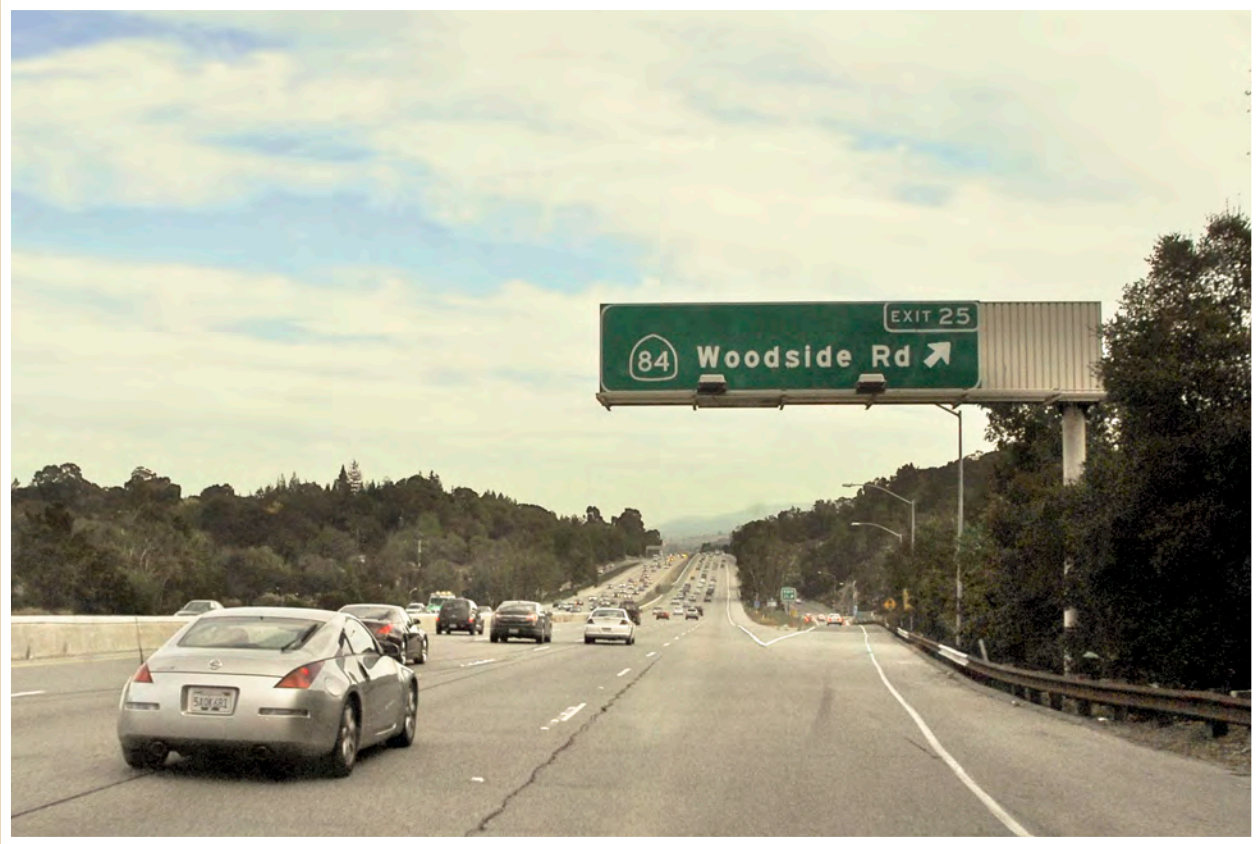




# NOISE ELEMENT



*“Nature and silence go together better”*

—Astrid Alauda

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## INTRODUCTION

This Element has been prepared in accordance with Section 65302(f) of the California Government Code, which outlines requirements for the Noise Element of the General Plan. The purpose of the Element is to provide information and policies related to noise sources, impacts and mitigation measures; and to prescribe noise exposure criteria and standards for new development (e.g., siting of new structures, and construction noise).

Major sources of noise in Woodside include automobiles, motorcycles, trucks, aircraft, and construction activity. Traffic noise levels are the highest along Interstate 280 (I-280) and Woodside Road (State Highway 84). Noise sources in residential areas include generators, power mowers, leaf blowers, chain saws, air conditioners, swimming pool filters, animals, and sound amplifiers. Building construction creates noise from hammering, hand tools, power tools and earth-moving equipment. Recreational activities in and near the Town are generally quiet; however, noise problems are caused by excessive concentrations of people, special events, vehicular traffic, audio amplifiers/loudspeakers and other noise sources at public and commercial recreation facilities. The Town has no industrial activity to generate noise. Adjacent to the Town, however, noise is generated by the cooling towers of the Stanford Linear Accelerator Center. The Town Center generates little noise, other than that of some mechanical equipment and the motor vehicles that frequent the Center. Occasional loud noise emanating from inbound or outbound air traffic from Bay Area airports, Moffett Federal Airfield, and NASA's Ames Research Center and can often be heard in Woodside.

The ambient noise level in Woodside (that is, the background noise that is generally present) is generally less than 40 dBA in the daytime and less than 35 dBA in the evening, except in those areas near I-280 and near Woodside Road.

## CHANGES SINCE 1988

The greatest increase in noise levels in Town over the last two decades has been from residential construction and property maintenance. Residential construction projects with a large main residence, multiple accessory structures, and extensive site improvements can have construction periods lasting for several years. After completion of such projects, on-going property maintenance can result in continued noise from landscape and maintenance equipment and staff.

Interstate 280, which bisects the north end of Town in a northwest/southeast transit, continues to be the most significant, single noise source. In 2000, the Town engaged the services of a Sacramento law firm to work with CalTrans on the Town's behalf to modify a planned resurfacing project scheduled for Interstate 280 as it runs through the Town. The Town was able to obtain CalTrans's agreement to redesign the project, utilizing open-graded asphaltic concrete (OGAC) on well over half of the five plus mile stretch of Interstate 280 to reduce noise impacts.

## DEFINITIONS

**ADT:** Average daily trips (vehicles).

**Ambient Noise Level:** The noise which exists at a given location as a result of the combination of many distant noise sources, individually indistinguishable.

**Attenuation:** A decrease in sound level. The most common cause of attenuation is increased distance between a source and receiver (typically, sound decreases by 3 to 6 dB per doubling of distance). Attenuation can also be caused by barriers (e.g., walls, hills, dense vegetation) located between a source and receiver.

**A-Weighted Sound Level:** See dBA.

**CNEL:** A descriptor for the 24-hour average noise level. The CNEL concept accounts for the increased acoustical sensitivity of people to noise during the evening and nighttime hours. Sound levels from 7 p.m. to 10 p.m. are penalized by 5 dB and sound levels from 10 p.m. to 7 a.m.

are penalized by 10 dB. A 10-dB increase in sound level is perceived by people to be twice as loud.

**dBA:** A-weighted sound level. 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 sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.

**Decibel (dB):** A unit of measurement of the relative loudness of sound, abbreviated dB. The decibel scale is logarithmic. For example, a measurement of 60 dB contains 10 times as much energy as 50 dB, which in turn, contains 10 times as much energy as 40 dB.

**Leq:** Equivalent Continuous Sound Level. The equivalent steady-state A-weighted sound level that, in a stated period of time (often an hour), would contain the same acoustic energy as the time-varying sound level during the same time period.

**Ldn:** Day Night Average Sound Level. A descriptor established by the U.S. Environmental Protection Agency to represent the 24-hour average noise level, without the evening time period (7-10 pm) being weighted separately as in the CNEL calculation.

**Noise:** Unwanted sound.

**Noise Contour:** A continuous line on a map that represents equal levels of noise exposure.

**Noise Impacted Areas:** Land areas that are located on the Noise Contour Map within the Noise Contour Bands of 60 Ldn or greater.

**Noise Measurement:** The measurement of the noise level at a given location. It is usually desirable to indicate both the intensity of the noise at the given location, and the distance between the noise source and the location at which the measurement is made. For example, one would report that a diesel truck generates 88 dBA of noise, as measured at a distance of 50 feet.

**Woodside VOR:** A measurement station located in the Town of Woodside at Skyline Boulevard and Highway 84, which records the flight number and altitude of aircraft flying over Town. VOR is short for VHF Omni-directional Radio Range, which is a type of radio navigation system for aircraft. VOR's broadcast a VHF radio composite signal including the station's morse code identifier, and data that allows the airborne receiving equipment to derive a magnetic bearing from the station to the aircraft. The VOR in Woodside is owned and operated by the Federal Aviation Administration.

## MEASUREMENT AND EFFECTS OF NOISE

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch, its loudness, or its duration. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is the amplitude of sound waves combined with the reception characteristics of the ear. There are several noise measurement scales which are used to describe noise:

### DECIBEL (DB)

A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. Zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. Each ten decibel increase in sound level, for example, is perceived as approximately a doubling of loudness.

## A-WEIGHTED SOUND LEVEL (DBA) AND EQUIVALENT CONTINUOUS SOUND LEVEL (LEQ)

The A-weighted sound level, or dBA scale, gives greater weight to the frequencies of sound to which the human ear is most sensitive (reference Table N1, Sound Levels and Human Response). Additionally, because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. The noise descriptor Leq describes sound in terms of an average of the acoustical energy over a specific period of time. The most common averaging period is hourly, but Leq can use other increments of time as well.

The scientific instrument used to measure noise is a sound level meter. Sound level meters can accurately measure noise levels to within about plus or minus one dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports.

## COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) AND DAY/NIGHT AVERAGE SOUND LEVEL (LDN)

Since the sensitivity to noise increases during the evening and at night (because excessive noise can interfere with the ability to sleep) 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level, CNEL, is a measure of the cumulative noise exposure in a community, with a five dB penalty added to evening hours (7:00 pm - 10:00 pm) and a ten dB penalty added to the nighttime (10:00 pm - 7:00 am) noise levels. The Day/Night Average Sound Level, Ldn, is essentially the same as CNEL, with the exception that the evening time period is not considered separately.

## SOUND LEVELS AND HUMAN RESPONSE

The decibel (dB) table below compares some common sounds and shows how they are perceived by or affect human beings. The U.S. Environmental Protection Agency (EPA) has established 70 dB as the point at which noise begins to harm hearing. To the ear, each 10 dB increase seems twice as loud.

**Table N1: Sound Levels and Human Response**

| Common Sounds  | Noise Level (dBA) | Effect                                  |
|--|-------------------|---|
| Rocket Launching Pad (no ear protection)               | 180               | Irreversible Hearing Loss               |
| Carrier Deck Jet Operation<br>Air Raid Siren           | 140               | Painfully Loud                          |
| Jet Takeoff (200 ft)<br>Auto Horn (3 ft)               | 120               | Maximum Vocal Effect                    |
| Pile Driver<br>Rock Concert                            | 110               | Extremely Loud                          |
| Garbage Truck<br>Firecrackers                          | 100               | Very Loud                               |
| Heavy Truck (50 ft)<br>City Traffic                    | 90                | Very Annoying<br>Hearing Damage (8Hrs.) |
| Alarm Clock (2 ft)<br>Hair Dryer                       | 80                | Annoying                                |
| Noisy Restaurant<br>Freeway Traffic<br>Business Office | 70                | Telephone Use Difficult                 |
| Air Conditioning Unit<br>Conversational Speech         | 60                | Intrusive                               |
| Light Auto Traffic (100 ft)                            | 50                | Quiet                                   |
| Living Room<br>Bedroom<br>Quiet Office                 | 40                | —                                       |
| Library<br>Soft Whisper (15 ft)                        | 30                | Very Quiet                              |
| Broadcasting Studio                                    | 20                | —                                       |
| —  | 10                | Just Audible                            |
| —  | 0                 | Hearing Begins                          |

Source: Noise Pollution Clearinghouse, January 2011.

Feet notation represents the number of feet between the noise source and noise receptor.

Construction equipment noise is a common source of noise in the Town of Woodside. The following table provides decibel (dB) information on some common construction equipment:

**Table N2: Construction Equipment Noise**

| Equipment              | Noise Levels (dBA) |
|------------------------|--------------------|
| Jackhammer             | 88                 |
| Concrete Truck Mixer   | 85                 |
| Front-End Loader       | 85                 |
| Saw (concrete cutting) | 83                 |
| Air Compressor         | 81                 |
| Semi Dump Truck        | 80                 |
| Tractor                | 80                 |

## STANDARDS FOR MAXIMUM NOISE LEVELS

Most areas of Town enjoy a low ambient noise level. This low level of noise contributes to the “rural” quality of the community. The General Plan’s Guiding Principle No. 3, Natural Environment, identifies tranquility as an important Town characteristic and community value.

Maximum noise level standards in Town are based on ambient noise level. Ambient noise level is the noise which exists at a given location as a result of the combination of many distant noise sources, individually indistinguishable.

It is the objective of the Town to keep ambient noise levels lower than those indicated for the areas and activities listed in Table N3, Maximum Ambient Noise Levels (Ldn) by Use.

Review of a project’s noise levels is done in conjunction with planning entitlements and building permit plan checks. Mitigations for ambient noise levels exceeding the thresholds set forth in Table N3 include:

- Site design strategies, such as siting buildings to shield or be shielded from noise, and grading which is responsive to site acoustical conditions, and,
- Building construction specifications, including sound-rated windows, wall insulation, and caulking specifications.

**Table N3: Maximum Ambient Noise Levels (Ldn) by Use**

| Use         | Noise Level (Exterior <sup>1</sup> ) | Noise Level (Interior) |
|-------------|--------------------------------------|------------------------|
| Residential | 55                                   | 40                     |
| Commercial  | 60                                   | 45                     |
| Open Space  | 55                                   | n/a                    |

<sup>1</sup>Exterior spaces include, e.g. patios, swimming pools, tennis courts, etc.

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## NOISE SOURCES

In addition to ambient noise level, the Town also experiences noise from the following sources:

- identifiable “single event” noises which may exceed the ambient noise level, such as that from construction equipment, skidding tires, and amplified music outdoors;
- noise from vehicular traffic on roads passing through the Town;
- noise from recreational activity; and,
- aircraft noise.

### INDIVIDUAL NOISE SOURCES

Identifiable noises from individual sources do, by definition, exceed the ambient noise level. Some of these noises occur infrequently or are considered necessary, and may be considered unobjectionable. Examples are skidding tires or a vehicle horn. Other noises, however, may be considered objectionable from a regulatory standpoint if they are too loud, are of excessive duration or occur at night. Examples are amplified music outdoors, straight pipe mufflers on motorcycles, or construction equipment.

The criteria to be considered in determining whether the policy concerning individual noise source is being observed include, but are not limited to, the following:

1. The level of the noise;
2. The intensity of the noise;
3. Whether the nature of the noise is usual or unusual;
4. Whether the origin of the noise is natural or unnatural;
5. The level and intensity of the background noise, if any;
6. The proximity of the noise to residential sleeping facilities;
7. The nature and zoning of the area within which the noise emanates;

8. The density of the habitation of the area within which the noise emanates;
9. The time of the day or night the noise occurs;
10. The duration of the noise;
11. Whether the noise is recurrent, intermittent, or constant;
12. Whether the noise is produced by a commercial, noncommercial, or recreational activity; and,
13. Whether the noise is produced by equipment normally required for maintenance of residential properties or for authorized construction projects.

The Town of Woodside does not currently have a Noise Ordinance. The Woodside Municipal Code does, however, regulate construction hours, and impose amplified sound restrictions on construction sites. Hours of construction are limited to Monday through Friday, 7:30 a.m. to 5:30 p.m., and Saturday 8:00 a.m. to 1:00 p.m., unless additional hours are approved by the Town Engineer. Additionally, projects requiring certain planning entitlements are required to comply with best management practices for controlling construction noise, such as:

- All work shall comply with Woodside Municipal Code Sections 151.55.B (construction hours) and 151.55.D (amplified noise restrictions);
- All construction equipment with internal combustion engines used on the project site shall be properly muffled and maintained in good working condition;
- Unnecessary idling of internal combustion engines shall be strictly prohibited;
- All stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be located as far as possible from noise-sensitive receptors such as existing residences;
- Prior to the issuance of a building permit, the project site shall be posted with the name and number of the lead contractor in a location visible from the public

street so that the contractor can be made aware of noise complaints;

- Construction equipment, vehicles, and workers associated with the development of the project shall not be permitted to park on any residential street; and,
- A Construction Staging Plan shall be submitted with a schedule that includes materials storage locations and parking. Parking shall not be allowed within the right-of-way.

Complaints regarding excessive evening hour noise are directed to, and handled by, the San Mateo County Sheriff's Office.

### TRAFFIC NOISE

Table N4, Traffic Noise Levels for 1986, 2010, and 2030, includes traffic noise level estimates for 1986 prepared for the 1988 General Plan, and traffic noise level estimates for 2010 and projections for 2030 prepared for the 2012 General Plan. Traffic noise levels for five segments of Woodside Road, four segments of Interstate 280, and five Town arterial roads (Portola Road, Cañada Road, Whiskey Hill Road, Farm Hill Boulevard, and Alameda de las Pulgas) are included. Noise estimates are calculated from traffic volumes, vehicle speeds, and the percentage of truck traffic; the Federal Highway Administration (FHWA) traffic noise calculation procedure is used. Noise estimates are expressed as Ldn, a descriptor established by the federal Environmental Protection Agency to represent the 24-hour average noise level. Noise level projections for the year 2030 use a factor of one percent per year increase in predicted traffic growth.

Map N1, 2030 Noise Contour Projections Map, depicts the 2030 noise contour projections for the Ldn 55 to 70+ dBA noise levels. These are the noise levels which exceed the maximum thresholds set forth in Table N3, Maximum Ambient Noise Levels (Ldn) by Use. The 2030 noise contours indicate that, noise levels in excess of the maximum thresholds will exist along all reported road segments. Interstate 280 has the widest

noise impact band, extending up to 1,700 feet in width from the road edge. Woodside Road and the five Town arterials included in the study have noise impact bands extending up to 75 feet in width from the road edge.

The implications of the study are that Woodside residents residing along the I-280 corridor, Woodside Road, and the five Town arterials included in the study may be exposed to noise levels in excess of the maximum thresholds set forth in Table N3, Maximum Ambient Noise Levels (Ldn) by Use, and that mitigation measures for new projects, such as specific siting and construction techniques previously discussed, may need to be employed to meet General Plan standards.

### RECREATIONAL ACTIVITY NOISE

Recreational activities in and adjacent to Town include: horseback riding, bicycling, hiking, and walking. These activities often pass through quiet, rural neighborhoods.

### AIRCRAFT NOISE

Noise from commercial and private aircraft can be a concern to Woodside residents. Commercial aircraft flight paths and low-flying private aircraft activities have created unacceptable noise levels in the past. The Town should be aware of regional airport plans, particularly San Francisco International Airport, which direct flights over Woodside. The Town is an active participant on the San Francisco Airport/Community Roundtable, which provides a multi-jurisdictional forum for addressing San Francisco Airport noise issues. New GPS (global positioning system) technologies may increase air traffic volume, and new fuel efficiency regulations may require aircraft to fly at lower elevations. Currently, the San Francisco Airport Noise Abatement Office records the flight number and altitude of an aircraft flying over the Woodside VOR. Although the majority of aircraft activity and flight patterns are beyond the reach of the Town to regulate, it is a policy of the General Plan (Policy N1.5.1) that "No aircraft shall land or take off from or hover over lands within the Town Planning Area except for emergency services, or when such activity is deemed beneficial by Town officials."

**Table N4: Traffic Noise Levels for 1986, 2005, 2010, and 2030**

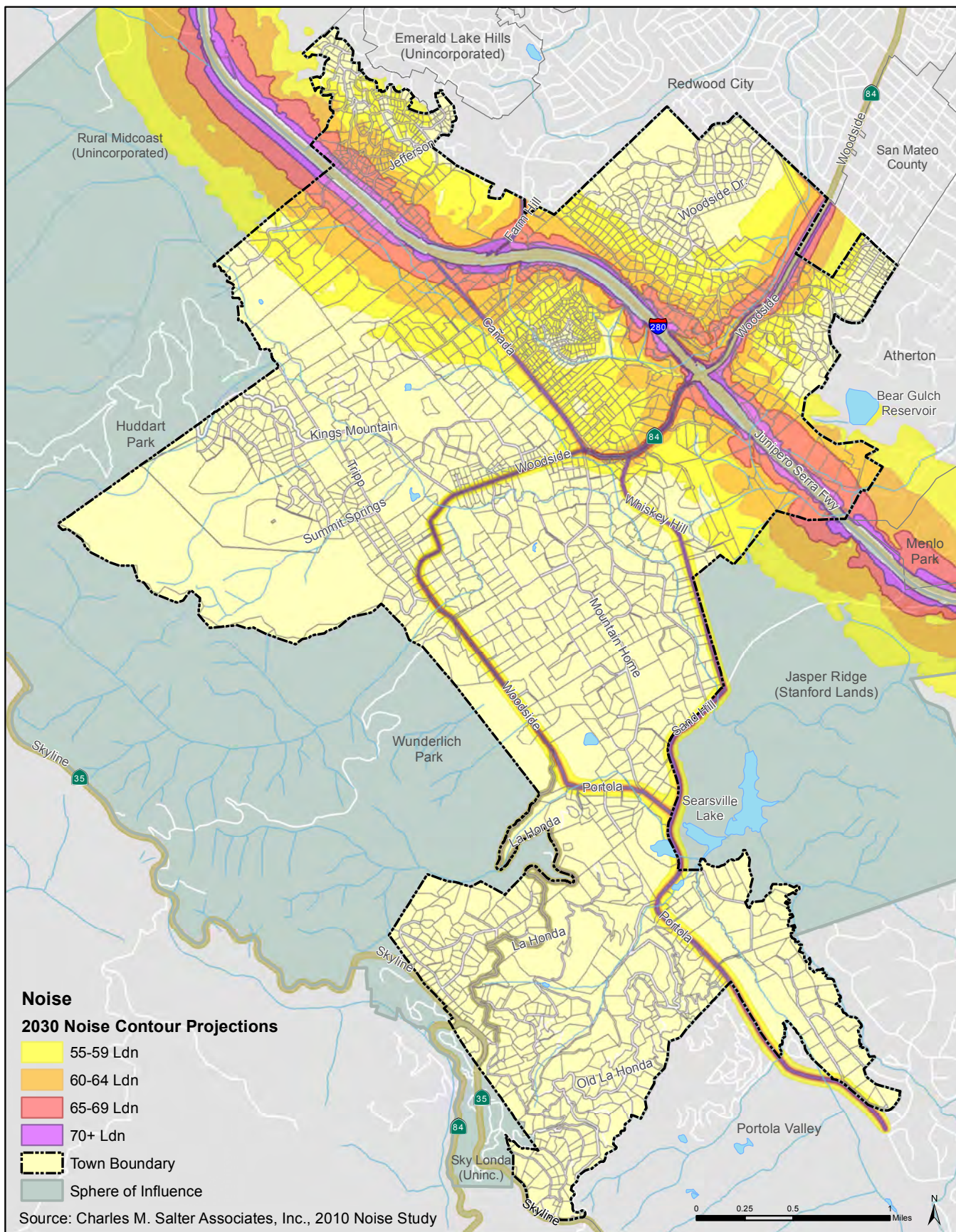
| Road Segment                                  | Average Daily Trips (ADT )<br>September<br>2010 Peak | ADT 2030 | Truck % | Posted Speed<br>(mph) | Ldn at 50 Ft.<br>1986 | Ldn at 50 Ft.<br>2010 | Ldn at 50 Ft.<br>2030 |
|---|--|----------|---------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Woodside Rd. / Highway 84</b>              |  |          |         |                       |                       |                       |                       |
| Portola Rd. to Tripp Rd.                      | 5,200  | 6,200    | 2.0%    | 35                    | 60                    | 66                    | 67                    |
| Tripp Rd. to Cañada Rd.                       | 5,300  | 6,400    | 2.0%    | 25                    | 60                    | 62                    | 63                    |
| Cañada Rd. to Whiskey Hill Rd.                | 13,600   | 20,300   | 3.1%    | 25                    | 65                    | 68                    | 69                    |
| Whiskey Hill Rd. to I-280                     | 15,100   | 21,000   | 4.4%    | 35                    | 67                    | 70                    | 71                    |
| I-280 to Alameda de las Pulgas                | 30,700   | 44,200   | 8.7%    | 45                    | 70                    | 75                    | 76                    |
| <b>I-280</b>                                  |  |          |         |                       |                       |                       |                       |
| Sand Hill Rd. to<br>Woodside Rd. / Highway 84 | 101,000  | 121,200  | 3.2%    | 65                    | 80                    | 82                    | 83                    |
| Woodside Rd. to Farm Hill Rd.                 | 100,000  | 120,000  | 2.9%    | 65                    | 80                    | 82                    | 83                    |
| Farm Hill Rd. to Cañada Rd.                   | 99,000   | 118,800  | 2.2%    | 65                    | 79                    | 82                    | 82                    |
| Cañada Rd. to Edgewood Rd.                    | 100,000  | 120,000  | 1.7%    | 65                    | 79                    | 82                    | 82                    |
| <b>Portola</b>                                | 5,300  | 6,500    | 1.2%    | 40                    | 62                    | 63                    | 64                    |
| <b>Cañada Rd.</b>                             | 6,300  | 7,800    | 1.3%    | 35                    | 61                    | 64                    | 65                    |
| <b>Whiskey Hill Rd.</b>                       | 3,000  | 4,100    | 1.6%    | 35                    | 61                    | 63                    | 64                    |
| <b>Farm Hill Blvd.</b>                        | 13,300   | 16,000   | 1.9%    | 35                    | 64                    | 68                    | 68                    |
| <b>Alameda de las Pulgas</b>                  | 8,700  | 10,800   | 1.6%    | 30                    | 66                    | 64                    | 65                    |

Source: Charles M. Salter Associates, Inc., 2010 Noise Study

The 2030 ADT assumes a one percent increase per year in traffic over the 2010 ADT actual counts.



Map N1: 2030 Noise Contour Projections



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# GOAL N1

Protect, maintain and improve the tranquil environment within the Town.

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## POLICY N1.1 – MINIMIZE NOISE DISTURBANCES

Activities that take place within the Town, within practical limits, shall be conducted so that the noise from individual identifiable sources shall not disturb the peace and quiet of any neighborhood.

### Strategies:

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#### **a. Amend the Municipal Code**

The Town Council should consider amending the Municipal Code to address noise impacts from:

1. Construction, including lengthy construction schedules, enforcement of construction hours, standard mitigation measures for construction equipment noise, and contractor contact posting requirements;
2. Property maintenance, including landscaping equipment;
3. Animals, such as barking dogs and crowing roosters;
4. Amplified music; and,
5. Non-standard vehicular equipment, such as straight pipe mufflers.

## POLICY N1.2 – REVIEW AND MITIGATE NOISE EXPOSURE ON RESIDENTS

Minimize exposure to noise which diminishes the ability to enjoy a tranquil environment.

### Strategies:

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#### **a. Assess Noise Exposure**

The Town will utilize the Noise Contour Map to generally assess the noise exposures on proposed projects.

#### **b. Mitigate Noise Exposure**

An acoustical analysis shall be required for projects which will be exposed to noise in excess of the thresholds set forth in the Table N3, Maximum Ambient Noise Levels (Ldn) by

Use. All required acoustical analyses shall be the financial responsibility of the applicant and shall be prepared by a qualified person in the fields of noise assessment and architectural acoustics. If the study indicates a significant exposure to noise level, noise mitigation may be required.

#### **c. Review Site Planning for Acoustical Considerations**

The Town will review the siting of new structures and building envelopes to assure that the future occupants of each building will enjoy appropriate levels of quiet and privacy in accordance with Table N3, Maximum Ambient Noise Levels (Ldn) by Use, to the extent practicable.

## POLICY N1.3 – REVIEW AND MITIGATE NOISE EXPOSURE GENERATED BY NEW DEVELOPMENT

Protect neighbors from exposure to noise generated from new development which diminishes the ability to enjoy a tranquil environment.

### Strategies:

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#### **a. Site Planning for Noise Protection**

New structures and accessory uses, such as barns, swimming pools, and tennis courts, shall be sited to assure that nearby property owners will enjoy appropriate levels of quiet and privacy in accordance with Table N3, Maximum Ambient Noise Levels (Ldn) by Use, to the extent practicable.

#### **b. Acoustical Analysis**

An acoustical analysis may be required to assess the impact of noise generated by new development on adjacent properties, buildings, and outdoor spaces to assess compliance with the thresholds set forth in the Table N3, Maximum Ambient Noise Levels (Ldn) by Use. All required acoustical analyses shall be the financial responsibility of the applicant and shall be prepared by a qualified person in the fields of noise assessment and architectural acoustics.

### c. Mitigate Noise Impacts

If an acoustical analysis indicates noise generation in excess of Table N2, noise mitigation or project revision may be required. When new uses and structures, which are likely to generate some unavoidable noise, are established in the Woodside Planning Area, adequate open space or noise shielding shall be provided between the noise source and the boundaries of the property to comply with the thresholds set forth in Table N3, Maximum Ambient Noise Levels (Ldn) by Use, to the extent practicable.

## POLICY N1.4 – MITIGATE VEHICULAR NOISE

Reduce the incidence and impact of vehicular noise.

### 1. State and Federal Noise Regulations

State and federal noise regulations which apply to motor vehicles should be fairly and effectively enforced.

### 2. Highway and Freeway Location and Design

Discourage any State highway or freeway projects in the Woodside Planning Area which could increase noise levels.

### 3. Attenuation of Highway Noise

The noise barriers between Interstate 280 and residential properties in Woodside should be improved. This may be accomplished through building earthmounds in appropriate locations, and under certain limited conditions by planting vegetation. In general, the Town prefers the construction of landscaped mounds and earth berms, and disfavors conventional solid “sound walls”. Although considered effective in reducing sound, solid fences and walls are not considered appropriate within highway and freeway corridors in Town since they detract from the natural and scenic quality of these roadways. The Town also encourages all County, State and national agencies to provide additional mitigation measures to reduce highway and freeway noise, such as the use of Open Graded Asphaltic Concrete (OGAC).

### 4. Motor Vehicle Trip Reduction

Motor vehicles, including: automobiles, motorcycles, and light and heavy trucks, passing through Woodside on arterials and State highways, are the primary source of noise in the Town. Woodside desires to reduce the noise generated by motorized vehicles, and therefore endorses those measures which will reduce the number of vehicles which travel through the Town. These measures may include:

- Regional mass transit which reduces traffic on I-280;
- Concepts of trip reduction and mass transit by supporting specific transit proposals for the Midpeninsula area if found to be effective, quiet, and economically feasible; and,
- Limitations on the frequency and hours of heavy commercial truck transportation through Town.

### Strategies:

#### a. Noise Regulation Enforcement

Cooperate with and encourage the California Highway Patrol, and the San Mateo County Sheriff in the enforcement of motor vehicle noise regulations (e.g., vehicle amplification systems, excessive muffler noise, etc.). Review the need to acquire acoustical measurement equipment.

#### b. Monitor Regional Transportation Planning

The Town will continue to monitor regional transportation planning (e.g., planned capital improvements, or publication of traffic projections) to gauge potential noise impacts on the Town.

#### c. Noise Suppression

Support measures which will provide effective noise suppression (e.g., the design of road surface paving).

#### d. Work with CalTrans

Cooperate with the California Department of Transportation in the review of the design of Interstate 280, with the objective of decreasing vehicular noise.

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**e. Heavy Commercial Truck Transportation**

Limit the frequency and hours of regular heavy commercial truck transportation through Town to reduce the related noise impacts.

**f. Alternative Transportation**

Encourage the use of alternative forms of local transportation by planning for and providing bicycle lanes, pedestrian paths and equestrian trails to reduce vehicle noise (refer to the Circulation Element).

**g. Mass Transit**

Support regional and local mass transit which reduces the number of private cars traveling on highways and roads through Woodside and their associated noise.

**h. Encourage Trip Reduction**

Encourage trip reduction strategies which can reduce the traffic noise impacts.

**POLICY N1.5 – MINIMIZE AIRCRAFT NOISE**

Minimize the amount of noise generated by aircraft flying over the Town.

1. Flight Restriction

Due to noise concerns, no aircraft shall land or take off or hover over lands within the Town Planning Area, except for emergency services or when such activity is deemed necessary by Town officials.

2. Flight Routes and Altitudes

Whenever possible, commercial airline traffic should be routed over the Bay and the ocean when making approaches to or departures from Bay Area airports. Flights over residential areas should be conducted at the highest feasible altitude.

3. Military and General Aviation Flights

Military and general aviation activities (including flight training) should not be conducted over residential areas, or recreation areas within the Town Planning Area.

4. Liaison with Government Agencies

The Town will cooperate with all local, State and National agencies and provide its best efforts toward minimizing aircraft noise.

**Strategies:**

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**a. Amend the Municipal Code**

The Town Council shall consider amending the Municipal Code to clarify that no aircraft should land or take off or hover over lands within the Town Planning Area, except for emergency services or when such activity is deemed necessary by Town officials.

**b. Minimize Disturbances**

Continue to participate on the San Francisco Airport / Community Roundtable to ensure that commercial aircraft on flights to and from the San Francisco, Oakland, and San Jose airports and flights utilizing Moffett Federal Airfield are routed in a manner which will produce minimum disturbance to residential areas.

**c. Training Restrictions**

Support measures to ensure that users of general aviation aircraft are restricted from practicing or training over residential areas.

**d. In Transit Flights**

Support measures to ensure that altitude requirements for in transit flights be raised as high as possible to mitigate noise disturbances.

**e. Noise Monitoring**

Support the installation of a permanent noise monitoring station near the Woodside VOR.