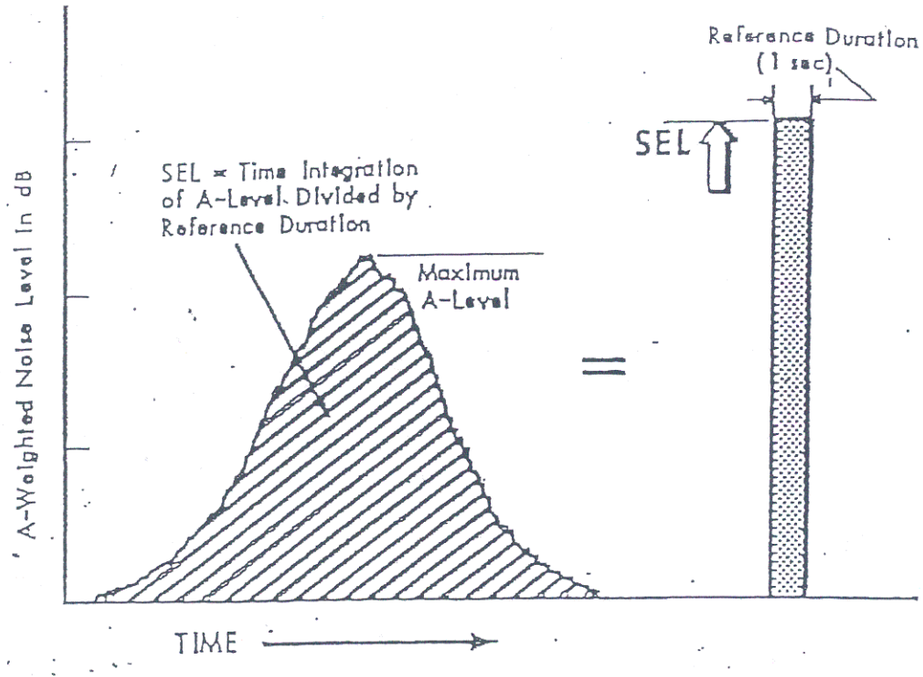
RANGE OF SOUND SPECTRA



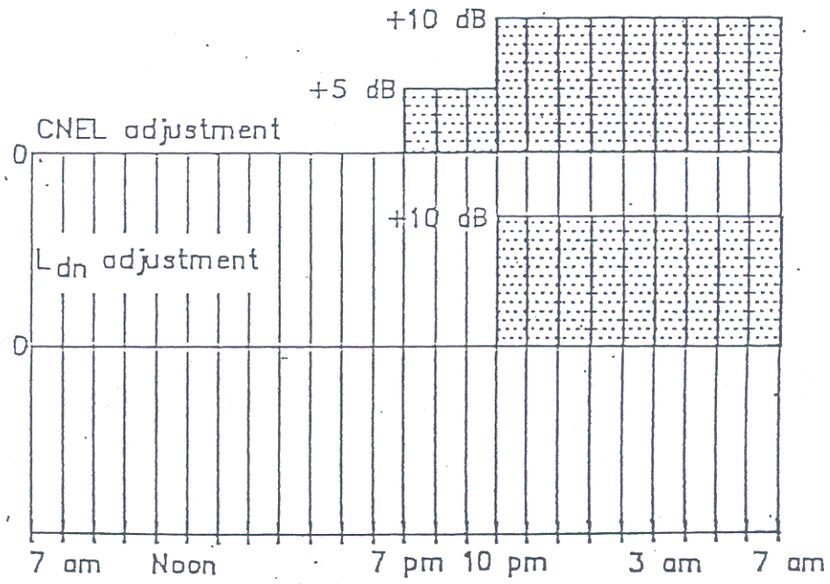
A-WEIGHTING NETWORK



TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY



SOUND EXPOSURE LEVEL



Hourly Noise Level (HNL)

HOURLY NOISE LEVELS
AND ANNUAL METRICS