# RANCHO MISSION VIEJO
# AIR QUALITY REPORT

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## THE PROJECT

The proposed project is the development of up to 14,000 dwelling units and other uses within the 22,815 undeveloped acres of Rancho Mission Viejo (the Ranch) in Southeastern Orange County that are unincorporated. The proposed development area is approximately 7,694 acres. Approximately 6,000 of the 14,000 dwelling units would be senior housing, and infrastructure, including schools, road improvements, utilities, and supporting neighborhood and activity centers, would be built to support the new residential development. Total development is anticipated to take 20 years. A total of 15,121 acres would be retained in open space. Construction would occur in 9 phases.

Bordering the proposed project on the west are the planned community of Ladera Ranch and the cities of Mission Viejo, San Juan Capistrano, and San Clemente. The City of Rancho Santa Margarita borders the northern edge of the project, Camp Pendleton in San Diego County is on the southern boundary, and to the east are Caspers Wilderness Park, the Cleveland National Forest and several private properties in Riverside and San Diego counties.

Grading is projected to occur over approximately 19 years and would be divided into seven phases, beginning in the year 2005 and extending through 2024. The peak period for potential air quality impacts during construction would occur between the beginning of 2013 and the end of 2016 during Phase 6 when the greatest amount of soil would be moved and the largest number of pieces of heavy equipment would be in use. Construction on previously graded areas would also be underway.

Present usage of the Ranch site includes agriculture and agriculture-related uses, including apiaries, packing plants for agricultural products, stables, commercial nurseries, facilities for on-site sale of agricultural products and employee housing. Other uses include research and development testing facilities, communication transmission facilities, sanitary landfills, utility structures, recycling facilities and surface mining. Some of these activities would continue until the area in which they are located is scheduled for grading and further development. In addition, some interim activities in support of the Ranch development would occur in areas slated for later development.

## ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. Orange County is in the South Coast Air Basin (SCAB), a 6,600-square-mile area comprised of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SCAB's climate and topography are highly conducive to the formation and transport of air pollution. Peak ozone concentrations in the SCAB over the last two decades have occurred at the base of the mountains around Azusa and Glendora in Los Angeles County and at Crestline in the mountains above the City of San Bernardino. Both peak ozone concentrations and the number of days the standards were exceeded decreased everywhere in the SCAB throughout the

1990s. Carbon monoxide concentrations also dropped significantly throughout the SCAB as a result of strict new emission controls and reformulated gasoline sold in winter months.

## Regulatory and Planning Requirements for the South Coast Air Basin

### Federal Attainment Status

Under the 1990 Clean Air Act, the SCAB was designated the nation's only "extreme" ozone ($O_3$) non-attainment area, which it remained until the EPA "bumped up" the San Joaquin Valley Air Basin from "severe" to "extreme" in October 2001. "Extreme" ozone non-attainment areas were given until 2010 to achieve the national 1-hour ozone standard. Based on 1990 Clean Air Act criteria, the SCAB is also designated a "serious" non-attainment area for both carbon monoxide (CO) and respirable particulate matter ($PM_{10}$).

The federal Clean Air Act sets CO and $PM_{10}$ attainment deadlines in "serious" non-attainment areas at 2000 and 2005, respectively. The 8-hour CO standard was not met in 2000. Although no CO standard was exceeded anywhere in the SCAB in 2001, the 8-hour federal standard was exceeded twice in 2000 in the South Central Los Angeles County Source-Receptor Area. EPA regulations specify that an area attains the CO standard when there are two years of data with no more than one exceedance at any one monitoring station. The 2003 AQMP states that the CO attainment requirements were met in 2002. However, the SCAQMD has not yet requested that the EPA redesignate the SCAB an attainment area.

The national nitrogen dioxide ($NO_2$) standard was regularly exceeded in Los Angeles County until 1992, and the SCAB was the only $NO_2$ non-attainment area in the nation in 1998 when the EPA redesignated it "attainment."

In July 1997, the EPA promulgated a new 8-hour standard for ozone and a new standard for fine particulate matter ($PM_{2.5}$). On April 15, 2004, the EPA released its list of 8-hour ozone non-attainment areas, together with the deadline for each non-attainment area to attain the standard. Areas with the highest 8-hour concentrations and the greatest number of days exceeding the new standard were given the longest time to reach attainment. The South Coast Air Basin is in the most severely degraded ozone category and was given 17 years, or until 2021, to reach the new 8-hour standard.

Designation of $PM_{2.5}$ non-attainment areas is also expected in late 2004 or sometime in 2005. Until these designations are made and the clock for meeting this new standard starts running, the existing federal $PM_{10}$ standards are the only particulate standards of reference for determining attainment.

### State Standards

California standards are generally stricter than national standards, but have no penalty for non-attainment. California and national ambient air standards, together with the health effects of each contaminant, are shown on Table 1.

| Table 1<br>Ambient Air Quality Standards | | | | |
|---|---|---|---|---|
| Air Pollutant | State Standard | National Standards | | Health Effect |
| | | Primary | Secondary | |
| Ozone ($O_3$) | 0.09 ppm, 1-hr. avg. | 0.12 ppm, 1-hr. avg.<br>0.08 ppm, 8-hr. avg. | 0.12 ppm, 1-hr. avg.<br>0.08 ppm, 8-hr. avg. | Aggravation of respiratory and cardiovascular diseases; Impairment of cardiopulmonary function |
| Respirable Particulate Matter ($PM_{10}$) | 50 $\mu g/m^3$, 24-hr. avg.<br>20 $\mu g/m^3$ AGM | 150 $\mu g/m^3$, 24-hr. avg.<br>50 $\mu g/m^3$ AAM | 150 $\mu g/m^3$, 24-hr. avg.;<br>50 $\mu g/m^3$ AAM | Increased cough and chest discomfort; Reduced lung function; Aggravation of respiratory and cardio-respiratory diseases |
| Fine Particulate Matter ($PM_{2.5}$) | No 24-hr., State std.<br>12$\mu g/m^3$ AGM | 65$\mu g/m^3$, 24-hr. avg.<br>15 $\mu g/m^3$ AAM | 65 $\mu g/m^3$, 24-hr. avg.<br>15 $\mu g/m^3$ AAM | |
| Carbon Monoxide (CO) | 9.0 ppm, 8-hr. avg.<br>20 ppm. 1-hr. avg. | 9 ppm, 8-hr. avg.<br>35 ppm, 1-hr. avg. | None | Aggravation of respiratory diseases (asthma, emphysema) |
| Nitrogen Dioxide ($NO_2$) | 0.25 ppm, 1-hr. avg. | 0.053 ppm, annual avg. | 0.053 ppm, annual avg. | Aggravation of respiratory illness |
| Sulfur Dioxide ($SO_2$) | .25 ppm 1-hr.<br>0.04 ppm, 24-hr avg. | 0.03 ppm, annual avg.<br>0.14 ppm, 24-hr. avg. | 0.5 ppm, 3-hr. avg. | Aggravation of respiratory diseases (asthma, emphysema) |
| Lead (Pb) | 1.5 $\mu g/m^3$, monthly avg. | 1.5 $\mu g/m^3$, calendar quarter | 1.5 $\mu g/m^3$ | Impaired blood, nerve function; Behavioral and hearing problems in children |
| Visibility-Reducing Particles | Extinction coefficient of 0.23 per km, visibility of 10 miles at relative humidity less than 70%, 1 observation | | | |
| Sulfates ($SO_4$) | 25 $\mu g/m^3$, 24-hr. avg. | | | Increased morbidity and mortality in conjunction with other pollutants |
| Hydrogen Sulfide ($H_2S$) | 0.03 ppm, 1-hr. avg. | | | Toxic at very high concentrations |
| Vinyl Chloride | 0.010 ppm, 24-hr. avg. | | | Carcinogenic |
| Note: ppm = parts per million by volume; $\mu g/m^3$ = micrograms per cubic meter; AAM = annual arithmetic mean; AGM = annual geometric mean | | | | |
| Source: California Air Resources Board, July 9, 2003 | | | | |

## State Planning

CARB approves the regional plans from each planning area in California for incorporation in the State Implementation Plan (SIP) for California. It also is responsible for preparing the portions

of the SIP related to mobile and many area source control measures and prepares advisory information on air pollution issues for use by other government entities.

**Regional Planning**

The South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) jointly prepare the Air Quality Management Plan (AQMP) for the SCAB. The AQMP contains measures to meet California and federal requirements. When approved by CARB and the federal EPA, the AQMP becomes part of the SIP.

The agencies adopted new AQMPs in 1989 to meet national standards and in 1991 to meet California standards and revised them in 1994 and 1997. The EPA approved the 1994 AQMP in 1996 as part of the SIP. After the EPA announced that it had concerns about the ozone control strategies in the 1997 AQMP, the SCAQMD revised the document in 1999 to address the EPA issues. The revised plan, now known as the 1997/1999 AQMP, was approved by the EPA on May 10, 2000, and replaced the 1994 AQMP as the federally enforceable SIP for the SCAB.

The SCAQMD and SCAG revised the 1999 AQMP in 2003, and the SCAQMD adopted the revised plan as the 2003 AQMP on August 1, 2003. CARB approved the 2003 AQMP in October 2003 and forwarded it to the EPA. When approved, it will replace the 1999 AQMP as the SIP for the SCAB.

## EXISTING AIR QUALITY

The SCAQMD is responsible for monitoring air quality in the SCAB, and for adopting controls, in conjunction with CARB, to improve air quality. The SCAQMD has established "source-receptor" areas (SRA's) for monitoring air pollution, based on topographical and meteorological barriers. The project site is in SRA 21, Capistrano Valley, which is the southernmost portion of Orange County and extends from the mountains to the coast. The SCAQMD does not maintain a monitoring station in this SRA. The SCAQMD monitoring station for this forecast area, known as Inland Orange County, is in SRA 19, the Saddleback Valley.

Overall, air quality improved considerably throughout the SCAB in the 1990's. In 1990, the peak ozone concentration in SRA 19 was 0.19 ppm and the State ozone standard was exceeded 32 times. In 2002, the peak reading at that same station was 0.136 ppm and the State standard was exceeded 9 times. These improvements have occurred despite extensive population growth in Orange County during the twelve years.

Until the EPA officially designates $PM_{2.5}$ areas, the SCAQMD is monitoring levels of $PM_{2.5}$. Where readings are available, the $PM_{2.5}$ concentrations are shown in Table 2 for information purposes. Readings for SRA 19 for the past five years, together with the applicable State and national standards, are shown in Table 2.

**Table 2**
**Summary of Air Quality Data Saddleback Valley (Inland Orange County) SRA 19**

| Pollutant Standards | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| Ozone ($O_3$) | | | | | |
| State standard (1-hr. avg. 0.09 ppm) | | | | | |
| National standard (1-hr. avg. 0.12 ppm) | | | | | |
| National standard (8-hr. avg 0.08 ppm) | | | | | |
| Maximum 1-hr concentration (in ppm) | 0.16 | 0.10 | 0.13 | 0.125 | 0.136 |
| Maximum 8-hr concentration (in ppm) | 0.11 | 0.08 | 0.11 | 0.098 | 0.095 |
| Number of days state standard exceeded | 15 | 2 | 3 | 10 | 9 |
| Days national 1-hr. standard exceeded | 1 | 0 | 1 | 1 | 2 |
| Days national 8-hr. standard exceeded | 3 | 0 | 2 | 2 | 2 |
| Carbon Monoxide (CO) | | | | | |
| State standard (1-hr. avg. 20 ppm) | | | | | |
| National standard (1-hr. avg. 35 ppm) | | | | | |
| State standard (8-hr. avg. 9.0 ppm) | | | | | |
| National standard (8-hr. avg. 9 ppm) | | | | | |
| Maximum concentration 1-hr. period (in ppm) | 6.0 | 4.0 | 5.0 | 3.0 | 3.0 |
| Maximum concentration 8-hr. period (in ppm) | 3.1 | 2.5 | 3.3 | 2.38 | 3.6 |
| Days state/nat'l 1-hr. standards exceeded | 0 | 0 | 0 | 0 | 0 |
| Days state/nat'l 8-hr. standard exceeded | 0 | 0 | 0 | 0 | 0 |
| Nitrogen Dioxide ($NO_2$)[1] | | | | | |
| State standard (1-hr avg. 0.25 ppm) | | | | | |
| National standard (0.0534 AAM in ppm) | | | | | |
| Annual arithmetic mean (in ppm) | 0.0200 | 0.0209 | 0.0205 | 0.0182 | 0.0187 |
| Percent national standard exceeded | 0 | 0 | 0 | 0 | 0 |
| Maximum 1-hr concentration | 0.12 | 0.12 | 0.11 | 0.08 | 0.11 |
| Days state 1-hr. standard exceeded | 0 | 0 | 0 | 0 | 0 |
| Suspended Particulates ($PM_{10}$)[1] | | | | | |
| State standard (24-hr. avg. 50 $\mu g/m^3$) | | | | | |
| National standard (24-hr. avg. 150 $\mu g/m^3$) | | | | | |
| Maximum 24-hr. concentration | 70 | 111 | 98[2] | 60 | 80 |
| Percent samples exceeding state standard | 10.2 | 10 | 3 | 5 | 8.3 |
| Percent samples exceeding national standard | 0 | 0 | 0 | 0 | 0 |
| Suspended Particulates ($PM_{2.5}$) | | | | | |
| National standard (24-hr. avg. 65 $\mu g/m^3$) | | | | | |
| Maximum 24-hr. concentration | NM | 56.6 | 94.7[2] | 53.4 | 58.5 |
| Percent samples exceeding national standard | | 0 | 0 | 0 | 0 |

[1] Readings are from SRA 18 (North Coast Orange County—$NO_2$ not monitored in SRA 19)
[2] Year 2000 $PM_{10}$ and $PM_{2.5}$ readings are from special monitoring station set up on temporary basis in SRA 19 and were the only $PM_{2.5}$ readings that year in SRA 19. $PM_{10}$ readings were from same monitoring station for comparison purposes.
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
NM = Not Monitored. $PM_{2.5}$ monitoring began in 1999.

Source: SCAQMD Air Quality Data—1998 through 2002

## Summary of Existing Air Quality

Pollutant concentrations, particularly those of particulates, vary somewhat from year, depending on meteorological conditions. Although readings in SRA 19 for the past four years are basically unchanged for ozone and carbon monoxide, concentrations of the two pollutants are down from

those in 1998. For all other pollutants, they are basically unchanged over the five-year period. The area experiences relatively low ozone pollution compared to elsewhere in the SCAB, but concentrations are the highest in Orange County and both state and national standards are regularly exceeded. As is the case throughout Orange County, carbon monoxide levels have not exceeded state and national standards in the period. Particulate readings are relatively constant and well below national $PM_{10}$ standards, although they exceed State standards. The new national $PM_{2.5}$ standard would have been exceeded occasionally.

## SIGNIFICANCE THRESHOLDS

A project's air quality impacts can be separated into short-term impacts due to construction and long-term permanent impacts from project operations. Determination of significant impact is the responsibility of the lead agency, which is the County of Orange (the County).

For air quality, the County relies on significance thresholds recommended by the SCAQMD in its CEQA Air Quality Handbook (the "SCAQMD CEQA Handbook"), as revised in November 1993 and approved by the SCAQMD's Board of Directors.

The SCAQMD's emission thresholds apply to all federally regulated air pollutants except lead, which is not exceeded in the SCAB. Construction and operational emissions are considered by the SCAQMD to be significant if they exceed the thresholds shown in Table 3.

**Table 3**
**Emissions Thresholds of Significance**

| Pollutant | Construction | | Operations |
|---|---|---|---|
| | pounds/day | tons/quarter | pounds/day |
| Carbon Monoxide (CO) | 550 | 24.75 | 550 |
| Sulfur Oxides ($SO_x$) | 150 | 6.75 | 150 |
| Particulate Matter ($PM_{10}$) | 150 | 6.75 | 150 |
| Nitrogen Oxides ($NO_x$) | 100 | 2.5 | 55 |
| Volatile organic compounds (VOC) | 75 | 2.5 | 55 |
| Source: SCAQMD CEQA Air Quality Handbook, 1993 | | | |

Carbon monoxide emissions from a project are significant if they cause CO concentrations at impacted locations to exceed a national or State standard or, in an area that already exceeds a standard, to increase CO concentrations by more than one part per million (ppm) averaged over one hour or 0.45 ppm averaged over eight hours.

In addition, the SCAQMD CEQA Handbook lists additional indicators of potential air quality impacts (Secondary Effects). Projects would have a significant impact if they would:

- Conflict with or obstruct implementation of the applicable air quality plan.

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release in emissions which exceed quantitative thresholds for ozone precursors)

- Expose sensitive receptors to substantial pollutant concentrations.

- Create objectionable odors affecting a substantial number of people. An objectionable odor is defined in the Handbook as 1 over 10 dilution to thresholds (D/T).

If the total population accommodated by a new project, together with the existing population and the projected population from all other planned projects in the subarea, does not exceed the growth projections for that subarea incorporated in the most recently adopted AQMP, the completed project is consistent with the AQMP. The entire County of Orange is considered to be one subarea. The AQMP is region-wide and accounts for, and offsets, cumulative increases in emissions that are the result of anticipated growth throughout the region.

Sensitive receptors may warrant additional mitigation even when emissions are below the significance thresholds established by the SCAQMD. Ambient air standards are established to protect the average person from health effects associated with air pollution. The standards include an "adequate margin of safety." However, some people are particularly sensitive to some pollutants. These sensitive people include persons with respiratory illnesses or impaired lung function because of other illnesses, the elderly, and children. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors.

The SCAQMD is currently revising its CEQA Handbook, which will be renamed the Air Quality Analysis Guidance Handbook when the revisions are complete. Chapters of the new Handbook are posted on the SCAQMD website as they are completed. To date, the following chapters have been revised:

Chapter 2 – Improving Air Quality and the AQMD's Role

Chapter 3 – Basic Air Quality Information

Chapter 4 – Early Consultation and Sensitive Receptor Siting Criteria

None of the chapters that address significance thresholds, emission factors, modeling, assessment procedures, etc. has been revised to date, although the SCAQMD has issued new modeling guidelines for local governments to use in determining potential $PM_{10}$ concentrations on nearby sensitive receptors. Chapter 4 defines land uses considered to be sensitive receptors as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers and athletic facilities.

Odors associated with some projects may cause a nuisance that is not covered by the SCAQMD's emission thresholds. These odors may result during construction from disturbing soil that has formerly been saturated with an odoriferous substance or they may be associated with new uses that would occur after the project is completed.

In addition, emissions from some construction equipment and trucks could expose sensitive receptors to toxic air contaminants or completion of the project could expose future sensitive receptors to air toxics if the project is near an existing source of toxic emissions.

## CONSTRUCTION IMPACTS

Construction impacts may be regional or local and include airborne dust from demolition, grading, excavation and dirt hauling and gaseous emissions from the use of heavy equipment, delivery and dirt hauling trucks, employee vehicles, and paints and coatings. Regional pollutants, such as ozone, are those where emissions from many sources combine in the atmosphere and impact areas far removed from the emission sources. Local pollutants are those where the impacts occur very close to the source. Examples of the latter include carbon monoxide or large particulate matter (fugitive dust) that settles in the vicinity of the source and does not become airborne.

The proposed project is projected to take 20 years to be fully built out. Grading schedules developed by the project engineers show that grading would occur in seven phases over a 19-year period.

The peak construction day and quarter would occur in Phase 6 in the four years between the beginning of 2013 and the end of 2016. This is when the most cut and fill would be occurring, as well as the most heavy-duty construction equipment in use. The analysis assumes that the peak period would occur in the year 2014. Based on the phasing plan for the Ranch, there would be overlap with Phase 4 construction in areas that have been previously graded.

Both construction grading and operation emissions were analyzed with the California Air Resources Board model, URBEMIS2002. This computer model estimates both construction and operational emissions associated with the specific land uses associated with a project, including grading based on the total acreage and the time frame in which grading will occur. The model uses current CARB emission factors for automobile and truck emissions and EPA emission factors for equipment emissions and fugitive dust emissions. The model is approved for use on all projects in the South Coast Air Basin. Because the URBEMIS estimates of worker trips and truck trips is based on average construction requirements for total land uses in the project, the worker and truck trip estimates were based on assumed needs in 2014 and include worker trips and truck trips for other activities besides grading. Peak day emissions are shown in Table 4; total emissions are shown in Table 5. All numbers are rounded to the nearest whole number. Model runs are on file at the County of Orange and are available for review during regular business hours.

### Grading and Excavation

The total project would require 288,461,000 cubic yards of cut and fill and remedial grading. Of this, 107,957,000 cubic yards of soil movement would occur in Phase 6, resulting in an average

of 26,989,250 cubic yards in the year. Assuming 22 workdays per month, this would average 102,232 cubic yards per day. Since all soil would be balanced on the site being graded during each phase, the model assumes no on-road truck travel.

SCAQMD Rule 403, last amended April 2, 2004, governs fugitive dust emissions from construction projects. This rule sets forth a list of control measures that must be undertaken for any activity or man-made condition capable of generating fugitive dust to prevent, reduce or mitigate fugitive dust emissions. The rule applies to all construction projects with a disturbed area of five or more acres. In addition, large projects, which are defined as active operations on property which contains in excess of 50 acres of disturbed surface area or any operation which exceeds a daily earth-moving or throughput volume of 5,000 cubic yards three times over a 365-day period, must file a fully executed Large Operation Notification Form (Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a large operation under the rule. The rule sets forth a number of requirements regarding record keeping, as well as specific mitigation measures that must be contained in an approved dust-control plan. Recommended dust control measures are incorporated in the URBEMIS model.

Because the proposed project would exceed 50 acres and would move at least 5,000 cubic yards of dirt three or more times in a year during construction, the proposed project would be required to file a 403N form.

SCAQMD Rule 402, Nuisance, also would apply to this project. Most of the fugitive dust associated with construction is comprised of particles larger than 10 microns in diameter. While these larger particles settle out quickly and do not cause the health effects associated with the smaller sized particles ($PM_{10}$ and $PM_{2.5}$), they can damage plants and property sufficiently to qualify as a nuisance. Rule 402 prohibits visible dust emissions from extending beyond the project boundaries. The same mitigation measures used to control $PM_{10}$ also control the larger, visible particles.

**Equipment**

Based on Phasing Plan B4g: Grading, prepared by the project engineers, the analysis assumed that there would be a total of 69 pieces of heavy equipment required for the peak-grading day. Equipment would consist of very large dozers, some moderate to smaller dozers, graders, scrapers, etc. There would be a need for 6 off-road water trucks. All equipment is assumed to operate 8 hours/day.

**Worker Trips**

The URBEMIS2002 model calculates daily worker trip emissions based on the land uses and amount of equipment.

**Architectural and Asphalt Coatings**

The proposed schedule assumes partial construction of Planning Area 4 simultaneously with the peak grading period. Some VOC emissions would occur during this construction. The amount of these emissions will depend on the painting schedule and duration, as well as the season in which painting occurs. This is a small planning area. In order to more accurately depict a typical

worst-case day for VOC emissions from architectural coatings, the construction that will follow in Planning Areas 5, 6, and 7 which have the same boundaries as Grading Phase 6 was assessed for potential daily emissions from architectural coatings. These emissions are a high estimate. The project applicant will require that all coatings are SCAQMD-compliant

**Sensitive Receptors**

The California Air Resources Board has identified diesel particulate emissions as carcinogenic air toxics. Because much of the project area is remote from the nearest currently populated area, there are few identified sensitive receptors in the immediate vicinity of where most of the grading would occur. However, cancer risk is cumulative, based on lifetime exposure and CARB has not set a safe level for exposure to diesel exhaust. Therefore, exposure to any amount should be mitigated. Construction workers would be most at risk because of the large amount of diesel equipment that would be operating simultaneously. Workers should wear masks when working near diesel equipment or diesel trucks. All diesel equipment should be fitted with particulate traps.

**Table 4**
**Peak Day Construction Emissions (in pounds per day) Without Mitigation**

| Source Category | Pollutant | | | | |
|---|---|---|---|---|---|
| | Carbon Monoxide (CO) | Volatile Organic Compounds (VOC) | Oxides of Nitrogen (NOx) | Oxides of Sulfur (SOx) | Particulate Matter ($PM_{10}$) |
| Earthmoving/ Grading | | | | | 12,047 |
| Diesel-Powered Equipment | 1,412 | 169 | 1,049 | 0 | 38 |
| Worker Trips[1]/[2] | 23/112 | 1/8 | 2/5 | 0 | 0/5 |
| Architectural Coatings[1] | | 1,409 | | | |
| MAXIMUM DAILY CONSTRUCTION EMISSIONS (highest phase) | 1,435 | 1,417 | 1,051 | 0 | 12,085 |
| SCAQMD Daily Significance Threshold | 550 | 75 | 100 | 150 | 150 |
| Significant? | YES | YES | YES | NO | YES |

[1] Grading Phase
[2] Architectural Coatings Phase

Source: URBEMIS 2002 model

| Table 5<br>Peak Quarter Construction Emissions (in tons) Without Mitigation | | | | | |
|---|---|---|---|---|---|
| Source Category | Pollutant | | | | |
| | Carbon Monoxide (CO) | Volatile Organic Compounds (VOC) | Oxides of Nitrogen (NOx) | Oxides of Sulfur (SOx) | Particulate Matter ($PM_{10}$) |
| Earthmoving/ Grading | | | | | 397.55 |
| Diesel-Powered Equipment | 46.60 | 5.58 | 34.62 | 0 | 1.25 |
| Worker Trips [1/2] | 0.76/3.70 | 0.03/0.26 | 0.07/0.17 | 0 | 0/0.17 |
| Architectural Coatings | 0 | 46 | 0 | 0 | 0 |
| TOTAL CONSTRUCTION EMISSIONS (highest phase) | 49.70 | 46.26 | 34.69 | 0 | 398.80 |
| SCAQMD Significance Thresholds for Construction | 24.75 | 2.5 | 2.5 | 6.75 | 6.75 |
| Significant? | YES | YES | YES | NO | YES |

[1] Grading Phase
[2] Architectural Coatings Phase

Source: URBEMIS 2002 model

## Summary of Construction Impacts

As shown in Tables 4 and 5, emissions of all pollutants except sulfur oxides would be very significant, based on SCAQMD thresholds of significance, without mitigation. CEQA requires that mitigation measures be employed to the maximum extent feasible.

## CONSTRUCTION MITIGATION MEASURES

As stated under Grading, the project qualifies as a “large project” under SCAQMD Rule 403 and the applicant is required to file a fugitive dust emissions control notice with the SCAQMD. The SCAQMD must determine that the project is implementing controls, as specified by the Rule, prior to the commencement of grading. The newly revised Rule 403 Implementation Handbook contains compliance guidelines for large operations and suggests dust control measures for incorporation in the fugitive dust emissions control plans, where applicable. Control measures are incorporated in the URBEMIS model.

The URBEMIS2002 model assumed the following mitigation measures:

A. Water exposed surfaces three times a day.

B. Use diesel particulate filter.

C. Cover all stockpiles with tarps.

D. Water all haul roads three times a day.

E. Operate vehicles on unpaved roads at 15 mph or less.

F. Apply soil stabilizers to inactive areas.

G. Replace ground cover in disturbed areas quickly.

According to the URBEMIS model, these measures would reduce particulate emissions substantially. Remaining emissions are shown in Table 6.

**Table 6**
**Peak Day Construction Grading Emissions After Mitigation (in pounds per day)**

| Source Category | Pollutant | | | | |
|---|---|---|---|---|---|
| | Carbon Monoxide (CO) | Volatile Organic Compounds (VOC) | Oxides of Nitrogen (NOx) | Oxides of Sulfur (SOx) | Particulate Matter ($PM_{10}$) |
| Total Daily Emissions Before Mitigation | 1,435 | 170 | 1,051 | 0 | 12,085 |
| Particulate Emissions Reduced | | | | | 11,007 |
| MAXIMUM DAILY CONSTRUCTION EMISSIONS AFTER MITIGATION | 1,435 | 170 | 1,051 | 0 | 1,078 |
| SCAQMD Significance Thresholds for Construction | 550 | 75 | 100 | 150 | 150 |
| Significant? | YES | YES | YES | NO | YES |

**Additional Mitigation Measures**

The following measure should be added to protect workers from exposure to toxic diesel air pollutants from equipment.

A. Construction workers should wear masks when working near diesel equipment or trucks.

B. Equipment should be turned off when not in use for longer than 5 minutes.

**Construction Emissions After Mitigation**

As shown in Table 6, the recommended control measures would substantially reduce $PM_{10}$ emissions. Emissions of NOx, CO, VOC and $PM_{10}$ would remain significant after mitigation.

Heavy-duty equipment emissions are assumed with today's emissions standards. However, both CARB and the EPA are proposing new controls on off-road diesel equipment that should go into effect prior to the peak construction period. Equipment will comply with all control regulations in force at that time. NOx emissions are, therefore, substantially higher than what could be expected.

## OPERATIONAL IMPACTS

**Regional**

The proposed project would contain up to 14,000 dwelling units. Approximately 6,000 of the 14,000 dwelling units would be senior housing, and infrastructure, including schools, road improvements, utilities, and supporting neighborhood and activity centers, would be built to support the new residential development. The Traffic Consultant, Austin-Foust Associates, Inc. estimates that these land uses would generate 183,338 trip ends daily.

The primary source of operational emissions would be vehicle travel. A small amount of gaseous emissions would occur from use of natural gas and other area sources. There would also be some indirect emissions from electricity usage. Landscaping emissions are principally those associated with garden equipment such as mowers, leaf blowers, etc. Consumer products are principally gaseous emissions from sources commonly associated with residential and commercial land uses. They include hair sprays, household and industrial cleaning solvents, floor cleaners and waxes, colognes and deodorants, etc.

To compare with current conditions, air quality was also estimated for total buildout assuming it was completed in 2005. Vehicle and area emissions were calculated with the California Air Resources Board model (URBEMIS2002), adjusted with total trips for the project supplied by the traffic consultant. Emissions were calculated for both summer and winter conditions. Existing traffic was estimated for 2004 by the traffic consultant, as well as cumulative and project-related traffic at buildout in 2025. These traffic numbers were combined to develop an existing scenario in 2005. NOx emissions are higher in winter because of heating with natural gas; ROC emissions are slightly higher in summer because of landscaping. To show a worst case, the higher number for each pollutant is used in Table 6.

Air quality as it would be in 2005 is shown in Table 7. Air quality at the presumed time of buildout is shown in Table 8.

| Table 7<br>Proposed Project Operational Emissions in pounds per day (2005) | | | | | |
|---|---|---|---|---|---|
| Source Category | Pollutant | | | | |
| | Carbon Monoxide (CO) | Volatile Organic Compounds (VOC) | Oxides of Nitrogen ($NO_x$) | Oxides of Sulfur (SOx) | Particulate Matter ($PM_{10}$) |
| Traffic Emissions | 19,577 | 1,894 | 2,477 | 16 | 1,443 |
| Consumer Products and Landscaping | 119 | 699 | 2 | 4 | 1 |
| Natural Gas Emissions | 73 | 13 | 173 | 0 | 0 |
| TOTAL PROJECT EMISSIONS | 19,769 | 2,606 | 2,652 | 20 | 1,444 |
| SCAQMD Significance Thresholds for Operation | 550 | 55 | 55 | 150 | 150 |
| Significant? | YES | YES | YES | NO | YES |
| Emissions calculated with URBEMIS2002 | | | | | |

| Table 8<br>Proposed Project Operational Emissions in pounds per day (2025) | | | | | |
|---|---|---|---|---|---|
| Source Category | Pollutant | | | | |
| | Carbon Monoxide (CO) | Volatile Organic Compounds (VOC) | Oxides of Nitrogen ($NO_x$) | Oxides of Sulfur (SOx) | Particulate Matter ($PM_{10}$) |
| Traffic Emissions | 4,073 | 495 | 330 | 10 | 1,434 |
| Consumer Products and Landscaping | 62 | 691 | 1 | 2 | 0 |
| Natural Gas Emissions | 73 | 13 | 173 | 2 | 0 |
| TOTAL PROJECT EMISSIONS | 4,208 | 1,199 | 504 | 14 | 1,434 |
| SCAQMD Significance Thresholds for Operation | 550 | 55 | 55 | 150 | 150 |
| Significant? | YES | YES | YES | NO | YES |
| Emissions calculated with URBEMIS2002 . Data from BonTerra Consulting and Austin Foust Associates. | | | | | |

**Significance**

As shown in both Tables 7 and 8, operation of the proposed project would result in significant emissions of all pollutants except sulfur oxides on a regional scale. However, because of fleet turnover to vehicles with already implemented emission controls and because of the implementation of already adopted but future effective vehicle emissions controls, total emissions in 2025 would be considerably lower than they would be if the project were operative in 2005. There would be some odors, such as from cooking and gardening, associated with residential uses, but those odors are not considered significant on a regional scale. Local odors would be no different than in any other residential area with supporting services and would not be significant. The proposed land uses would not significantly contribute to background air toxics.

No additional mitigation beyond that assumed by the Traffic Consultant was assumed for traffic emissions. These adverse impacts are significant and unavoidable. Some additional mitigation for area source and landscaping emissions may be available through design features that can be required at the time specific plans are prepared. However, impacts would remain significant.

**Local**

The purpose of the local analysis is to determine if the proposed project could cause or contribute to carbon monoxide hot spots (locations where the CO concentrations exceed a State or national CO standard). Because of carbon monoxide controls that have been implemented in the past decade, the number of potential CO hotspots has greatly decreased everywhere in the SCAB. The potential hotspots will continue to decline in the foreseeable future as background levels go down. Because the entire SCAB has been an attainment area for all 1-hour CO standards for more than five years, the 8-hour CO standards are the critical standards for assessing hotspots. No CO standard has been exceeded in Orange County since 1992, and the SCAQMD's 2003 AQMP demonstrates attainment of all standards throughout the Basin, as well as continued maintenance of that status. Background CO levels are projected to decline until 2010 and remain stable thereafter despite continued projected population and traffic growth.

The SCAQMD requires that current or projected background CO concentrations at the air monitoring station nearest a project be added to modeled concentrations. This addition is intended to provide an extra measure of safety to account for any amount of carbon monoxide that might be in the ambient air. In general, this requirement means that the analysis is very conservative because CO dissipates within a few hundred feet of where it is emitted. Since cumulative traffic from sources other than the proposed project is included in the traffic analysis, the modeling accounts for almost all the CO that could be present.

The background concentration is indicative of conditions near the monitoring station, which is in an area of high traffic volume, not where the project would have the greatest impact. CO concentrations are projected to continue to decline until at least 2010 and the SCAQMD has generated a table of estimated future one-hour and eight-hour CO concentrations at each of its monitoring stations that account for this decrease through the year 2020. In this analysis 2025 traffic is used with Year 2020 projected background levels. Because background carbon monoxide concentrations have declined substantially, actual 2002 CO concentrations are much

lower than those predicted by the SCAQMD for that year. Predicted year 2020 concentrations may be similarly overstated.

The traffic consultant's estimates of future traffic volume were used to determine the potential for future hotspots developing as a result of the proposed project. All of the future traffic projections in the traffic report include the cumulative traffic impacts resulting from related projects that could be built in the project vicinity between now and 2025.

The following intersections were modeled with CARB's Caline 4 model: Marguerite Parkway and Avery Parkway, I-5 SB Ramps at Avenida Pico, and SR-241 SB Ramps at Oso Parkway. Intersections were selected for modeling on the basis of whether they currently exist, would experience relatively heavy traffic from both the project and other sources, and would experience a substandard LOS (LOS F) when both cumulative traffic and traffic from the proposed project are combined. The SCAQMD has determined that intersections with an LOS of C or better would not exceed existing CO standards.

Eight-hour concentrations were assumed at 70% of the modeled one-hour concentration, consistent with Caltrans, CARB and SCAQMD guidelines. Emission factors were those contained in EMFAC2002, V2.2 issued September 23, 2002. Receptors were set at three meters from the roadway edges. Both one-hour and eight-hour concentrations in 2005 are shown in Table 9 and Table 10 shows concentrations in 2025..

The traffic consultant's estimates of existing traffic in 2003 and future traffic volume in 2025 were used to determine the potential for future hotspots developing as a result of the proposed project. All of the future traffic projections in the traffic report include the cumulative traffic impacts resulting from related projects that could be built in the project vicinity between now and 2025.

The following intersections were modeled with CARB's Caline 4 model: Marguerite Avenue and Avery Parkway, I-5 SB Ramps at Pico Street, and SR-241 SB Ramps at Oso Parkway. Intersections were selected for modeling on the basis of whether they currently exist, would experience relatively heavy traffic from both the project and other sources, and would experience LOS F with the project. The SCAQMD has determined that intersections with an LOS of C or better would not exceed existing CO standards. Decreases in CO concentrations at some intersections between existing levels and those in 2006 are the result of decreases in per-vehicle emissions resulting from fleet turnover with new, better-controlled vehicles.

Eight-hour concentrations were assumed at 70% of the modeled one-hour concentration, consistent with Caltrans, CARB and SCAQMD guidelines. Emission factors were those contained in EMFAC 2002, V2.2 issued September 23, 2002. Receptors were set at three meters from the roadway edges.

## Table 9
## Carbon Monoxide Concentrations at Most Impacted Intersections (in ppm)
## Existing Plus Cumulative Plus Project (2005)

| Intersection | Time | Monitored CO[a] | Modeled Existing Traffic | Adjusted CO Existing Traffic | Projected CO (2005)[b] | Modeled CO Cumulative No Project | Adjusted CO Cumulative No Project | Modeled CO Cumulative with Project | Adjusted CO Cumulative with Project[c] |
|---|---|---|---|---|---|---|---|---|---|
| **One Hour** | | | | | | | | | |
| Marguerite Parkway/ Avery Parkway | AM | 6.0 | 4.7 | 10.7 | 6.0 | 1.1 | 7.1 | 1.1 | 7.1 |
| I-5 SB Ramps/ Avenida Pico | AM | 6.0 | 4.9 | 10.9 | 6.0 | 1.1 | 7.1 | 1.1 | 7.1 |
| SR-241 SB Ramp/ Oso Parkway | AM | 6.0 | 3.3 | 9.3 | 6.0 | 0.6 | 6.6 | 1.2 | 7.2 |
| Marguerite Parkway/ Avery Parkway | PM | 6.0 | 6.3 | 12.3 | 6.0 | 1.3 | 7.3 | 1.3 | 7.3 |
| I-5 SB Ramps/ Avenida Pico | PM | 6.0 | 5.9 | 11.9 | 6.0 | 1.3 | 7.3 | 1.4 | 7.4 |
| SR-241 SB Ramp/ Oso Parkway | PM | 6.0 | 3.1 | 9.1 | 6.0 | 0.6 | 6.6 | 1.7 | 7.7 |
| **Eight Hour** | | | | | | | | | |
| Marguerite Parkway/ Avery Parkway | AM | 3.1 | 2.80 | 5.90 | 3.1 | 0.77 | 3.87 | 0.77 | 3.87 |
| I-5 SB Ramps/ Avenida Pico | AM | 3.1 | 3.43 | 6.53 | 3.1 | 0.77 | 3.87 | 0.77 | 3.87 |
| SR-241 SB Ramp/ Oso Parkway | AM | 3.1 | 2.31 | 5.41 | 3.1 | 0.42 | 3.52 | 0.84 | 3.94 |
| Marguerite Parkway/ Avery Parkway | PM | 3.1 | 4.41 | 7.51 | 3.1 | 0.91 | 4.01 | 0.91 | 4.01 |
| I-5 SB Ramps/ Avenida Pico | PM | 3.1 | 4.13 | 7.23 | 3.1 | 0.91 | 4.01 | 0.98 | 4.08 |
| SR-241 SB Ramp/ Oso Parkway | PM | 3.1 | 2.17 | 5.27 | 3.1 | 0.42 | 3.52 | 1.19 | 4.29 |

*[a] CO concentration measured in 2002 at SRA 19 monitoring station*
*[b] SCAQMD projected concentration in 2005 assumed at 2002 levels (Source: www.AQMD.org)*
*[c] Project would not have a significant impact because no concentration exceeds the most stringent 1-hour CO standard of 20 ppm or the most stringent 8-hour standard of 9.0 ppm*

## Table 10
## Carbon Monoxide Concentrations at Most Impacted Intersections (in ppm)
## Existing Plus Cumulative Plus Project (2025)

| Intersection | Time | Monitored CO[a] | Modeled Existing Traffic | Adjusted CO Existing Traffic | Projected CO[b] | Modeled CO Cumulative No Project | Adjusted CO Cumulative No Project | Modeled CO Cumulative with Project | Adjusted CO Cumulative with Project[c] |
|---|---|---|---|---|---|---|---|---|---|
| **One Hour** | | | | | | | | | |
| Marguerite Parkway/ Avery Parkway | AM | 3.0 | 4.7 | 7.7 | 5.1 | 1.1 | 6.2 | 1.1 | 6.2 |
| I-5 SB Ramps/ Avenida Pico | AM | 3.0 | 4.9 | 7.9 | 5.1 | 1.1 | 6.2 | 1.1 | 6.2 |
| SR-241 SB Ramp/ Oso Parkway | AM | 3.0 | 3.3 | 6.3 | 5.1 | 0.6 | 5.7 | 1.2 | 6.3 |
| Marguerite Parkway/ Avery Parkway | PM | 3.0 | 6.3 | 9.3 | 5.1 | 1.3 | 6.4 | 1.3 | 6.8 |
| I-5 SB Ramps/ Avenida Pico | PM | 3.0 | 5.9 | 8.9 | 5.1 | 1.3 | 6.4 | 1.4 | 6.5 |
| SR-241 SB Ramp/ Oso Parkway | PM | 3.0 | 3.1 | 6.1 | 5.1 | 0.6 | 5.6 | 1.7 | 6.8 |
| **Eight Hour** | | | | | | | | | |
| Marguerite Parkway/ Avery Parkway | AM | 3.6 | 2.80 | 6.40 | 1.8 | 0.77 | 2.57 | 0.77 | 2.57 |
| I-5 SB Ramps/ Avenida Pico | AM | 3.6 | 3.43 | 7.03 | 1.8 | 0.77 | 2.57 | 0.77 | 2.57 |
| SR-241 SB Ramp/ Oso Parkway | AM | 3.6 | 2.31 | 5.91 | 1.8 | 0.42 | 2.22 | 0.84 | 2.64 |
| Marguerite Parkway/ Avery Parkway | PM | 3.6 | 4.41 | 8.01 | 1.8 | 0.91 | 2.71 | 0.91 | 2.71 |
| I-5 SB Ramps/ Avenida Pico | PM | 3.6 | 4.13 | 7.73 | 1.8 | 0.91 | 2.71 | 0.98 | 2.78 |
| SR-241 SB Ramp/ Oso Parkway | PM | 3.6 | 2.17 | 5.77 | 1.8 | 0.42 | 2.22 | 1.19 | 2.99 |

*[a] CO concentration measured in 2002 at SRA 19 monitoring station*
*[b] SCAQMD projected concentration in 2020 (Source: www.AQMD.org)*
*[c] Project would not have a significant impact because no concentration exceeds the most stringent 1-hour CO standard of 20 ppm or the most stringent 8-hour standard of 9.0 ppm*

## Summary of Operational Impacts

As shown in Tables 7 and 8, the project would have a significant adverse impact on all regional emissions except for sulfur oxides in either 2005 or 2025. However, emissions would be much lower in 2025 because of new vehicle controls. Tables 9 and 10 show that no intersection would exceed the strictest CO standard, which is the State 8-hour standard of 9.0 ppm, in either 2005 or 2025 even after adding background concentrations. Already low CO concentrations would be even lower in 2025. Therefore, there would be no significant adverse impacts on local air quality with operation of the project.

## ALTERNATIVES

Ten alternatives, including the proposed Ranch project and no project, were analyzed. Key characteristics of each alternative are shown in Table 11.

**Table 11: Comparison of Alternatives**

| Alternative | Acres of Development | Acres of Open Space | Dwelling Units | Million Sq. Ft. Employment | Acres of Golf Resort | Average Daily Trips |
|---|---|---|---|---|---|---|
| A-1: No Action | 0 | No new dedications | No new | 0 | 0 | 0 |
| A-2: Existing Zoning | 19,822 | No new dedications | 3,265 | 0[b] | 0 | 29,878 |
| B-4: Proposed Project | 7,694 | 15,121 | 14,000 | 5.2 | 20 | 183,338 |
| B4-R: Project, Reduced Density | 6,589 | 16.226 | 10,800 | 2.7 | 25 | 137,844 |
| B-5: No Development in San Mateo Watershed | 7,170 | 15,645 | 14,000 | 5.58 | 0 | 183,906 |
| B-6: No New Disturbance in San Mateo Watershed | 6,740 | 10,075 | 14,000 | 5.58 | 0 | 183,906 |
| B-8: No Development in Chiquita Canyon and San Mateo Watershed | 3,680 | 19,135 | 8,400 | 2.48 | 0 | 126,925 |
| B-9: Working Group Proposal | 6,582 | 16,233 | 13,600 | 5.2 | 25 | 183,906 |
| B-10: County of Orange Proposal | 7,627 | 15,188 | 14,450 | 5.595 | 25 | 183,360 |
| B-11: OCP-2004 Housing | 8,565 | 14,250 | 19,200 | 3.64 | 25 | 191,911 |

*Source: BonTerra Consulting and The Ranch Plan EIR Traffic Report, Austin-Foust Associates, April 2004*

Construction and operational impacts are compared qualitatively to the proposed project, as analyzed above

## No Action (Alternative A-1)

### Description

Alternative A-1 is the "No Action", as required pursuant to CEQA. This alternative assumes existing conditions on RMV property and continued use of the RMV property for existing agricultural, livestock, resource extraction, and lease activities. No additional residential or other urban uses would be proposed.

### Air Quality Impact

While there are some uses currently on the property that contribute air pollutants to the ambient air, the specific land uses have not been sufficiently quantified by size and location to assess the amount of pollution they are currently emitting. In any event, they are very low compared to emissions from alternative proposals. Therefore, emissions from this alternative are assumed at zero.

## Existing Zoning (Alternative A-2)

### Description

Alternative A-2 is based on existing General Agricultural zoning (1 dwelling unit per 4 acres). Development would be large-lot residential development, agricultural uses and sand/gravel mining, resource extraction activities in conformance with the existing zoning code without preparing a NCCP/HCP or SAMP/MSAA. This would provide for approximately 3,265 single-family dwelling units throughout the Ranch Plan areas accessible by existing ranch roads. This alternative would result in about 19,822 acres of the Ranch Plan area being subdivided (See Exhibit 1-6). Resource extraction and related uses would be allowed to continue and potentially expand within 1,620 acres of designated areas consistent with existing zoning (i.e., in Planning Area 5). About 75 percent of the project site would be in open space; however, it would not be publicly dedicated, but occurring within small estate lot parcels owned by individual homeowners and along the ridges and slopes deemed unsuitable for development.

### Air Quality Impacts

This project would result in less cut and fill but would eventually result in more acres developed rather than remaining in open space. However, there would be fewer particulate emissions from grading because of reduced cut and fill. More surface area could be temporarily exposed, depending on what type of agricultural uses would remain. Operational emissions would be much lower.

## Alternative B-5: No New Development in San Mateo Watershed

Alternative B-5 would provide 14,000 dwelling units and 406 acres of non-residential uses, for a total of 7,170 acres of new development (See Exhibit 1-7). This alternative assumes 6,000 senior units, over four million square feet of business park and slightly over 1.5 million square feet of urban activity center. This alternative would achieve a jobs/housing balance onsite. Approximately 15,645 acres (69 percent) of the Ranch Plan site would be designated as

permanent open space. The amount of open space dedication versus acquisition area has not been defined. This alternative is distinguished from the Ranch Plan because no future development would be permitted within the San Mateo Creek watershed. Existing leases and continued ranching/farming activities would be permitted in the Verdugo sub-basin and San Mateo Creek watersheds. Development would be intensified in the areas where development is permitted to enable the 14,000 dwelling units to be constructed.

### Air Quality Impacts

This alternative would result in potentially less grading than the proposed project during construction, but there are no estimates of the amount of cut and fill that would be required. The same issues related to maintaining jobs/housing balance on the site addressed under OCP 2000 (Alt. B-11) would apply to Alternative B-5. The higher employment would otherwise result in slightly more trips than with the proposed project; therefore, operational impacts would be higher than with the proposed project.

## Alternative B-6: No New Disturbance in San Mateo Watershed

### Description

Alternative B-6 would avoid future development within the Chiquita sub-basin east of Chiquita ridge and Verdugo Canyon sub-basin. Development would be concentrated in areas in the San Juan Creek watershed, with new development in the San Mateo Creek watershed limited to areas already disturbed by past uses. This alternative would have provided for 14,000 dwelling units on approximately 6,334 acres Additionally, 406 acres of non-residential use would be provided. This alternative would provide for 16,075 acres or approximately 70 percent of open space. The amount of open space dedication area versus acquisition area has not been defined. Development would be intensified in the areas where development is permitted to enable the 14,000 dwelling units to be constructed.

### Air Quality Impacts

This alternative should result in less cut and fill and therefore fewer construction emissions than the proposed project. This alternative would result in slightly more trips than with the proposed project; therefore, operational impacts would be higher than with the proposed project.

## Alternative B-8: No Development in Chiquita Canyon and San Mateo Watershed

### Description

This alternative would allow new development in Planning Areas 1, 3 and 5 of the Ranch Plan. It would provide for 8,400 dwelling units on 3, 680 acres. Additionally, there would be 192 acres of non-residential development, which would permit 2,488,000 square feet of non-residential uses. There would be no age-restricted housing. The alternative would provide for 19,135 acres, or 84%, of the property to remain in open space.

### Air Quality Impacts

This alternative has the fewest developed acres, the fewest number of housing units, and the fewest square feet of any of the development alternatives and the most natural open space. It would, therefore, have the least adverse impact on air quality from both construction and operation.

## Alternative B-9: Working Group Proposal

### Description

This alternative was developed in conjunction with the NCCP/SAMP Working Group to maximize compliance with the Planning Principals and Guidelines. It would provide for 13,600 dwelling units on 6,789 acres. Additionally, there would be 381 acres of non-residential development for a total of 7,170 acres and a total of just over 5,000,000 square feet of non-residential uses. There would be 6,600 senior housing units. There would be two golf courses. The alternative would provide for 16,233 acres, or 71%, of the property to remain in permanent open space.

### Air Quality Impacts

This alternative would result in fewer acres being developed than the proposed project, slightly fewer housing units, and the same amount of employment. It would result in slightly fewer adverse impacts on air quality during both construction and operation than would the proposed project.

## Alternative B-10: County of Orange Proposal

### Description

This alternative was developed by the County of Orange. It would allow the development of 14,450 dwelling units, 6,000 of which would be senior housing. It would also allow approximately 5,000 square feet of non-residential uses. New development would total 7,683 acres, of which 25 acres would be for a golf course and resort. Approximately 15.132 acres, or 66 percent, of the site would be set aside as permanent open space. This alternative differs from the Proposed Ranch Plan in that no development would be allowed in Planning Area 9 and there would be less development in Planning Area 6. There would be more development in Planning Area 4. Approximately 15,132 acres, or 66 percent, would be designated as permanent open space. The location of regional parkland would also differ.

### Air Quality Impacts

Overall, the impacts from this alternative would not be significantly different than with the proposed project, although the number of dwelling units and square feet of employment are higher. There would be slightly fewer acres of development. However, the project would result in only 42 trips per day more than would the proposed project. Therefore, air quality impacts from both construction and operation are approximately the same for both B-10 and B-4.

**Alternative B-11: OCP 2000)**

**Description**

Alternative B-11 assumes development of the project site based on the County's OCP 2000 housing projections. This alternative would provide for 19,200 dwellings units and provide for a jobs/housing balance within the Ranch Plan boundaries. The focus of this alternative is on the provision of new housing consistent with long-term development/housing need projections provided by the SCAG and the County of Orange. Additionally, since these are the growth projections used by the SCAG and the AQMD, this alternative at this level of development has been assumed in other local and regional planning documents.

**Air Quality Impacts**

This alternative would result in the most developed land area except for existing zoning. Construction emissions would be higher than with the proposed project. It would provide for the most housing, although employment would be less than with the other development alternatives. Architectural coating emissions would be somewhat greater. Based on the traffic report, it would result in the highest number of trips and therefore the greatest amount of operation emissions.

## Noise Assessment For:

# RMV Ranch Plan

## County of Orange

**Prepared For:**

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**Submitted By:**

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**June 7, 2004**
**Report#04-069b**

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# 1.0 EXISTING SETTING

## 1.1 Project Description

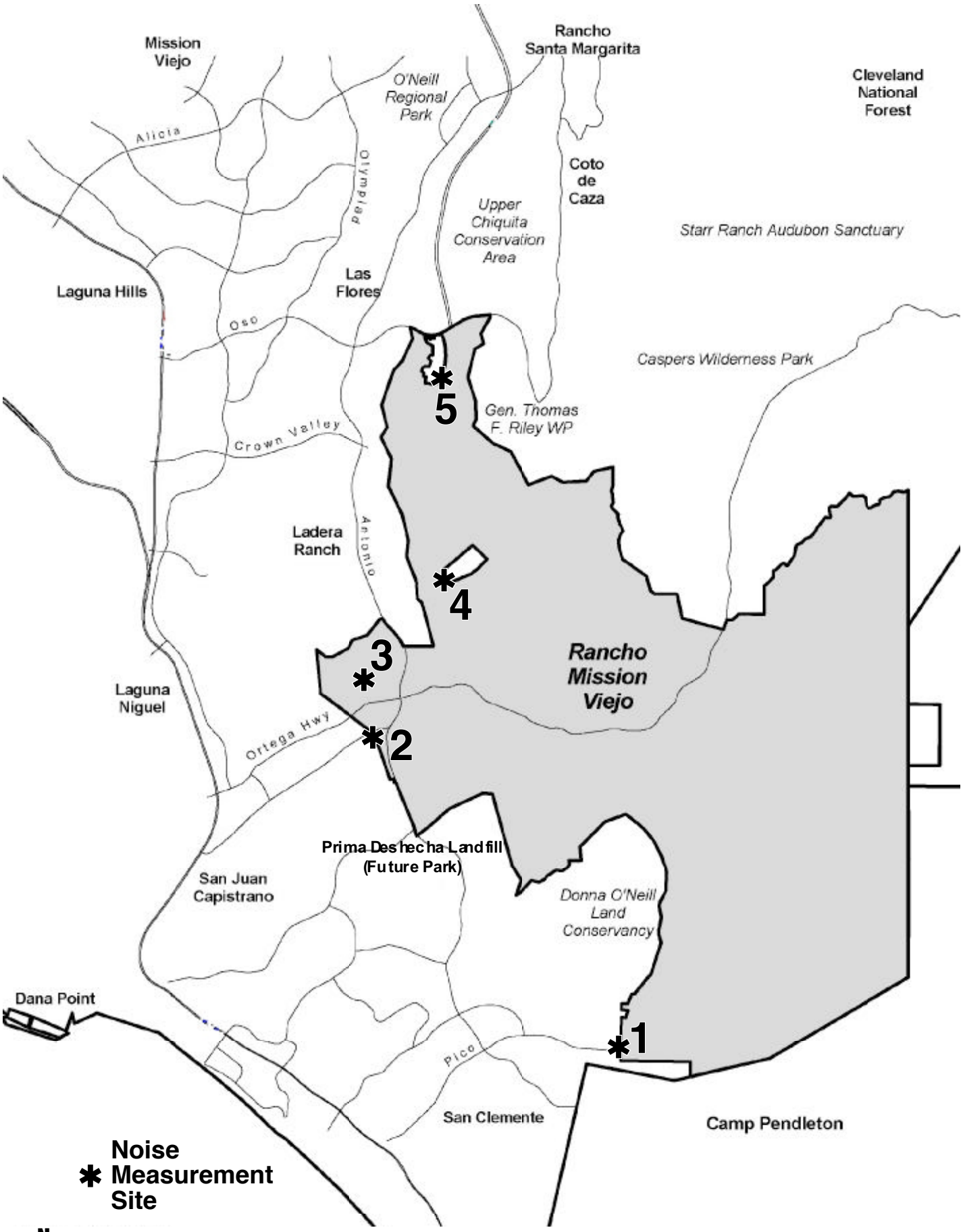
The approximately 22,815-acre Rancho Mission Viejo (the "Ranch Plan") project site is located in southeastern Orange County and constitutes the remaining undeveloped portions of Rancho Mission Viejo located within unincorporated Orange County. The planned community of Ladera Ranch and the cities of Mission Viejo, San Juan Capistrano, and San Clemente border the Project site on the west. The City of Rancho Santa Margarita borders the northern edge of the Project site; the United States Marine Corps Base (MCB) Camp Pendleton in San Diego County borders the southern edge; and Caspers Wilderness Park and the Cleveland National Forest, as well as several private properties in Riverside and San Diego counties, border the site on its eastern edge. A vicinity map is presented in Exhibit 1.

The Ranch Plan includes up to 14,000 dwelling units, 3.48 million square feet of urban activity center, 500,000 square feet of neighborhood center uses, 1.22 million square feet of business park uses, and 20 acres of golf resort. The project development area is approximately 7,694 acres. The remaining 15,121 acres within the Project site would be retained as open space. Development is proposed to occur over a period of approximately 20 to 25 years. Infrastructure would be constructed to support all of these uses, including road improvements, utility improvements and schools. Ranching and agricultural activities would be retained within a portion of the proposed open space area. A site plan is presented in Exhibit 2.

In addition to the development described above, the Project proposes making several changes to the Master Plan of Arterial Highways (MPAH) which include:

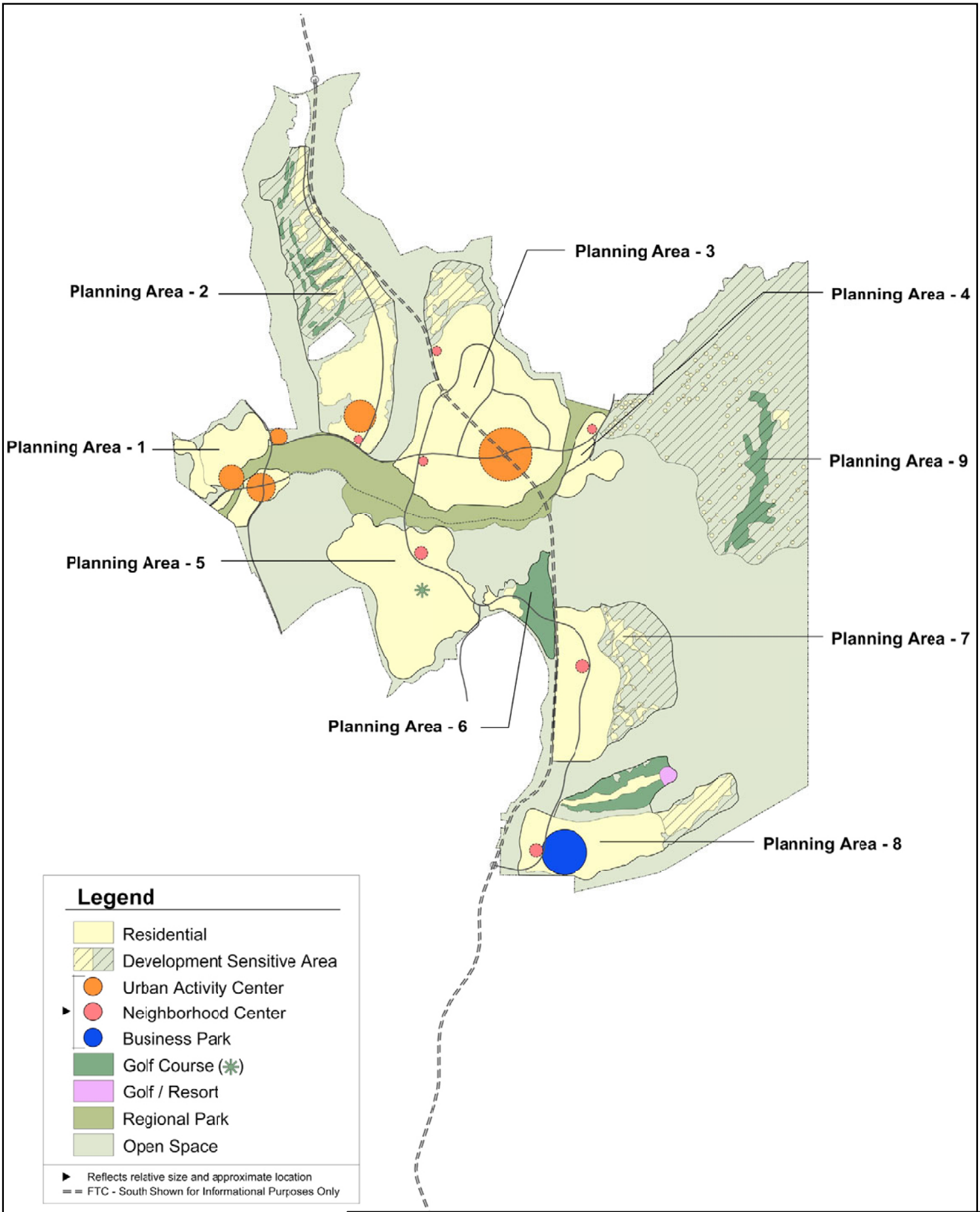
- New Ortega Highway would be added to the Circulation Plan and MPAH as an east-west arterial highway on the north side of San Juan Creek. The road would provide an east-west link through Rancho Mission Viejo. The alignment would extend from Antonio Parkway to the existing Ortega Highway near the common boundary of Rancho Mission Viejo and Caspers Park.
- Cristianitos Road would be added to the Circulation Plan and the MPAH as a north-south arterial highway. The roadway would extend from Avenida Pico northerly through Cristianitos and Trampas canyons, crossing San Juan Creek and New Ortega Highway, and connect with a newly proposed interchange with SR-241
- Avenida Talega would be reclassified (downgraded) on the Circulation Plan and the MPAH in unincorporated Orange County from a secondary arterial highway to a collector road (56 feet of right-of-way).
- Crown Valley Parkway would be deleted from the Circulation Plan and the MPAH east of Antonio Parkway.

These changes to the MPAH will change traffic circulation patterns and noise levels along roadways in the vicinity of the Project.




# Exhibit 1
# Vicinity Map

Mestre Greve Associates




# Exhibit 2
# Project Site Plan

Mestre Greve Associates

In addition to the Project, this analysis examines seven project alternatives. For two of these alternatives traffic data from the traffic study prepared for the Project was used to quantitatively assess traffic noise impacts. For the remaining five alternatives, traffic data required for a quantitative analysis was not prepared for the traffic study. For these alternatives, impacts will be estimated based on the results of the quantitative analysis for the Project and two alternatives that are quantitatively analyzed.

This study assesses the potential noise impacts associated with the development of the RMV Ranch Plan. Impacts from the construction and operation of the Project are assessed in terms of noise levels generated from activities on the Project site. Off-site noise impacts due to increased traffic noise from vehicle trips generated by the Project are assessed. Potential noise impacts upon the Project site are also examined. First, background information on noise and the applicable noise criteria are presented along with a description of the existing noise environment.

## 1.2 Background Information on Noise

### *1.2.1 Noise Criteria Background*

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 3 provides examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the perceived noise levels.

## SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

**Numbers in Parentheses are the A-Scale Weighted Sound Levels for that Noise Event**

| dB(A) | OVER-ALL LEVEL Sound Pressure Level Reference: 0.0002 Microbars | COMMUNITY (Outdoor) | HOME OR INDUSTRY | LOUDNESS Human Judgement of Different Sound Levels |
|---|---|---|---|---|
| 130 | | Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130) | Oxygen Torch (121) | 120 dB(A) 32 Times as Loud |
| 120<br>110 | UNCOMFORTABLY<br>LOUD | Concord Takeoff (113)* | Riveting Machine (110)<br>Rock-N-Roll Band (108-114) | 110 dB(A) 16 Times as Loud |
| 100 | | Boeing 747-200 Takeoff (101)* | | 100 dB(A) 8 Times as Loud |
| 90 | VERY<br>LOUD | Power Mower (96)<br>DC-10-30 Takeoff (96)*<br>Motorcycle @25 Ft. (90) | Newspaper Press (97) | 90 dB(A) 4 Times as Loud |
| 80 | | Car Wash @ 20 Ft. (89)<br>Boeing 727 w/ Hushkit Takeoff (96)*<br>Diesel Truck, 40 MPH @ 50 Ft. (84)<br>Diesel Train, 45 MPH @ 100 Ft. (83) | Food Blender (88)<br>Milling Machine (85)<br>Garbage Disposal (80) | 80 dB(A) 2 Times as Loud |
| 70 | MODERATELY<br>LOUD | High Urban Ambient Sound (80)<br>Passenger Car, 65 MPH @ 25 Ft. (77)<br>Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6)<br>Boeing 757 Takeoff (76)* | Living Room Music (76)<br>TV-Audio, Vacuum Cleaner | 70 dB(A) |
| 60 | | Propeller Airplane Takeoff (67)*<br>Air Conditioning Unit @ 100 Ft. (60) | Cash Register @ 10 Ft. (65-70)<br>Electric Typewriter @ 10 Ft. (64)<br>Dishwasher (Rinse) @ 10 Ft. (60)<br>Conversation (60) | 60 dB(A) 1/2 as Loud |
| 50 | QUIET | Large Transformers @ 100 Ft. (50) | | 50 dB(A) 1/4 as Loud |
| 40 | | Bird Calls (44)<br>Lower Limit Urban Ambient Sound (40) | | 40 dB(A) 1/8 as Loud |
| 20 | JUST AUDIBLE | (dB[A] Scale Interrupted)<br>Desert at Night | | |
| 10 | THRESHOLD OF HEARING | | | |

*Aircraft takeoff noise measured 6,500 meters from beginning of takeoff roll

SOURCE: Leo L. Beranek "Noise And Vibration Control," 1971
*Aircraft Levels From FAA Advisory Circular AC-36-3G

# EXHIBIT 3
# TYPICAL A-WEIGHTED NOISE LEVELS

Noise has been defined as unwanted sound, and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

**HEARING LOSS** is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

**SPEECH INTERFERENCE** is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

**SLEEP INTERFERENCE** is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

**PHYSIOLOGICAL RESPONSES** are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

**ANNOYANCE** is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

### *1.2.2 Noise Assessment Metrics*

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. As previously identified, A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, a community noise assessment, cumulative noise metrics will be used.

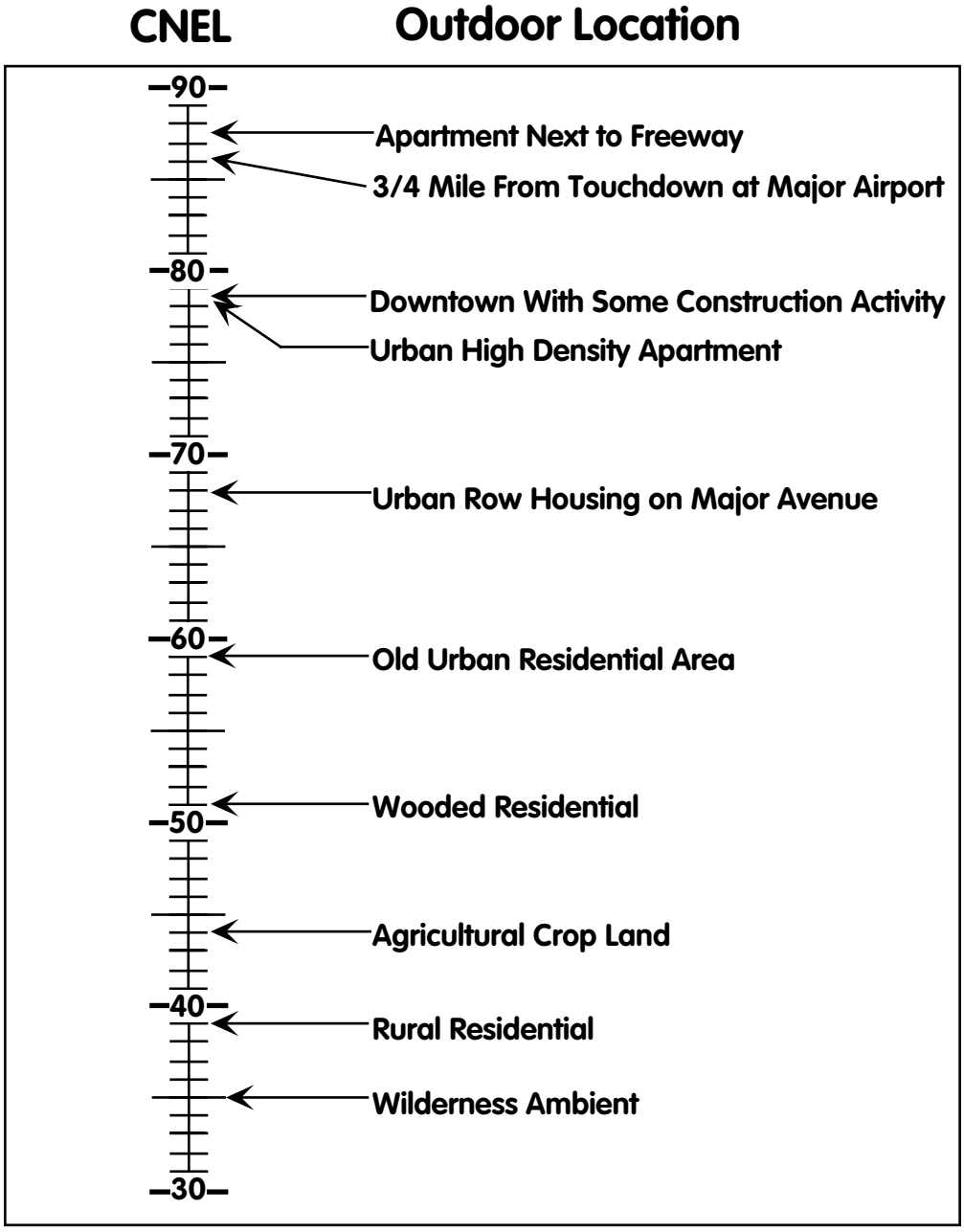
Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

**LEQ** 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. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 1 hour. This 1 hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.

**CNEL**, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 4.

**Ldn**, the day-night scale is similar to the CNEL scale except that evening noises are not penalized. It is a measure of the overall noise experienced during an entire day. The time-weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. In the Ldn scale, those noise levels that occur during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where sleep is the most probable activity.

**L(%)** is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25% of 20 minutes, L(25) is the noise level that is equal to or exceeded for five minutes in a twenty minute measurement period. It is L(%) that is used for most Noise Ordinance standards. For example most daytime city, state and county Noise Ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words the Noise Ordinance states that no noise level should exceed 55 dBA for more that fifty percent of a given period.




Source: U.S. Environmental Protection Agency, "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA Report NTID 73.4, 1973.

# EXHIBIT 4
# TYPICAL OUTDOOR NOISE LEVELS

## 1.3 Noise Criteria

The County of Orange Noise Ordinance and Noise Element of the General Plan contain the County's policies on noise. The Noise Ordinance applies to noise generated on one property impacting a neighboring property. It sets limits on noise levels at a neighboring property from a noise source on another property. The Noise Ordinance is part of the County's Municipal Code and is enforceable throughout unincorporated portions of the County. A project that proposes a zone change to residential uses must provide measures to ensure that existing noise sources do not violate the Noise Ordinance standards. The Noise Ordinance requirements cannot be applied to noise generated by vehicles traveling on public roadways, railroads or aircraft. Control of mobile noise sources on public roads is preempted by federal and State laws. Not withstanding, the Noise Ordinance can be applied to vehicles traveling on private property (e.g. parking lots or loading docks).

The Noise Element of the General Plan identifies limits on noise levels from transportation noise sources, vehicles on public roadways, railroads and aircraft. These limits are imposed on all new developments; i.e., new developments must incorporate the measures to ensure that the limits are not exceeded. The Noise Element and Noise Ordinance policies are presented below in Sections 1.3.1 and 1.3.2.

The County of Orange has several Standard Conditions that are placed upon projects to ensure compliance with the County's policies on noise. The Standard Conditions applicable to the Ranch Plan project are presented in Section 1.3.3.

### *1.3.1 County of Orange Noise Element*

The County of Orange specifies outdoor and indoor noise limits for various land uses impacted by transportation noise sources. The noise limits specified in the County's Noise Element are in terms of the Community Noise Equivalent Level (CNEL) for residential uses and Leq(h) for commercial uses, where h is the duration of the specific use in hours. Assuming the standard day-evening-night traffic distribution, CNEL levels are 1.4 dB higher than average daytime Leq(h).

The County has established exterior noise standards for residential uses, schools, hospitals, and places of worship. For residential uses the standard is 65 CNEL. For schools, hospitals, and places of worship the standard is 65 Leq(h) which is equivalent to 66 CNEL. These standards are applicable only at Outdoor Living Areas. The County defines Outdoor Living Areas to be spaces that are typically used for passive recreational activities or other noise sensitive uses. Such spaces include patio areas, barbecue areas, Jacuzzi areas, etc. for residential uses. Outdoor areas usually not included in the definition for residential areas include front yard areas, driveways, greenbelts, maintenance areas, and storage areas. For hospital uses Outdoor Living Areas include outdoor patient recovery or resting areas. Outdoor areas at hospitals that are not used for patient activities are not included in the Outdoor Living Area definition. For places of worship, areas that have a significant role in services or other noise sensitive activities are considered Outdoor Living Areas while areas principally used for short-term social gatherings are not. For schools, areas routinely used for educational purposes which may be adversely impacted by noise are considered Outdoor Living Areas while other areas not used for education uses such as play yard areas are not.

Table 1 presents the interior noise standards established by the County. These interior standards are applicable to Habitable Rooms as defined by the County. Closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces are not considered Habitable Rooms.

**Table 1**
**County of Orange Interior Noise Standards**

| Use | Standard |
|---|---|
| **Residential** | |
| All | 45 CNEL |
| **Commercial** | |
| Hotel, Motel | 45 CNEL |
| Hospital | 45 CNEL |
| Private Office, Church Sanctuary, College, Preschool, Schools (Grade K-12), Board Room, Conference Room, etc. | 45 Leq(h)[1] (46 CNEL[2]) |
| General Office, Reception Clerical, etc. | 50 Leq(h)[1] (51 CNEL[2]) |
| Other Schools and Colleges | 52 Leq(h)[1] (53 CNEL[2]) |
| Bank Lobby, Retail Store, Restaurant, Typing Pool, etc. | 55 Leq(h)[1] (56 CNEL[2]) |
| Manufacturing, Kitchen, Warehousing, etc. | 65 Leq(h)[1] (66 CNEL[2]) |

1. H=time duration of usage in hours)

2. Standard is in terms of Leq(h). CNEL limit given assumes standard day-evening-night traffic distribution which results in CNEL level being 1.4 dB higher than daytime Leq(h).

### *1.3.2 County of Orange Noise Ordinance*

Division 6, Section 4.6.1 of the County of Orange Municipal Code (the "Noise Ordinance") prescribes exterior and interior noise standards for the protection of residential zoned areas. Table 2 presents Orange County's Noise Ordinance standards. The Noise Ordinance is designed to control unnecessary, excessive and annoying sounds from sources on private property by setting limits that cannot be exceeded at adjacent properties. The Noise Ordinance requirements cannot be applied to mobile noise sources such as heavy trucks when traveling on public roadways. As previously discussed, control of the mobile noise sources on public roads is preempted by Federal and State laws. However, the Noise Ordinance does apply to vehicles on private property

The County Noise Ordinance specifies dBA noise levels that cannot be exceeded at residential areas for a specified period of time. The time limits are listed in the first column of Table 2. Column 2 lists the equivalent noise metric in terms of "percent noise level" or L%. The percent

noise level describes the noise level that is exceeded during a certain percentage of the measurement period. For example, the L50 noise level is the level exceeded 50% of the measurement period or thirty minutes in an hour. Columns 3 and 4 list the daytime and nighttime noise levels for the specified metric that cannot be exceeded under the noise ordinance. Greater noise levels are permitted during the day (7 a.m. to 10 p.m.) as compared to nighttime (10 p.m. to 7 a.m.).

**Table 2**
**Orange County Noise Ordinance Standards**

| Maximum Time of Exposure | Noise Metric | Noise Levels Not To Be Exceeded In Residential Zone 7 a.m. to 10 p.m. (daytime) | 10 p.m. to 7 a.m. (nighttime) |
|---|---|---|---|
| **EXTERIOR NOISE STANDARDS** | | | |
| 30 Minutes/Hour | L50 | 55 dBA | 50 dBA |
| 15 Minutes/Hour | L25 | 60 dBA | 55 dBA |
| 5 Minutes/Hour | L8.3 | 65 dBA | 60 dBA |
| 1 Minute/Hour | L1.7 | 70 dBA | 65 dBA |
| Any period of time | Lmax | 75 dBA | 70 dBA |
| **INTERIOR NOISE STANDARDS** | | | |
| 5 Minutes/Hour | L8.3 | 55 dBA | 45 dBA |
| 1 Minute/Hour | L1.7 | 60 dBA | 50 dBA |
| Any period of time | Lmax | 65 dBA | 55 dBA |

The Orange County Noise Ordinance states that the daytime noise level for a noise source measured at an outdoor area of a residential property cannot exceed 75 dBA ever, 70 dBA for more than 1 minute of any hour, 65 dBA for more than 5 minutes of any hour, 60 dBA for more than 15 minutes of any hour, or 55 dBA for more than 30 minutes of any hour. Nighttime noise level limits are reduced by 5 dB to reflect the increased sensitivity to noise occurring during this time period. The noise ordinance also states that the noise level for a source measured at an indoor area of a residential property cannot exceed 65 dBA ever, 60 dBA for more than 1 minute of any hour, and 55 dBA for more than 5 minutes of any hour. The nighttime interior noise level limits are reduced by 10 dB. Note that the ordinance contains a clause that, in the event that the ambient noise level exceeds any of the noise limit categories, the cumulative period applicable to that category shall be increased to reflect the ambient noise level. Additionally, the noise level limits are reduced by 5 dB for noise consisting of a pure tone or primarily speech or music to account for increased sensitivity to these sources.

For daytime noise the outdoor standard is more stringent than the interior standard. This is because a typical residence achieves 12 dB of noise reduction with windows open. That is, the interior noise levels will be at least 12 dB lower than the exterior noise levels with open windows. The Noise Ordinance requires the levels to be only 10 dB lower. This is not so for nighttime noise levels, depending on the characteristics of the noise source (i.e., either the interior or exterior noise standards may be the most stringent).

The County of Orange Noise Ordinance exempts noise generated by construction from the Noise Ordinance standards during the hours between 7 a.m. and 8 p.m. on weekdays and Saturdays.

This exemption does not include Sundays and holidays.

### *1.3.3 Standard Conditions*

#### 1.3.3.1 N01 Residential Noise

The applicant shall sound attenuate all residential lots and dwellings against present and projected noise (which shall be the sum of all noise impacting the project) so that the composite interior standard of 45 dBA CNEL for habitable rooms and a source specific exterior standard of 65 dBA CNEL for outdoor living areas is not exceeded. The applicant shall provide a report prepared by a County-certified acoustical consultant, which demonstrates that these standards will be satisfied in a manner consistent with Zoning Code Section 7-9-137.5, as follows:

A. Prior to the recordation of a subdivision map or prior to the issuance of grading permits, as determined by the Manager, Building Permits Services, the applicant shall submit an acoustical analysis report to the Manager, Building Permits Services, for approval. The report shall describe in detail the exterior noise environment and preliminary mitigation measures. Acoustical design features to achieve interior noise standards may be included in the report in which case it may also satisfy "B" below.

B. Prior to the issuance of any building permits for residential construction, the applicant shall submit an acoustical analysis report describing the acoustical design features of the structures required to satisfy the exterior and interior noise standards to the Manager, Building Permits Services, for approval along with satisfactory evidence which indicates that the sound attenuation measures specified in the approved acoustical report have been incorporated into the design of the project.

C. Prior to the issuance of any building permits, the applicant shall show all freestanding acoustical barriers on the project's plot plan illustrating height, location and construction in a manner meeting the approval of the Manager, Building Permits Services.

#### 1.3.3.2 N02 Non-Residential Noise

Except when the interior noise level exceeds the exterior noise level, the applicant shall sound attenuate all nonresidential structures against the combined impact of all present and projected noise from exterior noise sources to meet the interior noise criteria as specified in the Noise Element and Land Use/Noise Compatibility Manual.

Prior to the issuance of any building permits, the applicant shall submit to the Manager, Building Permit Services, an acoustical analysis report prepared under the supervision of a County-certified acoustical consultant which describes in detail the exterior noise environment and the acoustical design features required to achieve the interior noise standard and which indicates that the sound attenuation measures specified have been incorporated into the design of the project.

#### 1.3.3.3 N08 Noise Generating Equipment (Non-Residential Projects)

Prior to the issuance of any building or grading permits, the applicant shall obtain the approval of the Manager, Building Permits Services of an acoustical analysis report and appropriate plans which demonstrate that the noise levels generated by this project during its operation shall be controlled in compliance with Orange County Codified Ordinance, Division 6 (Noise Control).

The report shall be prepared under the supervision of a County-certified Acoustical Consultant and shall describe the noise generation potential of the project during its operation and the noise mitigation measures, if needed, which shall be included in the plans and specifications of the project to assure compliance with Orange County Codified Ordinance, Division 6 (Noise Control).

#### 1.3.3.4 N09 Multi-Family Dwelling Units

Prior to the issuance of any certificates of use and occupancy, the applicant shall perform field testing in accordance with Title 24 Regulations to verify compliance with FSTC and FIIC standards if determined necessary by the Manager, Building Inspection Services. In the event such a test was previously performed, the applicant shall provide satisfactory evidence and a copy of the report to the Manager, Building Inspection Services, as a supplement to the previously required acoustical analysis report.

#### 1.3.3.5 N10 Construction Noise

A. Prior to the issuance of any grading permits, the project proponent shall produce evidence acceptable to the Manager, Building Permits Services, that:

   (1) All construction vehicles or equipment, fixed or mobile, operated within 1,000' of a dwelling shall be equipped with properly operating and maintained mufflers.

   (2) All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control).

   (3) Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings.

B. Notations in the above format, appropriately numbered and included with other notations on the front sheet of the project's permitted grading plans, will be considered as adequate evidence of compliance with this condition.

#### 1.3.3.6 N12 Transportation Corridor Notification

Prior to the issuance of certificates of use and occupancy, the developer shall produce evidence to the Manager, Building Inspection Services, that the Department of Real Estate has been notified that the project area is adjacent to a regional transportation corridor. The corridor is expected to be a high capacity, high—speed, limited—access facility for motor vehicles, and will have provisions for bus lanes and other mass transit type facilities.

## 1.4 Existing Noise Environment

The existing noise environment on and around the project site is described in the following sections. The results of noise measurements are presented along with modeled traffic noise levels along roadways in the vicinity of the project. Noise levels from aircraft operations as well as activities at Camp Pendleton Marine Corps Base are also discussed.

### *1.4.1 Measured Noise Levels*

To determine the existing noise environment at the Project site, ambient noise measurements were made on March 29, 2004 between 12:00 p.m. and 3:00 p.m. at four locations (Sites 1-4) and on January 28, 2004 at one location (Site 5). The locations of the noise measurement sites are shown in Exhibit 1. Noise levels were measured for 15 minutes at each location except at Site 5 where a 30-minute measurement was performed.

The measurement survey utilized a Brüel & Kjær 2236 automated digital noise data acquisition system for short-term (15 min) readings. This instrument automatically calculates both the Equivalent Noise Level (LEQ) and Percent Noise Level (L%) for any specific time period. The noise monitor was equipped with a Brüel & Kjær 1/2-inch electret microphone and was calibrated with a Brüel & Kjær calibrator with calibrations traceable to the National Bureau of Standards. Calibration for the instruments is performed annually and is certified through the duration of the measurements. This measurement system satisfies the ANSI (American National Standards Institute) Standards 1.4 for Type 1 precision noise measurement instrumentation.

The measurement results are presented in Table 3 in terms of the equivalent noise levels (Leq), maximum noise levels, minimum noise levels and percentile noise levels (L%). The L50 percentile level, for example, represents the noise levels exceeded 50 percent of the time, and represents the median ambient noise level. The L90 noise levels represent the background noise levels which are exceeded 90 percent of the time.

**Table 3**
**Existing Noise Measurements**

| | | Sound Level (dBA) | | | | | |
|---|---|---|---|---|---|---|---|
| **Site** | **Start Time** | **Leq** | **Lmax** | **L10** | **L50** | **L90** | **Lmin** |
| 1 | 12:13 PM | 51 | 72 | 44 | 38 | 33 | 29 |
| 1* | 12:13 PM | 39 | 49 | 43 | 38 | 32 | 29 |
| 2 | 1:08 PM | 45 | 54 | 47 | 44 | 41 | 37 |
| 3 | 1:50 PM | 42 | 53 | 45 | 41 | 39 | 37 |
| 4 | 2:34 PM | 41 | 53 | 44 | 34 | 31 | 30 |
| 5 | 8:16 AM | 44 | 56 | 47 | 42 | 38 | 35 |

* Effects of vehicles entering the Northrop Grumman TRW Capistrano Test Site removed

The noise measurement sites were near the western perimeter of the Project. The measured noise levels show that even at the perimeter of this primarily undeveloped area, noise levels are relatively low. Noise levels further inside and along the eastern perimeter of the Project site are likely slightly lower as they are removed from areas of activity. In general, the noise sources experienced at the site consisted of birds, wind through vegitation, and distant traffic along with local sources of noise described below.

Site 1 was located near the current terminus of Avenida Pico off of the entry road to the Northrop Grumman TRW Capistrano Test Site. The primary source of noise affecting the recorded noise levels was six vehicles entering the TRW site. Table 3 presents the recorded noise levels during the entire measurement period along with an edited version of the measurement that removed the periods when vehicles passed by the site entering the TRW site. The results of the measurements show very low noise levels when the effect of the vehicles is removed. Background sources of noise included birdcalls and distant traffic noise. One would not expect the average noise level to drop much below the 40 dBA level during the daytime. Nighttime noise levels would be lower as wildlife activity ceased along with levels of traffic on roadways in the vicinity of the site.

Site 2 was located just beyond the end of San Juan Creek Road. The primary sources of noise at Site 2 were distant traffic and noise generated by activities in the nearby residential areas. The noise environment around Site 2 would be characterized as being quiet. An average noise level of 45 dBA is a relatively low noise level.

Site 3 was located approximately 1,000 feet north of Ortega Highway in the existing agricultural operations. The primary source of noise at Site 3 was truck traffic associated with the agricultural operations. Background noise sources included birds, distant traffic, and distant agricultural operation activities.

Site 4 was located near the Santa Margarita Water District Chiquita Water Reclamation Plant. Noise sources experienced at Site 4 included enroute aircraft, birds, and wind through vegetation. No discernable noise from the Water Reclamation Plant was detected. There is no reason to believe that the Water Reclamation Plant was not operating normally when the measurements were made because these types of facilities typically do not generate considerable amounts of noise.

Site 5 was located near the south end of Tesoro High School. Noise experienced at Site 5 included activities at the high school, traffic on Oso Parkway, birds, and distant traffic.

### *1.4.2 Existing Roadway Noise Levels*

An estimate of highway noise levels in terms of CNEL was computed for the roadways anticipated to be affected by traffic generated by the Project. The Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978) was utilized. The CALVINO noise emission curves developed by Caltrans were used with the FHWA model. These curves better model the California vehicle mix. The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL levels for the traffic projections used.

The distances to the existing 60, 65 and 70 CNEL contours for selected roadways in the vicinity of the Project are given in Table 4. The CNEL at 100 feet from the roadway centerline is also presented. These represent the distance from the centerline of the road to the contour value

shown. The values given in Table 4 represent existing noise levels and do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. Where the line of sight between an observer and a roadway is blocked by a substantial object (a berm, block wall or building) the traffic noise levels are reduced by a minimum of approximately 5 dB.

To focus on the roadway segments that are most impacted by projected changes in traffic noise, the segments presented in Table 4 are those that are projected to experience a 0.5 dB or greater traffic noise CNEL increase due to the development of the Project (or alternatives), or are projected to experience a 1.5 dB or greater traffic noise CNEL increase over existing conditions in the future with the Project (or alternatives). Existing traffic noise levels along all roadways assessed in the traffic study prepared for the Project are presented in the appendix.

**Table 4**
**Modeled Existing Roadway Traffic Noise Levels**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| Avery Pkwy. to Junipero Serra | 80.5 | 499 | 1,075 | 2,315 |
| Junipero Serra to Ortega Highway | 80.4 | 490 | 1,056 | 2,275 |
| Ortega Highway to San Juan Creek | 80.0 | 465 | 1,003 | 2,160 |
| San Juan Creek to Stonehill | 80.0 | 462 | 996 | 2,147 |
| Stonehill to Cmno. Las Ramblas | 79.7 | 445 | 958 | 2,063 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 80.0 | 465 | 1,003 | 2,160 |
| Cmno. de Los Mares to Vista Hermosa | 79.8 | 454 | 977 | 2,105 |
| Vista Hermosa to Avnda. Pico | 79.5 | 432 | 931 | 2,007 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 72.5 | 147 | 317 | 684 |
| Crown Valley Pkwy. to I-5 | 72.4 | 145 | 313 | 673 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 69.6 | 94 | 204 | 438 |
| Antonio Pkwy. to Oso Pkwy. | 66.1 | 55 | 119 | 255 |
| **Oso Parkway** | | | | |
| East of I-5 | 70.7 | 111 | 240 | 517 |
| West of Marguerite | 69.1 | 88 | 189 | 406 |
| Marguerite to Felipe Rd. | 69.1 | 88 | 189 | 406 |
| Felipe Rd. to Antonio Pkwy. | 69.1 | 88 | 189 | 406 |
| East of Antonio Pkwy. | 67.8 | 72 | 155 | 333 |
| West of SR-241 | 67.4 | 67 | 144 | 310 |
| East of SR-241 | 66.2 | 56 | 121 | 260 |
| **Crown Valley Parkway** | | | | |
| West of Marguerite | 69.1 | 88 | 189 | 406 |
| East of Marguerite | 68.9 | 84 | 182 | 392 |
| West of Antonio Pkwy. | 67.0 | 63 | 136 | 294 |

1. From Roadway Centerline
RW - Contour Does Not Extend Beyond Roadway Right-of-Way

**Table 4 (Continued)**
**Modeled Existing Roadway Traffic Noise Levels**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Junipero Serra** | | | | |
| West of I-5 | 63.5 | RW | 80 | 171 |
| **SR-74 (Ortega Highway)** | | | | |
| I-5 to Rancho Viejo | 72.8 | 154 | 332 | 715 |
| West of La Novia | 71.6 | 128 | 275 | 593 |
| East of La Novia | 70.7 | 112 | 242 | 521 |
| West of La Pata | 69.9 | 98 | 212 | 457 |
| East of New Ortega Highway | 65.5 | 50 | 108 | 233 |
| **San Juan Creek Road** | | | | |
| West of La Novia | 62.0 | RW | 64 | 137 |
| East of La Novia | 61.1 | RW | 55 | 118 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 66.2 | 56 | 121 | 260 |
| **Avenida Pico** | | | | |
| East of I-5 | 69.0 | 86 | 185 | 399 |
| West of La Pata | 66.8 | 62 | 133 | 286 |
| La Pata to Vista Hermosa | 63.6 | RW | 81 | 175 |
| East of Vista Hermosa | 61.0 | RW | 54 | 117 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.0 | RW | 40 | 86 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 62.5 | RW | 68 | 146 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 67.8 | 72 | 155 | 333 |
| Empressa to SR-241 | 67.2 | 65 | 140 | 302 |
| Empressa to Banderas | 67.4 | 67 | 144 | 310 |
| Oso Pkwy. to Crown Valley Pkwy. | 67.8 | 72 | 155 | 333 |
| South of Crown Valley Pkwy. | 65.3 | 48 | 104 | 224 |
| North of New Ortega Highway | 64.0 | RW | 86 | 185 |
| North of SR-74 | 64.0 | RW | 86 | 185 |
| **Avenida La Pata** | | | | |
| South of Ortega Highway | 58.0 | RW | RW | 73 |
| South of Avnda. Pico | 60.2 | RW | 48 | 103 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 61.6 | RW | 59 | 128 |
| **Talega** | | | | |
| East of Vista Hermosa | 52.0 | RW | RW | RW |

1. From Roadway Centerline
RW - Contour Does Not Extend Beyond Roadway Right-of-Way

Table 4 shows that high traffic noise levels are generated along I-5 and SR-73. Considerable noise levels are generated along SR-241, Oso Parkway, Crown Valley Parkway, SR-74, Avenida

Pico, and Antonio Parkway. Moderate noise levels are experienced along Junipero Serra, San Juan Creek, Avenida Vista Hermosa, Camino Capistrano, and Camino Vera Cruz. Noise levels along Avenida La Pata and Talega are minor.

### *1.4.3 Existing Aircraft Noise Levels*

The Project site is not located in the immediate vicinity of any airfields and is not directly impacted by noise generated by any airport operations. Enroute commercial aircraft overfly the Project site and are audible at times. However, because of the relatively low aircraft noise levels generated on the Project site and the limited time that this occurs, aircraft do not generate noise levels that even begin to approach the County's noise standards presented in Table 1. Military aircraft also fly over and near the project site. Noise generated by military aircraft is discussed below in Section 1.6.

There is a private heliport located at the RMV headquarters within the Project boundaries. However, this heliport is used infrequently, approximately four times a year, for aerial tours of the Ranch or other RMV business. Areas around the heliport are exposed to substantial noise levels as helicopters arrive and depart the heliport. However, because of the infrequency of operations, noise levels in the vicinity of the heliport will not even begin to approach the County's noise standards presented in Table 1.

### *1.4.4 Marine Core Base Camp Pendleton Noise*

MCB Camp Pendleton is located along the southern and eastern boundaries of the project at the southeast corner as shown in Exhibit 1. MCB Camp Pendleton is one of the busiest Department of Defense installations in the United States. Approximately 40-45,000 training events are scheduled at the base each year. These events range from small unit training to larger Regimental and Marine Expeditionary Brigade exercises. Nearly 60,000 service members train at the base each year. Training activities include amphibious landings, use of tracked vehicles, infantry and vehicle maneuvers, artillery and small arms firing, aerial weapons delivery, engineer support operations, logistics support, field combat service support, communications, airlift support for troops and weapons, equipment maintenance, and field medical treatment. In terms of noise generation, the most significant activities are artillery training and aircraft operations.

Camp Pendleton has an airfield where approximately 180 helicopters are based. The Base's airfield is located near the southern end of the base approximately 16 miles south of the Project. There are no fixed wing aircraft based at Camp Pendleton. However, turbo prop and jet aircraft from MCAS Miramar and other local military facilities use the facility for aerial weapons delivery training and other training. There is a Helicopter Outlying Landing Field located approximately 1.2 miles from the Project boundary which is used for night vision goggle training. Both fixed wing and helicopters operate throughout the base including the boundaries of the base.

Much of the central portion of Camp Pendleton consists of two Impact Areas which receive live fire from aircraft, and ground troops. There are Artillery Firing Areas (AFA) situated throughout the base from where ordinance is fired into the Impact Areas. There are no AFA's located within 0.5 miles of the Project Site. Several AFA's are located between 0.5 and 1.0 miles from the Project boundary and many more are located further than 1.0 mile.

A Range Compatible Use Zone (RCUZ) study was prepared for the Base in the early 1990's and approved in 1993. The RCUZ assesses potential impacts, including noise, from the operations at MCB Camp Pendleton. However, Mr. Larry Rannals (Community Plans & Liason Officer MCB Camp Pendleton) indicated that the 1993 RCUZ was out of date in that operations had changed substantially since its preparation. The base is just beginning to update the RCUZ with completion planned for early to mid 2005. In addition, Mr. Rannals indicated that due to current military activities in Iraq, operations at MCB Camp Pendleton are substantially lower than they would be normally, and that any noise monitoring performed at this time would not be representative of typical operations. Therefore, there is no data available to quantitatively assess the noise generated by activities at MCB Camp Pendleton on the Project site.

MCB Camp Pendleton operations noise impacting the project site will be primarily from aircraft and large artillery firings. Generally, these activities do not occur constantly but periodically. However, during short periods, a few days to a couple of weeks, almost constant activity and noise will occur 24-hours a day, during larger training exercises. These busy periods occur several times a year. Noise levels on the project site will be dependant on the specific activities and locations. Based on our understanding of the activities at MCB Camp Pendleton and the Base's relation to the Project site we would not expect that noise levels generated by these activities would exceed the County's CNEL noise criteria discussed in Section 1.2.1.

Some training activities will generate readily audible noise levels at the southern portion of Project site. However, the relative infrequency that these activities occur would result in the CNEL criteria not being exceeded. Note that CNEL is strictly defined as an annual average noise level with the evening and nighttime weightings described in Section 1.1.1. It is possible that CNEL levels on the project site could approach or even possibly exceed the 65 CNEL residential outdoor noise standard on a daily basis during periods of heavy activity at MCB Camp Pendleton. However, including periods with little or no noise being generated by the base in the CNEL level calculation would result in the CNEL level being below 65 CNEL.

# 2.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long-term impacts are further divided into (i) impacts on surrounding land uses generated by the proposed Project and, (ii) those impacts which occur from activities at the Project site. Potential traffic noise impacts on the Project are also assessed.

## 2.1 Noise Impact Criteria

Off-site impacts from on-site activities, temporary and long-term, are measured against the County of Orange Noise Ordinance standards discussed previously. Construction activities and commercial area activities must comply with the Noise Ordinance.

Long-term off-site impacts from traffic noise are measured against two criteria. Both criteria must be met for a significant impact to be identified. First, traffic generated by the Project must cause a substantial noise level increase on a roadway segment adjacent to a noise sensitive land use. Second, the resulting "Future With Project" noise level must exceed the criteria level for the noise sensitive land use. In this case the criteria level is Orange County Noise Element 65 CNEL outdoor standard for residential land uses.

In community noise assessment, changes in noise levels greater than 3 dB are often identified as significant, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. In laboratory testing situations involving direct, immediate comparisons of noise levels, humans are able to detect noise level changes of slightly less than 1 dB. In a community noise situation, however, noise exposures are over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB appears to be appropriate for most people. For this Project, a 3 dB traffic noise level increase due to the Project is considered substantial.

Cumulative impacts are measured in terms of the total noise increase due to the Project and other growth in the area over existing conditions. Because increases over existing conditions will take place over a long period of time, a 3 dB increase over existing conditions will be considered cumulatively substantial. For a cumulative impact to be identified, the project will need to contribute to this increase the resulting "Future With Project" noise level must exceed the criteria level for the noise sensitive land use.

Long-term on-site traffic noise impacts are measured against the noise level limits applied by the County which are presented in Table 1. Long-term on-site impacts from on-site activities are measured against the County of Orange Noise Ordinance standards discussed previously.

## 2.2 Temporary Impacts

### *2.2.1 Construction Noise*

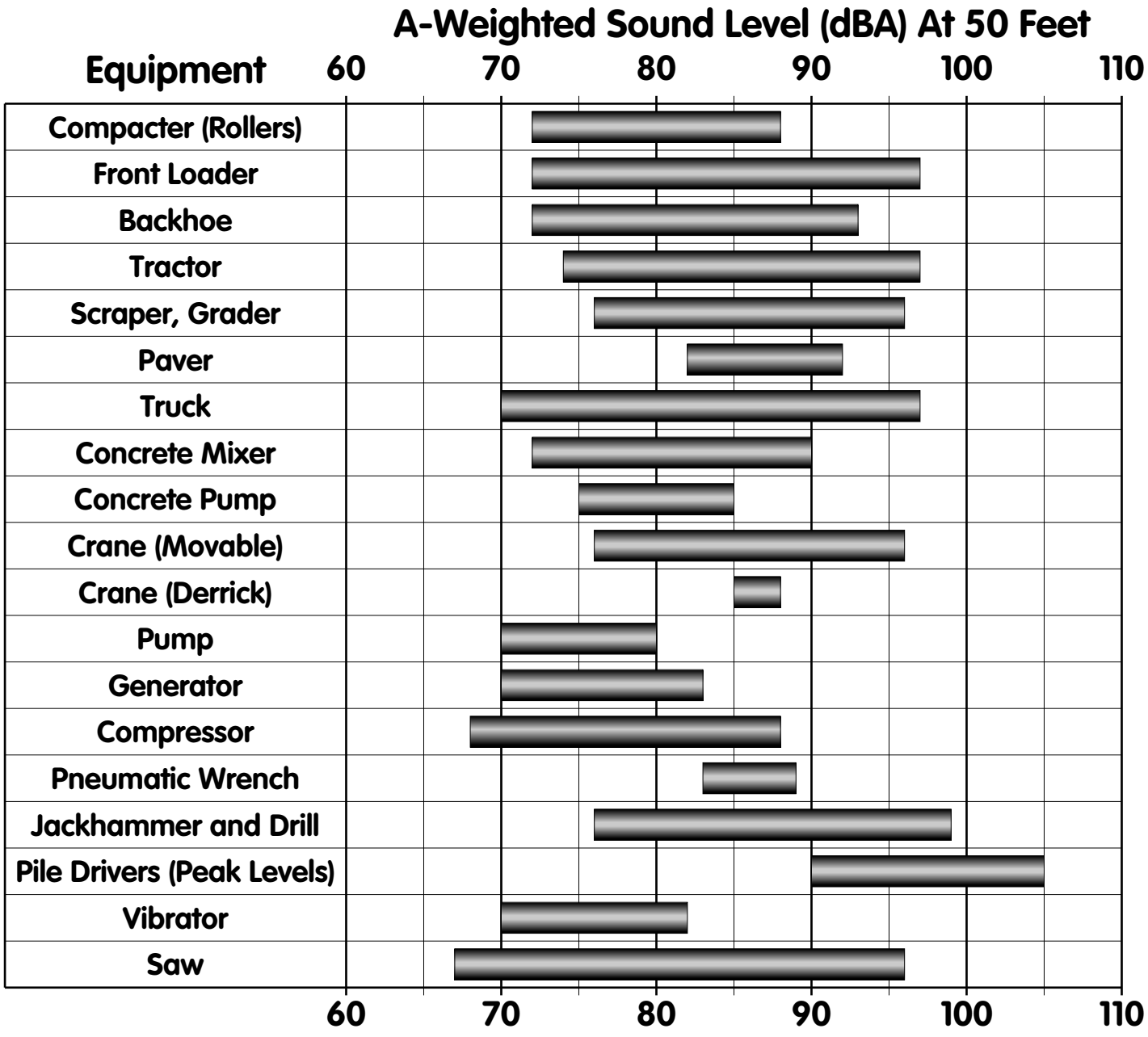
Construction noise, generally, represents a short-term impact on ambient noise levels. Noise generated by construction equipment and construction activities can reach high levels. Construction equipment noise comes under the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). Examples of construction noise at 50 feet are presented in Exhibit 5. Noise measurements made by Mestre Greve Associates for other projects show that the noise levels generated by commonly used grading equipment (i.e. loaders, graders and trucks) generate noise levels that typically do not exceed the middle of the range shown in Exhibit 5.

The equipment used for site grading will generate the highest construction noise levels. Exhibit 5 shows that the peak noise level generated by the equipment that will be used during grading is 70 to 95 dBA at a distance of 50 feet. When grading occurs directly adjacent to homes, high noise levels can be reached at the yards of the residences, upwards of 100 dBA, but for very short periods of time as a piece of equipment passes by the home. At 150 feet, the peak construction noise levels range from 61 to 86 dBA. At 1,000' the peak noise levels range from 44 to 69 dBA. Note that these noise levels are based upon worst-case conditions. Typically noise levels near the site will be less.

For the most part, the development proposed by the Project is well away from existing noise sensitive uses. The exception to this is at the edge of the Project near Ortega Highway where development will occur directly adjacent to existing homes. Further the Project will be developed in phases which may result in construction occurring adjacent or near to residential areas already constructed by the Project. It is possible that at some point during construction, construction equipment will generate noise levels in excess of the Noise Ordinance limits. However, the County of Orange Noise Ordinance exempts noise generated by construction from the Noise Ordinance limits during the hours between 7 a.m. and 8 p.m. on weekdays and Saturdays. This exemption does not include Sundays and holidays. No noise generating activities are expected outside of these hours. In addition, the County of Orange Standard Condition N10 requires compliance with the Noise Ordinance, the use of mufflers, and locating stock piles away from residential areas. Therefore, the construction of the Project will not cause any significant temporary noise impacts.

## 2.3 Long Term Off-Site Impacts

This section examines noise impacts from the Project on the surrounding land uses. Increases in traffic noise levels due to traffic generated by the Project are examined. First, traffic noise impacts due to the Project are examined. Second, cumulative traffic noise impacts are assessed. Finally, potential impacts from noise generated on the Project site affecting nearby uses is discussed.




Source: "Handbook of Noise Control," by Cyril Harris, 1979

# Exhibit 5
# Construction Equipment Noise Levels

### *2.3.1 Traffic Noise Impacts Due to Project*

Impacts from noise produced by traffic generated by the Project are estimated based on the traffic projections presented in the traffic study prepared for the Project. By comparing the traffic volumes for different scenarios, the changes in noise levels along roadways in the vicinity of the Project can be estimated. To estimate noise level increases and impacts due to the development of Project, the with-project traffic volume is compared to the without-project traffic volume. This analysis is performed below for three scenarios; (1) Existing conditions with and without Project, (2) year 2010 conditions with and without Phase 1 of the Project, and (3) 2025 conditions with and without the Project. Additionally, impacts of the project in combination with the proposed amendments of the MPAH are also analyzed.

For the 2025 analysis, the Project and two alternatives, B-4R and B-5 are assessed. Traffic modeling to provide ADT's by link was not performed for the other alternatives being considered. This precludes a quantitative analysis of the noise level increases due to these alternatives. Section 2.5 discusses potential traffic noise impacts that could result from implementation of the other alternatives being considered.

#### 2.3.1.1 Existing Plus Project Impacts

Table 5 presents the traffic noise level increases along roadways that would be caused by the project if the project were constructed with no other changes to the region. This is done by comparing traffic noise generated under existing conditions to what would be generated based on the existing plus project traffic volumes presented in the traffic study,

To focus on the roadway segments that are most impacted by projected changes in traffic noise, only roadway segments projected to experience noise level increases of greater than 0.5 dB due to the Project are presented in Table 5. Increases due to the Project for all roadway segments analyzed the traffic study are presented in the appendix. Noise level increases in excess of the 3 dB threshold are shown in bold italics. Note that there is not necessarily an impact along the roadway segments with increases greater than 3 dB. Absolute noise levels and impacts are discussed for the segments projected to experience noise level increases greater than 3 dB in the text following Table 5.

## Table 5
## Existing Plus Project Traffic CNEL Noise Level Increases

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.6 |
| Crown Valley Pkwy. to I-5 | 0.7 |
| **SR-241** | |
| North of Antonio Pkwy. | 1.6 |
| Antonio Pkwy. to Oso Pkwy. | ***3.5*** |
| **Oso Parkway** | |
| West of Marguerite | 1.9 |
| Marguerite to Felipe Rd. | 0.8 |
| Felipe Rd. to Antonio Pkwy. | 1.1 |
| East of Antonio Pkwy. | 1.9 |
| West of SR-241 | 2.1 |
| **Crown Valley Parkway** | |
| West of Marguerite | 0.7 |
| East of Marguerite | 1.0 |
| West of Antonio Pkwy. | 1.6 |
| **SR-74 (Ortega Highway)** | |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.8 |
| East of La Novia | 1.3 |
| West of La Pata | 1.9 |
| Eas of New Ortega Highway | 0.8 |
| **San Juan Creek Road** | |
| East of La Novia | 0.5 |
| **Avenida Pico** | |
| East of I-5 | 0.5 |
| West of La Pata | 1.4 |
| La Pata to Vista Hermosa | ***3.7*** |
| East of Vista Hermosa | ***6.5*** |
| **Rancho Viejo** | |
| North of Ortega Highway | 0.5 |
| **Antonio Parkway** | |
| South of Crown Valley Pkwy. | 1.9 |
| North of New Ortega Highway | 2.2 |
| North of SR-74 | ***4.4*** |
| **La Pata** | |
| South of Ortega Highway | 2.2 |
| South of Avnda. Pico | 2.0 |
| **Talega** | |
| East of Vista Hermosa | ***7.8*** |

Table 5 shows that implementation of the Project with no other changes to the surrounding area would increase noise levels over existing conditions by 3 dB or more along five roadway segments. Absolute noise levels along these roadway segments are discussed below. Worst-case

future with project traffic noise levels are presented in Table 12.

**SR-241 between Antonio Parkway and Oso Parkway:** There are homes located on the northwest side of SR-241 between Antonio Parkway and Oso parkway. Most of these homes are located more than 500 feet from the centerline of SR-241 and are projected to be exposed to noise levels less than 65 CNEL. A few homes at the northeast end of the segment are within the projected future worst case 65 CNEL contour. However, these homes face the corridor and. Therefore, only the front yards (which are not subject to the County's standard, see Section 1.3.1) will experience noise levels in excess of 65 CNEL. The building structures act as noise barriers reducing rear yard noise levels to below 65 CNEL. There are no other noise sensitive uses along this roadway segment. Therefore, the Project will not result in a significant traffic noise impact along this roadway segment.

**Avenida Pico between Avenida La Pata and Avenida Vista Hermosa:** There are homes located on the north side of this roadway segment. These homes are located outside the projected worst-case future 65 CNEL contour or have sound walls. A detailed analysis of the performance of the sound walls found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, the Project will not result in a significant traffic noise impact along this roadway segment.

**Avenida Pico, East of Avenida Vista Hermosa:** There are homes located on the north side of this roadway segment. All of the homes have sound walls. A detailed analysis of the performance of the sound walls found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, the Project will not result in a significant traffic noise impact along this roadway segment.

**Antonio Parkway, North of SR-74 (Ortega Highway):** This entire roadway segment is located within the project boundaries. Traffic noise impacts on the development proposed by the project are assessed in Section 2.4.1. Therefore, the Project will not result in a significant traffic noise impact along this roadway segment.

**Avenida Talega, East of Avenida Vista Hermosa:** There are homes on the both sides of the entire roadway segment. All of the homes have sound walls. A detailed analysis of the performance of the sound walls found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, the Project will not result in a significant traffic noise impact along this roadway segment.

#### 2.3.1.2 Phase 1 (2010) Impacts

Phase 1 of the Project comprises 5,000 residential dwelling units and a commercial/business center (510,000 square feet). Table 6 presents the traffic noise level increases along roadways that would be caused by the development of Phase 1 in 2010. This is done by comparing traffic noise generated 2010 without the project to what would be generated based on the 2010 with Phase 1 traffic volumes presented in the traffic study.

To focus on the roadway segments that are most impacted by projected changes in traffic noise, only roadway segments projected to experience noise level increases of greater than 0.5 dB due to Phase 1 of the Project are presented in Table 6. Increases due to Phase 1 for all roadway segments analyzed the traffic study are presented in the appendix. Noise level increases in excess of the 3 dB threshold are shown in bold italics. Note that there is not necessarily an impact along the roadway segments with increases greater than 3 dB. Absolute noise levels and impacts are discussed for the segments projected to experience noise level increases greater than 3 dB in the text following Table 6.

**Table 6**
**Traffic Noise Level Increase Due to Development of Phase 1 in 2010**

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Crown Valley Parkway** | |
| East of Marguerite | 0.6 |
| West of Antonio Pkwy. | 0.9 |
| **SR-74 (Ortega Highway)** | |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.7 |
| East of La Novia | 0.9 |
| West of La Pata | 1.1 |
| **Rancho Viejo** | |
| South of Juniperro | 0.5 |
| **Antonio Parkway** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.7 |
| South of Crown Valley Pkwy. | 2.1 |
| North of New Ortega Highway | ***3.6*** |
| North of SR-74 | 2.0 |
| **La Pata** | |
| South of Ortega Highway | 1.2 |

Table 6 shows that the project would increase noise levels by 3 dB or more along one roadway segment, Antonio Parkway north of New Ortega Highway. Absolute noise levels along this roadway segment are discussed below. Worst-case future with project traffic noise levels are presented in Table 12.

**Antonio Parkway, North of New Ortega Highway:** Most of this roadway segment is within the project boundaries. Outside of the project boundaries there are no existing homes located within the worst-case future 65 CNEL contour. Therefore, Phase 1 of the Project will not result in a significant traffic noise impact along this roadway segment.

#### 2.3.1.3 Project Buildout (2025) Impacts

The traffic study prepared for the Project estimated 2025 traffic volumes for several different roadway network scenarios (the traffic study describes the roadway network scenarios in detail). To assess impacts from the project alone, future with and without project traffic volumes for the same roadway network conditions are compared. For the traffic data provided, the roadway network scenario run for the Project and Alternatives B-4R and B-5 and the no project conditions is the Committed Circulation System. As discussed above, traffic data required to calculate traffic noise levels with the other project alternatives was not generated for the traffic study. Section 2.5 discusses off-site traffic noise impacts due to these alternatives.

Table 7 presents the traffic noise level increases due solely to the project under the Committed Circulation System at project buildout (year 2025). To focus on the roadway segments that are most impacted by projected, only roadway segments projected to experience noise level increases of greater than 0.5 dB are presented in Table 7. Increases due to the project for all roadway segments analyzed the traffic study are presented in the appendix. Noise level increases in excess of the 3 dB threshold are shown in bold italics. Note that there is not necessarily an impact along the roadway segments with increases greater than 3 dB. In order for a significant impact to occur, the absolute noise level must be in excess of the County's standard at a sensitive use. Absolute noise levels at each of the areas with increases above the threshold are discussed below.

**Table 7**
**Traffic Noise CNEL Increases Due to the Project at Buildout (2025)**

| | Traffic Noise CNEL Increase | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **SR-241** | | | |
| North of Antonio Pkwy. | 1.1 | 1.1 | 1.2 |
| Antonio Pkwy. to Oso Pkwy. | 2.2 | 2.0 | 2.4 |
| **Oso Parkway** | | | |
| East of I-5 | 0.3 | 0.2 | 0.5 |
| West of Marguerite | 0.3 | 0.2 | 0.5 |
| Marguerite to Felipe Rd. | 0.7 | 0.6 | 1.1 |
| Felipe Rd. to Antonio Pkwy. | 1.0 | 0.9 | 1.5 |
| East of Antonio Pkwy. | 1.8 | 1.7 | 2.6 |
| West of SR-241 | 2.1 | 2.0 | 2.8 |
| **Crown Valley Parkway** | | | |
| West of Marguerite | 0.5 | 0.4 | 0.5 |
| East of Marguerite | 0.7 | 0.5 | 0.7 |
| West of Antonio Pkwy. | 1.1 | 0.9 | 1.2 |
| **SR-74 (Ortega Highway)** | | | |
| I-5 to Rancho Viejo | 0.5 | 0.2 | 0.5 |
| West of La Novia | 0.7 | 0.3 | 0.7 |
| East of La Novia | 1.0 | 0.7 | 1.1 |
| West of La Pata | 1.5 | 1.0 | 1.6 |
| East of New Ortega Highway | 0.7 | 0.4 | 0.7 |

**Table 7 (Continued)**
**Traffic Noise CNEL Increases Due to the Project**

| | Traffic Noise CNEL Increase | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **Avenida Vista Hermosa** | | | |
| Talega to Pico | 2.4 | 1.8 | 1.8 |
| **Avenida Pico** | | | |
| West of La Pata | 1.3 | 1.2 | -0.2 |
| La Pata to Vista Hermosa | ***4.3*** | ***3.9*** | 0.5 |
| East of Vista Hermosa | ***4.3*** | ***4.0*** | 0.0 |
| **Antonio Parkway** | | | |
| South of Crown Valley Pkwy. | 1.0 | 0.7 | 0.9 |
| North of New Ortega Highway | 2.9 | 2.2 | 2.8 |
| North of SR-74 | ***3.1*** | 2.5 | ***3.2*** |
| **Avenida La Pata** | | | |
| South of Ortega Highway | 2.2 | 1.2 | ***3.0*** |
| South of Avnda. Pico | 1.8 | 1.8 | 1.2 |
| **Talega** | | | |
| East of Vista Hermosa | 1.8 | 1.8 | 1.8 |

Table 7 shows that the Project or Alternatives B-4R and B-5 are projected to result in noise increases greater than the 3 dB threshold along four roadway segments. Three of these segments are the same as those segments discussed/identified in Section 2.3.1.1 (Table 5) projected to experience substantial traffic noise increases under existing plus project conditions. These segments include:

Avenida Pico
Avenida La Pata to Avenida Vista Hermosa:
East of Avenida Vista Hermosa:
Antonio Parkway
North of SR-74 (Ortega Highway):

The discussion following Table 5 concluded that future worst-case noise levels at sensitive receptors along all of these roadway segments are projected to be below the County Standards. Therefore, neither the Project nor Alternatives B-4R and B-5 will result in a significant noise impact along these roadway segments

Absolute noise levels at sensitive uses for the remaining segment are described below. Worst-case future with project traffic noise levels are presented in Tables 12, 13, and 14.

**Avenida La Pata, South of SR-74 (Ortega Highway):** Most of this roadway segment is located within the project boundaries. Outside of the project boundaries there are no existing homes located within the worst-case future 65 CNEL contour from this roadway segment. Therefore, neither the Project nor Alternatives B-4R and B-5 will result in a significant traffic noise impact along this roadway segment.

#### 2.3.1.4 Project + MPAH Amendment Impacts

The preceding analysis compared noise levels with and without the project with the Committed Circulation System. The Project also proposes several changes to the Master Plan of Arterial Highways. These changes will result in a change in the future traffic circulation, traffic volumes along roadways, and resulting noise levels. Table 8, below, assesses the anticipated noise level increases associated with the Project and the proposed MPAH amendments. The noise levels with the Project and buildout of the amended MPAH were compared to the noise levels if the project site were developed in accordance with existing zoning and the "un-amended" MPAH. To focus on the roadway segments that are most impacted by projected changes in traffic noise, only roadway segments with increases in noise levels due to the Project and MPAH amendments greater than 0.5 dB are presented in Table 8. Increases along all roadway segments analyzed are presented in the appendix. Traffic noise CNEL increases greater than the 1 dB threshold are shown in bold-italics.

Traffic volumes for the Project alternatives, under the MPAH buildout were not provided. This precluded an analysis of the affects of these alternatives in combination with the MPAH amendments.

**Table 8**
**Traffic Noise CNEL Increases Due to the Project & MPAH Amendments**

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **SR-241** | |
| North of Antonio Pkwy. | 0.6 |
| Antonio Pkwy. to Oso Pkwy. | 0.8 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.2 |
| Crown Valley Pkwy. to C St. | 2.0 |
| C St. to Ortega Highway | 1.2 |
| Ortega Highway to Avnda. Pico | 0.6 |
| **Oso Parkway** | |
| Felipe Rd. to Antonio Pkwy. | 0.5 |
| East of Antonio Pkwy. | 1.8 |
| West of SR-241 | 2.4 |
| East of SR-241 | 1.5 |
| **Crown Valley Parkway** | |
| West of Antonio Pkwy. | 0.6 |
| **SR-74 (Ortega Highway)** | |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.9 |
| East of La Novia | 1.0 |
| West of La Pata | 1.5 |
| **San Juan Creek Road** | |
| East of La Novia | 0.8 |
| West of La Pata | ***3.0*** |
| **Avenida Vista Hermosa** | |
| Talega to Pico | 1.2 |

**Table 8 (Continued)**
**Traffic Noise CNEL Increases Due to the Project & MPAH Amendments**

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Avenida Pico** | |
| West of La Pata | 1.2 |
| La Pata to Vista Hermosa | 2.5 |
| East of Vista Hermosa | 2.1 |
| East of SR-241 | ***5.7*** |
| **Camino Capistrano** | |
| South of Paseo de Colinas | 0.6 |
| **Antonio Parkway** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.7 |
| South of Crown Valley Pkwy. | 1.6 |
| North of New Ortega Highway | ***3.5*** |
| North of SR-74 | ***3.3*** |
| **La Pata** | |
| South of Ortega Highway | 1.5 |
| Cmno. Las Ramblas to Cmno. del Rio | 0.7 |
| **A Street** | |
| South of Oso Pkwy. | ***4.0*** |
| North of New Ortega Highway | 0.8 |

Table 8 shows that five roadway segments are projected to experience traffic noise level increases greater than 3 dB as a result of development of the Project and implementation of the proposed MPAH Amendments.

Noise levels along Antonio Parkway north of SR-74 (Ortega Highway) were discussed/identified in Section 2.3.1.1 (Table 5) as being projected to experience substantial traffic noise increases under existing plus project conditions. The discussion following Table 5 concluded that future worst-case noise levels at sensitive receptors along this roadway segment are projected to be below the County Standards. Therefore, the Project in combination with the MPAH amendments will not result in a significant noise impact along this roadway segment.

Noise levels along Antonio Parkway north of New Ortega Highway were discussed/identified in Section 2.3.1.2 (Table 6) as being projected to experience substantial traffic noise increases due to development of Phase 1 of the project. The discussion following Table 6 concluded that future worst-case noise levels at sensitive receptors along this roadway segment are projected to be below the County Standards. Therefore, the Project in combination with the MPAH amendments will not result in a significant noise impact along this roadway segment.

Absolute noise levels at sensitive uses for the remaining three segments are described below. Worst-case future with project traffic noise levels are presented in Table 12.

**San Juan Creek Road, West of La Pata:** There are homes located on both sides of this roadway segment. These homes are located outside the projected worst-case future 65 CNEL contour or have sound walls. A detailed analysis of the performance of the sound walls found that all of the homes along this roadway segment are projected to be exposed to future traffic

noise levels less than 65 CNEL. Therefore, the Project in combination with the MPAH amendments will not result in a significant traffic noise impact along this roadway segment.

**Avenida Pico, East of SR-241:** This is a future roadway segment that will mostly be located within the project boundaries. Outside of the project boundaries there are no existing homes located within the worst-case future 65 CNEL contour from this roadway segment. Therefore, the Project in combination with the MPAH amendments will not result in a significant traffic noise impact along this roadway segment.

**A Street, South of Oso Parkway:** This is a future roadway that will be within the project. Traffic noise impacts on the Project are assessed in Section 2.4.1. The Project in combination with the MPAH amendments will not result in a significant off-site traffic noise impact along this roadway segment.

### *2.3.2 Cumulative Traffic Noise Impacts*

Cumulative traffic noise impacts are assessed by estimating the traffic noise CNEL increases over existing conditions with the proposed project and all other projected development within the study area. To estimate the noise level increases over existing conditions, the existing traffic volume is compared to the projected future with project traffic volumes. This results in an estimate in the traffic noise level increases due to the proposed project in addition to other projects and general growth projected for the area. Cumulative traffic noise impacts in 2010 with development of Phase 1 of the Project are examined below along with cumulative traffic noise impacts in 2025 with buildout of the Project. For the 2025 buildout conditions cumulative impacts are assessed with the Committed Circulation System. This presents the cumulative noise increases due to the Project and general growth in the area. Cumulative impacts are separately assessed for the other roadway network scenarios analyzed in the traffic study prepared for the project. This presents the cumulative noise increases due to the Project, general growth in the area, and changes to the areas roadway network.

#### 2.3.2.1 2010 Cumulative Impacts

Table 9 presents the 2010 with Phase 1 traffic noise CNEL increases over existing conditions with the Project. Three roadway network alternatives were analyzed for the Phase 1 of the Project and are described in the traffic study prepared for the Project. Therefore, a range of noise level increases is presented in the table. Increases greater than the 3 dB threshold are shown in bold italics. To focus on the roadway segments that are most impacted by projected changes in traffic noise, the segments presented in Table 9 are those projected to experience an increase of greater than 1.5 dB. Traffic noise level increases for all road segments assessed in the traffic study are presented in the appendix.

**Table 9**
**2010 Cumulative Traffic Noise CNEL Increases Due to Phase 1 of the Project, Other Development and Changes in the Roadway Network**

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 1.6 - 1.7 |
| Crown Valley Pkwy. to I-5 | 1.5 - 1.6 |
| **SR-241** | |
| North of Antonio Pkwy. | 1.2 - 1.6 |
| Antonio Pkwy. to Oso Pkwy. | 2.1 - 2.7 |
| **Oso Parkway** | |
| West of Marguerite | 1.6 - 1.7 |
| **Crown Valley Parkway** | |
| West of Marguerite | 2.0 - 2.2 |
| East of Marguerite | 2.2 - 2.4 |
| West of Antonio Pkwy. | 2.2 - 2.5 |
| **SR-74 (Ortega Highway)** | |
| East of La Novia | 1.0 - 1.7 |
| West of La Pata | 1.2 - 1.9 |
| **San Juan Creek Road** | |
| West of La Novia | 1.1 - 1.5 |
| East of La Novia | 2.1 - 2.1 |
| **Avenida Vista Hermosa** | |
| East of I-5 | 2.0 - 2.3 |
| **Avenida Pico** | |
| East of Vista Hermosa | 1.8 - 2.2 |
| **Antonio Parkway** | |
| Empressa to Banderas | 1.5 - 1.6 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.1 - 2.6 |
| South of Crown Valley Pkwy. | ***3.6 - 4.7*** |
| North of New Ortega Highway | ***4.3 - 5.4*** |
| North of SR-74 | ***3.5 - 4.3*** |
| **La Pata** | |
| South of Ortega Highway | ***1.2 - 6.0*** |
| **Camino Vera Cruz** | |
| Cmno. de Los Mares to Vista Hermosa | ***2.5 - 3.0*** |

Table 9 shows that five roadway segments are projected to experience traffic noise level increases over existing conditions greater than 3 dB as a result of (i) the development of the Phase 1 of the Project, (ii) all other projected growth in the study area and (iii) roadway network changes.

Noise levels along Antonio Parkway north of SR-74 (Ortega Highway) were discussed/identified in Section 2.3.1.1 (Table 5) as being projected to experience substantial traffic noise increases under existing plus Project conditions. The discussion following Table 5 concluded that future worst-case noise levels at sensitive receptors along this roadway segment are projected to be

below the County Standards. Therefore, Phase 1 of the Project in combination with all other planned growth in the study area and roadway network changes will not result in a significant cumulative traffic noise impact along this roadway segment.

Noise levels along Antonio Parkway north of New Ortega Highway were discussed/identified in Section 2.3.1.2 (Table 6) as being projected to experience substantial traffic noise increases due to development of Phase 1 of the Project. The discussion following Table 6 concluded that future worst-case noise levels at sensitive receptors along this roadway segment are projected to be below the County Standards. Therefore, Phase 1 of the Project in combination with all other planned growth in the study area and roadway network changes will not result in a significant cumulative traffic noise impact along this roadway segment.

Noise levels along Avenida La Pata south of Ortega Highway were discussed/identified in Section 2.3.1.3 (Table 7) as being projected to experience substantial traffic noise increases due to development the project. The discussion following Table 7 concluded that future worst-case noise levels at sensitive receptors along this roadway segment are projected to be below the County Standards. Therefore, Phase 1 of the Project in combination with all other planned growth in the study area and roadway network changes will not result in a significant cumulative traffic noise impact along this roadway segment.

Absolute noise levels at sensitive uses for the remaining two segments are described below. Worst-case future with project traffic noise levels are presented in Table 12.

**Antonio Parkway, South of Crown Valley Parkway:** There are homes located on the west side of this roadway segment. These homes are between 25 and 40 feet below the roadway grade. The topography acts as a noise barrier. A detailed analysis of the performance of the topographic noise barrier found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, Phase 1 of the Project, in combination all other planned growth in the study area, will not result in a significant cumulative traffic noise impact along this roadway segment.

**Camino Vera Cruz between Camino de los Mares and Avenida Vista Hermosa:** There are homes located along both sides of the entire roadway segment. Some of the homes have sound walls and others do not. A detailed analysis of future worst case noise levels, including the effects of sound walls, showed that homes that back up to Camino Vera Cruz on Pavoreal, Bellow Panorama, Campo Raso, and Camino Oleada are projected to experience future worst case noise levels in excess of the County's 65 CNEL standard. However, the development of the project does not change the traffic noise levels along this roadway segment. Projected traffic volumes with and with the project are the same. The noise level increase is completely due to other projects and growth in the area. Therefore, Phase 1 of the Project, in combination all other planned growth in the study area, will not result in a significant cumulative traffic noise impact along this roadway segment.

#### 2.3.2.2 2025 Cumulative Impacts Due to Project and Other Development

Table 10 presents the 2025 with Project traffic noise CNEL increases over existing conditions with the Project and Alternatives B-4R and B-5 for the Committed Circulation System. Increases greater than the 3 dB threshold are shown in bold italics. To focus on the roadway segments that are most impacted by projected changes in traffic noise, the segments presented in Table 10 are those projected to experience noise level increases of 1.5 dB or greater. Traffic noise level increases for all road segments assessed in the traffic study are presented in the appendix.

**Table 10**
**2025 Cumulative Traffic Noise CNEL Increases Due to Project and Other Development (With Committed Roadway Network)**

| | Traffic Noise CNEL Increase | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **I-5** | | | |
| Avery Pkwy. to Junipero Serra | 1.6 | 1.6 | 1.6 |
| Junipero Serra to Ortega Highway | 1.6 | 1.6 | 1.6 |
| Ortega Highway to San Juan Creek | 1.7 | 1.7 | 1.7 |
| San Juan Creek to Stonehill | 1.7 | 1.7 | 1.7 |
| Stonehill to Cmno. Las Ramblas | 1.8 | 1.8 | 1.8 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 1.7 | 1.7 | 1.7 |
| Cmno. de Los Mares to Vista Hermosa | 1.8 | 1.8 | 1.7 |
| Vista Hermosa to Avnda. Pico | 1.8 | 1.8 | 1.8 |
| **SR-73** | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***3.2*** | ***3.2*** | ***3.1*** |
| Crown Valley Pkwy. to I-5 | ***3.1*** | ***3.1*** | ***3.0*** |
| **SR-241** | | | |
| North of Antonio Pkwy. | 2.9 | 2.9 | ***3.0*** |
| Antonio Pkwy. to Oso Pkwy. | ***4.9*** | ***4.8*** | ***5.1*** |
| **Oso Parkway** | | | |
| West of Marguerite | 2.2 | 2.2 | 2.5 |
| Marguerite to Felipe Rd. | 1.3 | 1.2 | 1.7 |
| Felipe Rd. to Antonio Pkwy. | 1.3 | 1.2 | 1.8 |
| East of Antonio Pkwy. | 2.2 | 2.1 | ***3.0*** |
| West of SR-241 | 2.1 | 2.0 | 2.8 |
| **Crown Valley Parkway** | | | |
| West of Marguerite | 2.5 | 2.4 | 2.5 |
| East of Marguerite | 2.8 | 2.6 | 2.8 |
| West of Antonio Pkwy. | ***3.2*** | ***3.0*** | ***3.4*** |
| **Junipero Serra** | | | |
| West of I-5 | 2.0 | 1.8 | 1.8 |
| **SR-74 (Ortega Highway)** | | | |
| West of La Novia | 1.5 | 1.1 | 1.5 |
| East of La Novia | 2.2 | 1.9 | 2.3 |
| West of La Pata | 2.8 | 2.3 | 2.9 |

**Table 10 (Continued)**
**Cumulative Traffic Noise CNEL Increases Due to Project and Other Development (With Committed Roadway Network)**

| Roadway Segment | Traffic Noise CNEL Increase Project | B-4R | B-5 |
|---|---|---|---|
| **San Juan Creek Road** | | | |
| West of La Novia | 1.8 | 1.8 | 1.8 |
| East of La Novia | 2.1 | 2.1 | 2.1 |
| **Avenida Vista Hermosa** | | | |
| East of I-5 | 2.9 | 2.9 | 2.8 |
| **Avenida Pico** | | | |
| East of I-5 | 1.9 | 1.9 | 1.3 |
| West of La Pata | 1.8 | 1.7 | 0.4 |
| La Pata to Vista Hermosa | ***3.4*** | ***3.0*** | -0.4 |
| East of Vista Hermosa | ***6.5*** | ***6.2*** | 2.2 |
| **Camino Capistrano** | | | |
| Junipero Serra to Roso | 2.4 | 2.4 | 2.1 |
| **Antonio Parkway** | | | |
| North of SR-241 | 1.5 | 1.5 | 1.5 |
| Empressa to Banderas | 1.5 | 1.5 | 1.5 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.4 | 2.2 | 2.6 |
| South of Crown Valley Pkwy. | ***4.2*** | ***3.9*** | ***4.1*** |
| North of New Ortega Highway | ***5.3*** | ***4.6*** | ***5.2*** |
| North of SR-74 | ***5.5*** | ***4.9*** | ***5.6*** |
| **La Pata** | | | |
| South of Ortega Highway | 2.2 | 1.2 | ***3.0*** |
| South of Avnda. Pico | 2.6 | 2.6 | 2.0 |
| **Camino Vera Cruz** | | | |
| Cmno. de Los Mares to Vista Hermosa | ***3.7*** | ***3.7*** | ***3.7*** |
| **Talega** | | | |
| East of Vista Hermosa | ***11.8*** | ***11.8*** | ***11.8*** |

Table 10 shows that 14 roadway segments are projected to experience 2025 traffic noise level increases over existing conditions greater than 3 dB as a result of (i) development of the Project or Alternatives B-4R and B-5 and (ii) all other projected growth in the area. Seven of these segments are the same as those segments discussed/identified in Section 2.3.1 that are projected to experience substantial traffic noise increases under existing plus Project conditions. These segments include:

SR-241
- Antonio Parkway to Oso Parkway

Avenida Pico
- Avenida La Pata to Avenida Vista Hermosa
- East of Avenida Vista Hermosa

Antonio Parkway
- North of New Ortega Highway
- North of SR-74

Avenida La Pata

South of Ortega Highway
Avenida Talega
East of Vista Hermosa

The discussions in Section 2.3.1 concluded that future worst-case noise levels at sensitive receptors along all of these roadway segments are projected to be below the County Standards. Therefore, the Project and Alternatives B-4R and B-5, in combination with all other planned growth in the study area will not result in a significant cumulative traffic noise impact along these roadway segments.

Two of these segments are the same as those segments discussed/identified in Section 2.3.2.1 that are projected to experience substantial traffic noise increases over existing conditions in 2010 with development of Phase 1 of the Project. These segments include:

Antonio Parkway
South of Crown Valley Parkway
Camino Vera Cruz
Camino de los Mares to Avenida Vista Hermosa

The discussions in Section 2.3.2.1 concluded that future worst-case noise levels at sensitive receptors along the first of these roadway segments (Antonio Parkway) are projected to be below the County Standards. Future worst-case noise levels at some sensitive receptors along the Camino Vera Cruz segment are projected to be exposed to traffic noise levels greater than the County's Standards. However, the development of the project or either of the Alternatives assessed does not change the traffic noise levels along this roadway segment. Therefore, the Project, in combination with all other planned growth in the study area will not result in a significant cumulative traffic noise impact along either of these roadway segments.

Absolute noise levels along the remaining five roadway segments with projected traffic noise CNEL increases over existing conditions greater than the 3 dB threshold are discussed below.

**SR-73 between Oso Parkway and Crown Valley Parkway:** There are homes located along both sides of the entire roadway segment. All of the homes have sound walls or elevation differences from the roadway where the roadway structure and/or topography act as a noise barrier. A detailed analysis of the performance of the sound walls and noise barriers found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, neither the Project nor Alternatives B-4R or B-5, in combination all other planned growth in the study area, will result in a significant cumulative traffic noise impact along this roadway segment.

**SR-73 between Crown Valley Parkway and I-5:** There are homes located along both sides of the entire roadway segment. All of the homes have sound walls or elevation differences from the roadway where the roadway structure and/or topography act as a noise barrier. A detailed analysis of the performance of the sound walls and noise barriers found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, neither the Project nor Alternatives B-4R or B-5, in combination all other planned growth in the study area, will result in a significant cumulative traffic noise impact along this roadway segment.

**SR-241 North of Antonio Parkway:** Table 10 shows that projected cumulative noise level increases due to the project along this roadway segment are in excess of the 3 dB threshold with Alternative B-5. Further, the development of Alternative B-5 would result in 1.2 dB of the cumulative 3.0 dB increase along this roadway segment. The only residential uses on this segment of road are east of SR-241 and north of Antonio Parkway and there is a sound wall between the residences and SR-241. A detailed analysis was performed to assess the performance of the sound wall. It was found that the existing sound wall reduces future projected noise levels at the residences to below 65 CNEL. There are no other noise sensitive uses along this roadway segment. Therefore, Alternative B-5, in combination all other planned growth in the study area, will result in a significant cumulative traffic noise impact along this roadway segment.

**Oso Parkway, East of Antonio Parkway:** Table 10 shows that projected cumulative noise level increases due to the project along this roadway segment are in excess of the 3 dB threshold with Alternative B-5. Further, the development of Alternative B-5 would result in 2.6 dB of the cumulative 3.0 dB increase along this roadway segment. There are homes along both sides of the roadway east of Antonio Parkway. All of the homes have existing sound walls. A detailed analysis of the performance of the sound walls found that some of the homes backing up to Oso Parkway along Acanthus and Radiance Lane are projected to be exposed to future traffic noise levels in excess of 65 CNEL with the development of Alternative B-5. All of the other existing sound walls are projected to reduce future traffic noise levels to below 65 CNEL. Residences along Oso Parkway east of Antonio Parkway would be subjected to a cumulative noise level increase of greater than 3 dB due to the development of Alternative B-5 and experience a resulting future worst-case traffic noise level of greater than the County's 65 CNEL standard. Additionally, Alternative B-5 considerably contributes to this increase. Therefore, these homes would be significantly cumulatively impacted by traffic noise with the development Alternative B-5. Mitigation is discussed in Section 3.2. Not withstanding the foregoing, noise level increases over existing conditions with the development of the proposed project or Alternative B-4R would be less than 3 dB and therefore, the Project nor Alternative B-4R would not result in a significant cumulative noise impact along this roadway segment.

**Crown Valley Parkway, West of Antonio Parkway:** There are homes on both sides of the entire roadway segment. Some of the homes have sound walls and others have topographical features that act as noise barriers. A detailed analysis of the performance of the sound walls and topography found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels in less than 65 CNEL. There are no other noise sensitive uses along this roadway segment. Therefore, neither the Project nor Alternatives B-4R or B-5, in combination all other planned growth in the study area, will result in a significant cumulative traffic noise impact along this roadway segment.

#### 2.3.2.3 2025 Cumulative Impacts Due to Project, Other Development and Changes in Roadway Network

The traffic study estimated traffic volumes for the Project and Alternatives B-4R and B-5 under several different roadway networks. Table 11 presents the range of increases in noise levels over existing conditions projected under the different roadway network configurations. The traffic study describes the different traffic network scenarios. These noise level changes are due to a combination of the project, other development and changes in the roadway network. To focus on the roadway segments that are most impacted by projected changes in traffic noise, the segments presented in Table 11 are those projected to experience noise level increases of 1.5 dB or greater over existing conditions. Noise level increases along all roadway segments presented in the traffic study are presented in the appendix.

**Table 11**
**Cumulative Traffic Noise CNEL Increases due to the Project, Other Development and Changes in Roadway Network**

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **I-5** | | | |
| Avery Pkwy. to Junipero Serra | 1.3 - 1.6 | 1.4 - 1.6 | 1.3 - 1.6 |
| Junipero Serra to Ortega Highway | 1.3 - 1.6 | 1.3 - 1.6 | 1.3 - 1.6 |
| Ortega Highway to San Juan Creek | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| San Juan Creek to Stonehill | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| Stonehill to Cmno. Las Ramblas | 1.3 - 1.8 | 1.4 - 1.8 | 1.3 - 1.8 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| Cmno. de Los Mares to Vista Hermosa | 1.3 - 1.8 | 1.3 - 1.8 | 1.3 - 1.7 |
| Vista Hermosa to Avnda. Pico | 1.4 - 1.8 | 1.4 - 1.8 | 1.3 - 1.8 |
| **SR-73** | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***2.7 - 3.2*** | ***2.7 - 3.2*** | ***2.7 - 3.1*** |
| Crown Valley Pkwy. to I-5 | ***2.6 - 3.1*** | ***2.7 - 3.1*** | ***2.6 - 3.0*** |
| **SR-241** | | | |
| North of Antonio Pkwy. | ***2.9 - 5.0*** | ***2.9 - 4.9*** | ***3.0 - 5.1*** |
| Antonio Pkwy. to Oso Pkwy. | ***4.9 - 7.9*** | ***4.8 - 7.8*** | ***5.1 - 8.0*** |
| **Oso Parkway** | | | |
| West of Marguerite | 1.6 - 2.2 | 1.6 - 2.2 | 1.9 - 2.5 |
| Marguerite to Felipe Rd. | 0.9 - 1.3 | 0.9 - 1.2 | 1.3 - 1.7 |
| Felipe Rd. to Antonio Pkwy. | 0.9 - 1.3 | 0.9 - 1.2 | 1.3 - 1.8 |
| East of Antonio Pkwy. | 1.2 - 2.3 | 0.9 - 2.2 | ***2.0 - 3.2*** |
| West of SR-241 | 0.8 - 2.3 | 0.6 - 2.1 | 1.4 - 2.9 |
| **Crown Valley Parkway** | | | |
| West of Marguerite | 2.3 - 2.5 | 2.3 - 2.4 | 2.4 - 2.5 |
| East of Marguerite | 2.6 - 2.8 | 2.6 - 2.6 | 2.8 - 2.8 |
| West of Antonio Pkwy. | ***2.9 - 3.2*** | ***2.8 - 3.0*** | ***3.2 - 3.4*** |
| **Junipero Serra** | | | |
| West of I-5 | ***1.8 - 3.0*** | 1.8 - 1.8 | 1.8 - 1.8 |

**Table 11 (Continued)**
**Cumulative Traffic Noise CNEL Increases due to the Project, Other Development and Changes in Roadway Network**

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **SR-74 (Ortega Highway)** | | | |
| West of La Novia | 1.1 - 1.5 | 0.8 - 1.1 | 1.1 - 1.5 |
| East of La Novia | 1.3 - 2.2 | 1.4 - 1.9 | 1.9 - 2.3 |
| West of La Pata | 1.8 - 2.8 | 1.9 - 2.3 | 2.4 - 2.9 |
| East of New Ortega Highway | 1.1 - 1.5 | 0.8 - 1.1 | 1.1 - 1.5 |
| **San Juan Creek Road** | | | |
| West of La Novia | 1.5 - 1.8 | 1.5 - 1.8 | 1.5 - 1.8 |
| East of La Novia | 1.8 - 2.1 | 2.1 - 2.1 | 2.1 - 2.1 |
| **Avenida Vista Hermosa** | | | |
| East of I-5 | 1.9 - 2.9 | 2.0 - 2.9 | 1.9 - 2.8 |
| **Avenida Pico** | | | |
| East of I-5 | 0.8 - 1.9 | 0.9 - 1.9 | 0.3 - 1.3 |
| West of La Pata | 0.2 - 1.8 | 0.4 - 1.7 | -1.1 - 0.4 |
| La Pata to Vista Hermosa | ***3.4 - 3.6*** | ***3.0 - 3.2*** | -0.4 - 0.7 |
| East of Vista Hermosa | ***6.5 - 7.1*** | ***6.2 - 6.8*** | ***1.8 - 4.5*** |
| **Camino Capistrano** | | | |
| South of Paseo de Colinas | 0.8 - 2.0 | 0.8 - 0.8 | 0.8 - 0.8 |
| North of Junipero Serra | ***0.0 - 4.8*** | 0.0 - 0.0 | 0.0 - 0.0 |
| Junipero Serra to Roso | 2.1 - 2.6 | 2.1 - 2.4 | 1.9 - 2.1 |
| **Antonio Parkway** | | | |
| North of SR-241 | 1.5 - 1.5 | 1.5 - 1.5 | 1.5 - 1.5 |
| Empressa to SR-241 | 1.3 - 1.6 | 1.3 - 1.6 | 1.3 - 1.6 |
| Empressa to Banderas | 1.5 - 1.8 | 1.5 - 1.8 | 1.5 - 1.8 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.4 - 2.8 | 2.2 - 2.6 | ***2.6 - 3.0*** |
| South of Crown Valley Pkwy. | ***4.2 - 4.9*** | ***3.9 - 4.6*** | ***4.1 - 4.8*** |
| North of New Ortega Highway | ***5.3 - 6.1*** | ***4.6 - 5.5*** | ***5.2 - 6.1*** |
| North of SR-74 | ***5.5 - 6.8*** | ***4.9 - 6.4*** | ***5.6 - 6.9*** |
| **La Pata** | | | |
| South of Ortega Highway | ***2.2 - 9.2*** | ***1.2 - 8.8*** | ***3.0 - 9.2*** |
| South of Avnda. Pico | ***2.6 - 3.4*** | ***2.6 - 3.0*** | 2.0 - 2.6 |
| **Camino Vera Cruz** | | | |
| Cmno. de Los Mares to Vista Hermosa | ***0.9 - 3.9*** | ***3.7 - 3.9*** | ***3.7 - 3.7*** |
| **Talega** | | | |
| East of Vista Hermosa | ***10.4 - 11.8*** | ***10.4 - 11.8*** | ***10.8 - 11.8*** |

Table 8 shows that 18 roadway segments are projected to experience traffic noise level increases over existing conditions greater than 3 dB as a result of (i) the development of the project or alternatives, (ii) all other projected growth in the study area and (iii) roadway network changes. Seven of these segments are the same as those segments discussed/identified in Section 2.3.1 projected to experience substantial traffic noise increases under existing plus Project conditions. These segments include:

SR-241
Antonio Parkway to Oso Parkway
Avenida Pico
Avenida La Pata to Avenida Vista Hermosa
East of Avenida Vista Hermosa
Antonio Parkway
North of New Ortega Highway
North of SR-74
Avenida La Pata
South of Ortega Highway
Avenida Talega
East of Vista Hermosa

The discussions presented in Section 2.3.1 concluded that future worst-case noise levels at sensitive receptors along all of these roadway segments, are projected to be below the County Standards. Therefore, the development of the Project or Alternatives B-4R and B-5 in combination all other planned growth in the study area and changes in the area's roadway network will not result in a significant cumulative traffic noise impact along these roadway segments

Of the remaining 11 roadway segments that are projected to experience traffic noise level increases over existing conditions greater than 3 dB due to the Project or Alternatives B-4R and B--5 and all other projected growth in the area, seven of these segments are the same as are projected to experience substantial cumulative traffic noise increases as analyzed in Sections 2.3.2.1 and 2.3.2.2 and subsequent discussion. These segments include:

SR-73
Oso Parkway to Crown Valley Parkway
Crown Valley Parkway to I-5
SR-241
North of Antonio Parkway
Oso Parkway
East of Antonio Parkway
Crown Valley Parkway
West of Antonio Parkway
Antonio Parkway
South of Crown Valley Parkway
Camino Vera Cruz
Camino de Los Mares to Avenida Vista Hermosa

The discussion in Sections 2.3.2.1 and 2.3.2.2 concluded that future worst-case noise levels at sensitive receptors along all of these roadway segments, except Oso Parkway east of Antonio Parkway with Alternative B-5 and Camino Vera Cruz from Camino de los Mares to Avenida Vista Hermosa for the Project and Alternatives B-4R and B-5 are projected to be below the County Standards. The project, nor either of the alternatives assessed, is not projected to contribute to the noise level increase along Camino Vera Cruz from Camino de los Mares to Avenida Vista Hermosa. Therefore, the project in combination all other planned growth and changes in the area's roadway network will not result in a significant cumulative traffic noise

impact along these roadway segments except Oso Parkway east of Antonio Parkway with Alternative B-5. Along Oso Parkway east of Antonio Parkway, the development of Alternative B-5 in combination all other projected growth in the area and changes in the areas roadway network will result in a significant cumulative traffic noise impact to the homes that back up to Oso Parkway along Acanthus and Radiance Lane. Mitigation is discussed in Section 3.2.

Absolute noise levels along the remaining four roadway segments with projected traffic noise CNEL increases greater than the 1 dB threshold are discussed below.

**Junipero Serra, West of I-5:** There are no noise sensitive uses located within the future worst case 65 CNEL contour from this roadway segment. Therefore, neither the Project nor Alternatives B-4R and B-5 in combination with all other growth and changes in the areas roadway network will result in a significant traffic noise impact along this roadway segment.

**Camino Capistrano, North of Junipero Serra:** There are scattered residences located on the west side of this roadway segment. These residences do not have noise barriers and are exposed to existing and future noise levels in excess of 65 CNEL. I-5 is located on the east side of the roadway segment. I-5 dominates the noise environment in this area, and Camino Capistrano only contributes slightly to the overall noise level. The actual noise level increase along this segment is a combination of the increase along Camino Capistrano and the increase along I-5. The actual noise level increase is dependant on the specific receptor location relative to these two roadways. The worst-case location is a receptor to Camino Capistrano and is far from I-5. Detailed modeling was performed for such a worst-case location, and it was determined that the greatest increase in noise levels over existing conditions is projected to be 2.6 dB. Therefore, while the traffic noise level generated by vehicles on Camino Capistrano will increase by more than 3 dB, the total traffic noise level at the residences will not be subjected to increases greater than 3 dB. Therefore, neither the Project nor Alternatives B-4R and B-5 in combination with all other growth and changes in the areas roadway network will result in a significant traffic noise impact along this roadway segment.

**Antonio Parkway between Oso Parkway and Crown Valley Parkway:** There are homes located on the west side of this roadway segment. These homes are between 25 and 40 feet below the roadway grade. The topography acts as a noise barrier. A detailed analysis of the performance of the topographic noise barrier found that all of the homes along this roadway segment are projected to be exposed to future traffic noise levels less than 65 CNEL. Therefore, neither the Project nor Alternatives B-4R and B-5 in combination with all other growth and changes in the areas roadway network will result in a significant traffic noise impact along this roadway segment.

**Avenida La Pata, South of Avenida Pico:** There are no existing noise sensitive uses located within the worst-case future 65 CNEL contour from this roadway segment. Therefore, neither the Project nor Alternatives B-4R and B-5 in combination with all other growth and changes in the areas roadway network will result in a significant traffic noise impact along this roadway segment.

### *2.3.3 Future Worst Case Traffic Noise Levels*

The distances to the future 60, 65 and 70 CNEL contours with the proposed project and Alternatives B-4R and B-5 for selected roadways are presented in Table 12, 13, and 14. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. These are worst-case noise levels in that the highest traffic volume projected in the traffic study, as compared between the different roadway networks was used to estimate the future noise level. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix.

To focus on the roadway segments that are most impacted by projected changes in traffic noise, the roadway segments presented in Table 12, 13, and 14 are those that are projected to experience a 0.5 dB or greater traffic noise CNEL increase due to the development of the project (or alternatives), or are projected to experience a 1.5 dB or greater traffic noise CNEL increase over existing conditions in the future with the project (or alternatives). Future with project traffic noise levels along all roadways assessed in the traffic study prepared for the project are presented in the appendix.

**Table 12**
**Future With Project Traffic Noise Levels**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| Avery Pkwy. to Junipero Serra | 82.1 | 642 | 1,383 | 2,979 |
| Junipero Serra to Ortega Highway | 82.0 | 630 | 1,358 | 2,926 |
| Ortega Highway to San Juan Creek | 81.7 | 606 | 1,306 | 2,813 |
| San Juan Creek to Stonehill | 81.7 | 605 | 1,303 | 2,807 |
| Stonehill to Cmno. Las Ramblas | 81.6 | 589 | 1,269 | 2,734 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.8 | 609 | 1,311 | 2,825 |
| Cmno. de Los Mares to Vista Hermosa | 81.6 | 596 | 1,283 | 2,765 |
| Vista Hermosa to Avnda. Pico | 81.4 | 573 | 1,235 | 2,660 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.7 | 239 | 515 | 1,109 |
| Crown Valley Pkwy. to I-5 | 75.5 | 234 | 504 | 1,085 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.6 | 204 | 439 | 946 |
| Antonio Pkwy. to Oso Pkwy. | 74.0 | 184 | 397 | 855 |
| Oso Pkwy. to Crown Valley Pkwy. | 74.0 | 184 | 397 | 855 |
| Crown Valley Pkwy. to C St. | 74.0 | 184 | 397 | 855 |
| C St. to Ortega Highway | 73.1 | 161 | 347 | 747 |
| Ortega Highway to Avnda. Pico | 73.0 | 158 | 341 | 734 |

1. From Roadway Centerline
RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 12 (Continued)
## Future With Project Traffic Noise Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Oso Parkway** | | | | |
| East of I-5 | 71.3 | 123 | 265 | 571 |
| West of Marguerite | 71.3 | 123 | 265 | 571 |
| Marguerite to Felipe Rd. | 70.5 | 107 | 231 | 498 |
| Felipe Rd. to Antonio Pkwy. | 70.5 | 107 | 231 | 498 |
| East of Antonio Pkwy. | 70.1 | 102 | 220 | 473 |
| West of SR-241 | 69.7 | 95 | 204 | 440 |
| East of SR-241 | 67.0 | 63 | 136 | 294 |
| **Crown Valley Parkway** | | | | |
| West of Marguerite | 71.6 | 128 | 276 | 594 |
| East of Marguerite | 71.7 | 129 | 278 | 600 |
| West of Antonio Pkwy. | 70.2 | 103 | 222 | 479 |
| **Junipero Serra** | | | | |
| West of I-5 | 66.5 | 59 | 126 | 272 |
| **SR-74 (Ortega Highway)** | | | | |
| I-5 to Rancho Viejo | 74.1 | 186 | 402 | 866 |
| West of La Novia | 73.1 | 161 | 346 | 746 |
| East of La Novia | 73.0 | 158 | 341 | 736 |
| West of La Pata | 72.7 | 152 | 327 | 704 |
| East of New Ortega Highway | 67.0 | 63 | 136 | 292 |
| **San Juan Creek Road** | | | | |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| West of La Pata | 61.1 | RW | 55 | 118 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.1 | 88 | 189 | 406 |
| Talega to Pico | 62.3 | RW | 66 | 141 |
| **Avenida Pico** | | | | |
| East of I-5 | 70.9 | 115 | 248 | 535 |
| West of La Pata | 68.7 | 81 | 175 | 378 |
| La Pata to Vista Hermosa | 67.2 | 65 | 140 | 302 |
| East of Vista Hermosa | 68.1 | 75 | 162 | 349 |
| East of SR-241 | 67.4 | 67 | 144 | 310 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 61.1 | RW | 55 | 118 |
| North of Junipero Serra | 63.8 | RW | 83 | 179 |
| Junipero Serra to Roso | 65.1 | 47 | 101 | 217 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 12 (Continued)
## Future With Project Traffic Noise Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.6 | 110 | 237 | 511 |
| South of Crown Valley Pkwy. | 70.1 | 102 | 220 | 473 |
| North of New Ortega Highway | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 114 | 246 | 529 |
| **La Pata** | | | | |
| South of Ortega Highway | 67.2 | 65 | 140 | 302 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.6 | 60 | 129 | 277 |
| South of Avnda. Pico | 63.6 | RW | 81 | 175 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.5 | 50 | 108 | 232 |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Highway | 59.8 | RW | 45 | 97 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |

1. From Roadway Centerline
RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 13
## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| Avery Pkwy. to Junipero Serra | 82.1 | 642 | 1,383 | 2,979 |
| Junipero Serra to Ortega Highway | 82.0 | 630 | 1,358 | 2,926 |
| Ortega Highway to San Juan Creek | 81.7 | 605 | 1,303 | 2,807 |
| San Juan Creek to Stonehill | 81.7 | 603 | 1,300 | 2,801 |
| Stonehill to Cmno. Las Ramblas | 81.6 | 589 | 1,269 | 2,734 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.8 | 607 | 1,308 | 2,819 |
| Cmno. de Los Mares to Vista Hermosa | 81.6 | 594 | 1,280 | 2,758 |
| Vista Hermosa to Avnda. Pico | 81.4 | 572 | 1,232 | 2,654 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.7 | 239 | 515 | 1,109 |
| Crown Valley Pkwy. to I-5 | 75.5 | 232 | 500 | 1,077 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.6 | 201 | 434 | 934 |
| Antonio Pkwy. to Oso Pkwy. | 73.9 | 182 | 391 | 843 |
| Oso Pkwy. to Crown Valley Pkwy. | 73.6 | 174 | 375 | 808 |
| Crown Valley Pkwy. to C St. | 73.6 | 174 | 375 | 808 |
| C St. to Ortega Highway | 72.9 | 155 | 335 | 722 |
| Ortega Highway to Avnda. Pico | 72.8 | 153 | 329 | 709 |
| **Oso Parkway** | | | | |
| East of I-5 | 71.3 | 122 | 262 | 565 |
| West of Marguerite | 71.3 | 122 | 262 | 565 |
| Marguerite to Felipe Rd. | 70.4 | 106 | 228 | 492 |
| Felipe Rd. to Antonio Pkwy. | 70.4 | 106 | 228 | 492 |
| East of Antonio Pkwy. | 70.0 | 100 | 217 | 466 |
| West of SR-241 | 69.5 | 92 | 198 | 427 |
| East of SR-241 | 67.0 | 63 | 136 | 294 |
| **Crown Valley Parkway** | | | | |
| West of Marguerite | 71.5 | 127 | 273 | 588 |
| East of Marguerite | 71.5 | 127 | 273 | 588 |
| West of Antonio Pkwy. | 70.0 | 100 | 217 | 466 |
| **Junipero Serra** | | | | |
| West of I-5 | 65.3 | 48 | 104 | 225 |
| **SR-74 (Ortega Highway)** | | | | |
| I-5 to Rancho Viejo | 73.8 | 180 | 388 | 836 |
| West of La Novia | 72.7 | 152 | 327 | 704 |
| East of La Novia | 72.6 | 149 | 322 | 693 |
| West of La Pata | 72.2 | 140 | 301 | 650 |
| East of New Ortega Highway | 66.7 | 60 | 129 | 278 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 13 (Continued)
## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **San Juan Creek Road** | | | | |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| West of La Pata | -- | -- | -- | -- |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.1 | 88 | 189 | 406 |
| Talega to Pico | 61.7 | RW | 60 | 129 |
| **Avenida Pico** | | | | |
| East of I-5 | 70.9 | 115 | 248 | 535 |
| West of La Pata | 68.5 | 80 | 172 | 371 |
| La Pata to Vista Hermosa | 66.8 | 62 | 133 | 286 |
| East of Vista Hermosa | 67.8 | 72 | 155 | 333 |
| East of SR-241 | 66.6 | 60 | 129 | 277 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.8 | RW | 45 | 97 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 64.8 | 45 | 97 | 210 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.5 | 107 | 231 | 498 |
| South of Crown Valley Pkwy. | 69.8 | 98 | 210 | 453 |
| North of New Ortega Highway | 69.6 | 93 | 201 | 433 |
| North of SR-74 | 70.4 | 106 | 228 | 492 |
| **La Pata** | | | | |
| South of Ortega Highway | 66.8 | 62 | 133 | 286 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.4 | 58 | 125 | 269 |
| South of Avnda. Pico | 63.2 | RW | 76 | 164 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.5 | 50 | 108 | 232 |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Highway | 59.0 | RW | 40 | 86 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 14
## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| Avery Pkwy. to Junipero Serra | 82.1 | 637 | 1,372 | 2,955 |
| Junipero Serra to Ortega Highway | 81.9 | 625 | 1,347 | 2,902 |
| Ortega Highway to San Juan Creek | 81.7 | 602 | 1,297 | 2,795 |
| San Juan Creek to Stonehill | 81.7 | 600 | 1,292 | 2,783 |
| Stonehill to Cmno. Las Ramblas | 81.5 | 585 | 1,261 | 2,716 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.7 | 602 | 1,297 | 2,795 |
| Cmno. de Los Mares to Vista Hermosa | 81.5 | 588 | 1,266 | 2,728 |
| Vista Hermosa to Avnda. Pico | 81.3 | 568 | 1,223 | 2,636 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.6 | 237 | 511 | 1,101 |
| Crown Valley Pkwy. to I-5 | 75.4 | 230 | 496 | 1,069 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.7 | 206 | 444 | 957 |
| Antonio Pkwy. to Oso Pkwy. | 74.1 | 187 | 402 | 866 |
| Oso Pkwy. to Crown Valley Pkwy. | 74.3 | 194 | 418 | 901 |
| Crown Valley Pkwy. to C St. | 74.3 | 194 | 418 | 901 |
| C St. to Ortega Highway | 73.0 | 158 | 341 | 734 |
| Ortega Highway to Avnda. Pico | 72.4 | 144 | 311 | 670 |
| **Oso Parkway** | | | | |
| East of I-5 | 71.6 | 128 | 276 | 594 |
| West of Marguerite | 71.6 | 128 | 276 | 594 |
| Marguerite to Felipe Rd. | 70.9 | 114 | 246 | 529 |
| Felipe Rd. to Antonio Pkwy. | 70.9 | 115 | 248 | 535 |
| East of Antonio Pkwy. | 71.0 | 117 | 251 | 541 |
| West of SR-241 | 70.3 | 105 | 225 | 486 |
| East of SR-241 | 67.2 | 65 | 140 | 302 |
| **Crown Valley Parkway** | | | | |
| West of Marguerite | 71.7 | 129 | 278 | 600 |
| East of Marguerite | 71.7 | 130 | 281 | 606 |
| West of Antonio Pkwy. | 70.4 | 106 | 228 | 492 |
| **Junipero Serra** | | | | |
| West of I-5 | 65.3 | 48 | 104 | 225 |
| **SR-74 (Ortega Highway)** | | | | |
| I-5 to Rancho Viejo | 74.1 | 189 | 406 | 875 |
| West of La Novia | 73.1 | 161 | 346 | 746 |
| East of La Novia | 73.1 | 161 | 346 | 746 |
| West of La Pata | 72.8 | 154 | 332 | 715 |
| East of New Ortega Highway | 67.0 | 63 | 136 | 292 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Table 14 (Continued)
## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **San Juan Creek Road** | | | | |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| West of La Pata | -- | -- | -- | -- |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.0 | 86 | 185 | 399 |
| Talega to Pico | 61.7 | RW | 60 | 129 |
| **Avenida Pico** | | | | |
| East of I-5 | 70.3 | 105 | 225 | 486 |
| West of La Pata | 67.2 | 65 | 140 | 302 |
| La Pata to Vista Hermosa | 64.4 | 42 | 91 | 195 |
| East of Vista Hermosa | 65.5 | 50 | 108 | 234 |
| East of SR-241 | 56.2 | RW | RW | 56 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.8 | RW | 45 | 97 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 64.6 | 44 | 94 | 203 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.9 | 114 | 246 | 529 |
| South of Crown Valley Pkwy. | 70.0 | 100 | 217 | 466 |
| North of New Ortega Highway | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 115 | 248 | 535 |
| **La Pata** | | | | |
| South of Ortega Highway | 67.2 | 65 | 140 | 302 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.6 | 60 | 129 | 277 |
| South of Avnda. Pico | 62.8 | RW | 71 | 153 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.3 | 48 | 104 | 225 |
| **A Street** | | | | |
| South of Oso Pkwy. | 62.0 | RW | 64 | 137 |
| North of New Ortega Highway | 61.6 | RW | 59 | 128 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

### *2.3.4 On-Site Activities*

Noise from activities on one property impacting another typically only occur where commercial uses abut residential uses. The land use plans for the project and identified alternatives show that commercial areas are not proposed to directly abut any existing residential areas. The nearest commercial uses to existing residential uses are the Urban Activity Center in Planning Area 1. These uses are located more than 1,500 feet from the nearest existing residential use and there will be residential uses developed by the project between the commercial and existing residential uses. The commercial uses will need to comply with the Noise Ordinance at the nearer residential areas developed by the project (see Section 2.4.2) and will definitely not approach the Noise Ordinance limits at the nearest existing residences. Therefore, activities on the project site will not result in a significant noise impact.

## 2.4 Long Term On-Site Impacts

This section examines potential noise impacts on the proposed uses. Traffic noise impacts are examined first. Second, impacts from on-site activities are examined (i.e., the potential for noise generated by one proposed use to impact another. There are no existing uses in the vicinity of the project that have the potential of impacting the project.

### *2.4.1 Traffic Noise*

It should be noted that the analysis in this section discusses noise levels along the proposed southern extension of SR-241. The analysis is based on the alignment of the proposed southern extension of SR-241 that was selected by the Transportation Corridor Agencies (TCA) as the locally preferred toll road alignment in 1991. This is the alignment reflected on the Master Plan of Arterial Highways (MPAH), local General Plans, and in regional planning documents. The TCA and Federal Highway Administration (FHWA) are currently evaluating the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP), which includes the southern extension of SR-241. Selection of an alignment for the SR-241 extension is anticipated to occur by early 2005, approximately one year after the release of the EIS/EIR on the SOCTIIP study. Should the TCA and FHWA select an alignment for the SR-241 extension different from what is depicted in this document, the Ranch Plan project would be modified to reflect the adopted alignment. The impacts associated with the construction of the extension of SR-241 are being addressed in a separate EIS/EIR on the SOCTIIP study. Because the construction of the toll road is not part of the Ranch Plan project and the project is not dependent on the completion of the toll road, this project is not required to evaluate the impacts associated with the toll road. However, potential noise impacts from traffic on the southern extension of SR-241 are evaluated here for illustrative purposes.

The distances to the future 60, 65 and 70 CNEL contours for the roadways impacting the Project are presented in Table 15. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix.

## Table 15
## Future Traffic Noise Levels Impacting the Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **SR-241** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 74.0 | 184 | 397 | 855 |
| Crown Valley Pkwy. to C St. | 74.0 | 184 | 397 | 855 |
| C St. to Ortega Hwy. | 73.1 | 161 | 347 | 747 |
| Ortega Hwy. to Avnda. Pico | 73.0 | 158 | 341 | 734 |
| South of Avnda. Pico | 71.8 | 133 | 286 | 616 |
| **SR-74 (Ortega Hwy.)** | | | | |
| West of La Pata | 72.7 | 152 | 327 | 704 |
| East of La Pata | 64.1 | 40 | 87 | 186 |
| West of SR-241 | 62.5 | RW | 68 | 147 |
| East of SR-241 | 58.5 | RW | RW | 80 |
| East of C St. | 58.5 | RW | RW | 80 |
| East of New Ortega Hwy. | 67.0 | 63 | 136 | 292 |
| **San Juan Creek Road** | | | | |
| West of La Pata | 61.1 | RW | 55 | 118 |
| **New Ortega Hwy.** | | | | |
| Antonio Pkwy. to A St. | 69.2 | 89 | 191 | 411 |
| A St. to C St. | 69.2 | 89 | 191 | 411 |
| C St. to F St. | 67.0 | 63 | 135 | 291 |
| F St. to SR-74 | 67.6 | 69 | 149 | 322 |
| **Avenida Pico** | | | | |
| East of SR-241 | 67.4 | 67 | 144 | 310 |
| **Antonio Parkway** | | | | |
| North of New Ortega Hwy. | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 114 | 246 | 529 |
| **La Pata** | | | | |
| South of Ortega Hwy. | 67.2 | 65 | 140 | 302 |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Hwy. | 59.8 | RW | 45 | 97 |
| **F Street** | | | | |
| Oso Pkwy. to C St. | 67.2 | 65 | 141 | 303 |
| C St. to New Ortega Hwy. | 64.6 | 44 | 94 | 203 |

1. From Roadway Centerline.

RW-Contour does not extend beyond roadway right-of-way.

**Table 15 (Continued)**
**Future Traffic Noise Levels Impacting the Project**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **C Street** | | | | |
| Northeast of F St. | 63.2 | RW | 76 | 163 |
| North of New Ortega Hwy. | 64.4 | 42 | 91 | 195 |
| New Ortega Hwy. to Ortega Hwy. | 67.2 | 65 | 141 | 303 |
| Ortega Hwy. to Talega | 66.4 | 57 | 123 | 265 |
| South of Talega | 64.1 | 40 | 87 | 187 |
| **Talega** | | | | |
| South of C St. | 59.8 | RW | 45 | 97 |

1. From Roadway Centerline.
RW-Contour does not extend beyond roadway right-of-way.

Table 16 assesses the traffic noise impacts based on the traffic noise level information presented above. At this time detailed plans showing specific locations of uses for the project site have not been developed. Therefore, the analysis presented in Table 16 assumes a worst-case situation where development is located at the edge of the roadway right-of-way. It was assumed that buildings were set back 20 feet from the right-of-way.

The first column of Table 16 presents the roadway segments running through the project. The next two columns examine outdoor noise levels. The second column of the table shows the noise level experienced at the worst-case receiver at the edge of the right-of-way. Noise levels in excess of the 65 CNEL residential outdoor noise standard are shown in bold. The third column shows the maximum height of a noise barrier required to meet the residential 65 CNEL outdoor noise standard. The maximum noise barrier heights presented in Table 16 assume that the barrier can be located at the highest point between the roadway and the outdoor living area. If this cannot be accommodated, then a higher barrier may be required.

Design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most efficient method of reducing outdoor noise exposure levels. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is broken by the barrier. The greater the distance the sound must travel around the barrier to reach the receiver, the greater the noise reduction of the barrier.

To be effective noise barriers are required to have a surface density of at least 3.5 pounds per square foot, and have no openings or cracks. They may be a solid wall, an earthen berm, or a combination of the two. They may be constructed of wood studs with stucco exterior, 1/4 inch plate glass, 5/8 inch plexiglass, any masonry material, or a combination of these materials. Wood and other materials may be acceptable if properly designed as a noise barrier. For patios and balconies, the barriers must run along the entire edge of the patio or balcony from building face to building face.

The last three columns of Table 16 assess the noise reduction required to meet the appropriate indoor noise standard. Typical construction achieves at least 20 dB of outdoor-to-indoor noise

reduction with windows closed. Uses requiring more than 20 dB of noise reduction are shown in bold. With open windows the noise reduction falls to 12 dB. In order to assume that windows can remain closed, adequate ventilation per the Uniform Building Code must be provided. Typically this is provided through a mechanical ventilation or air conditioning system. Note that windows do not need to be sealed shut, but closeable at the occupants' discretion. Detailed calculations based on architectural drawings are required to show that a building can achieve more than 20 dB of outdoor-to-indoor noise reduction. With measures that may include thicker windows, walls, and/or roof/ceiling assemblies, up to approximately 32 dB of outdoor-to-indoor reduction is achievable.

## Table 16
## Traffic Noise Impacts Analysis

| Roadway Segment | Unmitigated Outdoor Noise Level | Barrier Height* for Residential Area | Building Noise Reduction Required to Meet Interior Noise Standard | | |
|---|---|---|---|---|---|
| | | | Residential | Office | Retail |
| **SR-241** | | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***74*** | 9.0 | ***28*** | ***23*** | 18 |
| Crown Valley Pkwy. to C St. | ***74*** | 9.0 | ***28*** | ***23*** | 18 |
| C St. to Ortega Hwy. | ***73*** | 8.5 | ***27*** | ***22*** | 17 |
| Ortega Hwy. to Avnda. Pico | ***73*** | 8.5 | ***27*** | ***22*** | 17 |
| South of Avnda. Pico | ***72*** | 7.5 | ***26*** | ***21*** | 16 |
| **SR-74 (Ortega Hwy.)** | | | | | |
| West of La Pata | ***77*** | 11.0 | ***30*** | ***25*** | ***20*** |
| East of La Pata | ***71*** | 7.0 | ***23*** | 18 | 13 |
| West of SR-241 | ***69*** | 6.5 | ***21*** | 16 | 11 |
| East of SR-241 | ***65*** | 5.5 | 17 | 12 | 7 |
| East of C St. | ***65*** | 5.5 | 17 | 12 | 7 |
| East of New Ortega Hwy. | ***74*** | 8.5 | ***26*** | ***21*** | 16 |
| **San Juan Creek Road** | | | | | |
| West of La Pata | ***68*** | 5.5 | ***20*** | 15 | 10 |
| **New Ortega Hwy.** | | | | | |
| Antonio Pkwy. to A St. | ***74*** | 8.0 | ***27*** | ***22*** | 17 |
| A St. to C St. | ***74*** | 8.0 | ***27*** | ***22*** | 17 |
| C St. to F St. | ***71*** | 7.0 | ***24*** | 19 | 14 |
| F St. to SR-74 | ***72*** | 7.5 | ***25*** | ***20*** | 15 |
| **Avenida Pico** | | | | | |
| East of SR-241 | ***72*** | 7.0 | ***25*** | ***20*** | 15 |
| **Antonio Parkway** | | | | | |
| North of New Ortega Hwy. | ***75*** | 8.5 | ***27*** | ***22*** | 17 |
| North of SR-74 | ***75*** | 9.0 | ***28*** | ***23*** | 18 |
| **La Pata** | | | | | |
| South of Ortega Hwy. | ***73*** | 7.5 | ***26*** | ***21*** | 16 |

*Maximum Noise Barrier Height to Reduce Outdoor Noise Levels to Below 65 CNEL. Note that the analysis assumes that the barrier can be located at the highest point between the roadway and outdoor living area. If this cannot be accommodated a higher barrier may be required.

**Table 16 (Continued)**
**Traffic Noise Impacts Analysis**

| Roadway Segment | Unmitigated Outdoor Noise Level | Barrier Height* for Residential Area | Building Noise Reduction Required to Meet Interior Noise Standard | | |
|---|---|---|---|---|---|
| | | | Residential | Office | Retail |
| **A Street** | | | | | |
| South of Oso Pkwy. | ***67*** | 5.0 | 19 | 14 | 9 |
| North of New Ortega Hwy. | ***68*** | 5.0 | 19 | 14 | 9 |
| **F Street** | | | | | |
| Oso Pkwy. to C St. | ***74*** | 8.0 | ***26*** | ***21*** | 16 |
| C St. to New Ortega Hwy. | ***71*** | 7.0 | ***23*** | 18 | 13 |
| **C Street** | | | | | |
| Northeast of F St. | ***71*** | 6.5 | ***23*** | 18 | 13 |
| North of New Ortega Hwy. | ***72*** | 7.0 | ***24*** | 19 | 14 |
| New Ortega Hwy. to Ortega Hwy. | ***75*** | 8.5 | ***27*** | ***22*** | 17 |
| Ortega Hwy. to Talega | ***74*** | 8.0 | ***26*** | ***21*** | 16 |
| South of Talega | ***72*** | 7.0 | ***24*** | 19 | 14 |
| **Talega** | | | | | |
| South of C St. | ***67*** | 5.0 | 19 | 14 | 9 |

*Maximum Noise Barrier Height to Reduce Outdoor Noise Levels to Below 65 CNEL. Note that the analysis assumes that the barrier can be located at the highest point between the roadway and outdoor living area. If this cannot be accommodated a higher barrier may be required.

Table 16 shows that maximum noise barrier heights between 5 and 11 feet will reduce noise levels along all roadways within the project to below the County's most restrictive, residential, outdoor noise standard of 65 CNEL. Greater setbacks and elevation differences between the roadway and outdoor living areas will result in lower wall heights. Further, Table 16 shows a maximum outdoor-to-indoor noise reduction of 30 dB is required to achieve the County's interior noise standards. As discussed above, noise reductions of less than 12 dB are achieved with standard construction and open windows. Noise reductions between 12 and 20 dB are achieved with standard construction and closed windows. Noise reductions between 20 and 26 dB may require upgraded windows to meet the interior noise standard. Noise reductions between 26 and 32 dB typically require upgraded windows and may require thicker walls and upgraded roof/ceiling assemblies, but are achievable. Noise reductions in excess of 32 dB are extremely difficult to achieve.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

### *2.4.2 On-Site Activities*

As discussed previously, noise impacts from on-site activities typically occur only where residential areas directly abut commercial areas. At this time the specific uses for the commercial areas are not known. Therefore, a specific analysis of noise impacts on the proposed residential uses from on-site activities at the commercial areas is precluded. Notwithstanding, a general discussion of potential noise impacts from on-site commercial activities is provided below for illustrative purposes. In addition to commercial activity, the proposed golf course facilities and Sports Park could generate noise impacts that may affect residential uses. The plans for the proposed golf course facilities and residential areas are not developed enough to allow a detailed analysis of the noise impacts. Potential noise impacts from golf course operations are described generally below.

#### 2.4.2.1 Commercial/Residential Interface

Noise impacts on residential areas typically occur only where the residential areas directly abut commercial areas. Typical sources of noise from commercial uses adjacent to residential uses that have the potential to impact residential uses include parking lot activity, mechanical equipment, and delivery trucks/loading docks. In addition, specific uses in the commercial portions of the project not yet identified could generate significant noise levels. Restaurants, nightclubs, and bars are often sources of noise issues due to their late night operation.

#### 2.4.2.2 Golf Course Operations

Golfing, by its very nature, is not a significant noise generating activity. Therefore, will not result in a significant noise impact. However, maintenance activities on the golf course have the potential to result in a noise impact. The County of Orange exempts noise associated with the maintenance of real property as long as those activities occur between 7:00 a.m. and 8:00 p.m. Monday through Saturday, or between 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday. Therefore, all maintenance activities occurring within these hours will not result in a significant noise impact. However, golf course operators typically mow greens as early as possible in the morning. Homes located near greens would be subject to early morning mowing noise. Further, some golf course operations begin mowing fairways early in the morning, accordingly, homes located adjacent to fairways could be subject to early morning noise as well.

#### 2.4.2.3 Sports Park

The project proposes a regional Sports Park to be located near the southern boundary of Planning Area 3. The park would provide baseball and soccer fields with night lighting. Noise generated by Sports Park activities is typically limited to the voices of participants and spectators. These noise levels are quite varied and dependent on the specific activity. Larger crowds will tend to generate higher noise levels. Important game (e.g., championship vs. preseason) with close scores will tend to result in higher noise levels. Any amplified speech (e.g. bull-horns) or music could generate substantial noise levels. Noise levels at sensitive receptors will be dependant on their location relative to activity areas at the park and any intervening terrain or walls that act as sound barriers. Section 4-6-7 of the County of Orange Noise Ordinance specifically exempts "Activities conducted on any park or playground, provided such park or playground is owned and operated by a public entity." The park will be publicly owned and operated and designed to County of Orange standards. Therefore noise generated by the park will comply with the County's Noise Ordinance and not result in a significant noise impact.

#### 2.4.2.4 Conclusion

Application of County of Orange Standard Condition N08 will ensure that commercial uses and the golf course facilities proposed by the project will not significantly impact any proposed residential uses. This condition will require a specific noise study for any commercial uses (including golf course facilities) that are deemed to have the potential to generate noise levels in excess of the Noise Ordinance. Measures that may be required to meet the Noise Ordinance include additional setbacks through site design, noise barriers, mufflers/silencers, and/or operational restrictions. If a specific use cannot show that it will meet the provisions of the Noise Ordinance, then it will not be allowed.

Activities at the sports park will comply with the County of Orange Noise Ordinance and not result in a significant noise impact.

### *2.4.3 Aircraft Noise*

As discussed in Section 1.6 the project site is not located in the immediate vicinity of any airfields and is not directly impacted by noise generated from any airport operations. Enroute aircraft overfly the project site and are audible at times. These conditions are not expected to change in the future. Because of the relatively low aircraft noise levels generated on the project site and the limited time that this occurs, aircraft do not generate noise levels that even begin to approach the County's noise standards presented in Table 1.

There is a private heliport located at the RMV headquarters within the project boundaries. Currently, the heliport is used infrequently, approximately four times a year, for aerial tours of the Ranch or other RMV business. Typically, operations do not occur during the nighttime hours. This is not projected to change in the future. Areas around the heliport will exposed to substantial single event noise levels as helicopters arrive and depart the heliport. These levels could be high enough to interfere with speech in the immediate area around the heliport. However, because of the infrequency of operations, noise levels in the vicinity of the heliport will not even begin to approach the County's noise standards presented in Table 1.

The project site is not significantly impacted by aircraft noise.

### *2.4.4 Camp Pendleton Marine Corps Base*

Homes planned for Planning Area 8 would be the most impacted by noise generated from Activities at Camp Pendleton. As discussed in Section 1.3.4, noise levels from Camp Pendleton are not expected to exceed the County's 65 CNEL outdoor residential noise standard within the Project. This would include Planning Area 8. However, noise from activities on the base, aircraft and artillery firings, would be audible in Planning Area 8.

Planning Area 8 is currently leased by Northrop Grumman Space Technology. The lease for this area lasts until 2018 and will preclude development of Planning Area 8 before this time. Activity at Camp Pendleton and their noise impacts on the project may be substantially different than it is today and, as discussed in Section 1.3.4, the existing noise impacts are not quantifiable. The Land Use section of the EIR provides additional analysis of the potential impacts of MCB Camp Pendleton activities on the project. Two mitigation measures MM 4.1-1 and 4.1-2 are called for and require a buyers notification program for residents of Planning Area 8 and use of the most current RCUZ at the time of Area Plan approval to ensure that noise levels in Planning

Area 8 do not exceed the appropriate noise standards. With these mitigation measures, Planning Area 8 will not be significantly impacted by noise from activities at Camp Pendleton Marine Corps Base.

## 2.5 Project Alternatives

### *2.5.1 Alternative B-4R*

Alternative B-4R would develop 6,589 acres of the project site with 10,800 dwelling units, 820,000 square feet of urban activity center, 450,000 square feet of neighborhood center, 1.43 million square feet of Business Park and a 20-acre Golf Resort. The traffic study prepared for the project projected average daily traffic volumes by roadway link for this alternative under several different roadway scenarios. Therefore, traffic noise impacts are quantitatively analyzed. Other potential noise impacts are measured relative to the proposed project.

#### 2.5.1.1 Long Term Off-Site Impacts

Development of Alternative B-4R would develop approximately 1,100 fewer acres than the proposed project and construct 3,200 fewer dwelling units and 2.5 million fewer square feet of commercial uses. To the extent that less construction would be required for development of Alternative B-4R, noise impacts due to construction would be reduced somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Alternative B-4R. This analysis showed that development of Alternative B-4R would not cause any significant off-site traffic noise impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from Alternative B-4R. This analysis showed that development of Alternative B-4R would not cause any cumulative significant off-site traffic noise impacts. In general, Alternative B-4R, because it generates less traffic than the Project, would generate lower noise levels than the Project. However, traffic noise level changes would not be substantially different than with the proposed project.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-4R would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-4R is roughly the same as for the Project. Alternative B-4R would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.1.2 Long Term On-Site Impacts

The distances to the future 60, 65 and 70 CNEL contours for the roadways impacting Alternative B-4R are presented in Table 17. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix.

## Table 17
## Future Traffic Noise Levels Impacting Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **SR-241** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 73.6 | 174 | 375 | 808 |
| Crown Valley Pkwy. to C St. | 73.6 | 174 | 375 | 808 |
| C St. to Ortega Hwy. | 72.9 | 155 | 335 | 722 |
| Ortega Hwy. to Avnda. Pico | 72.8 | 153 | 329 | 709 |
| South of Avnda. Pico | 71.7 | 130 | 280 | 603 |
| **SR-74 (Ortega Hwy.)** | | | | |
| West of La Pata | 72.2 | 140 | 301 | 650 |
| East of La Pata | 61.0 | RW | 55 | 117 |
| East of C St. | 58.5 | RW | RW | 80 |
| East of New Ortega Hwy. | 66.7 | 60 | 129 | 278 |
| **New Ortega Hwy.** | | | | |
| Antonio Pkwy. to A St. | 68.4 | 78 | 168 | 362 |
| A St. to C St. | 68.5 | 79 | 171 | 368 |
| C St. to F St. | 66.0 | 54 | 117 | 252 |
| F St. to SR-74 | 66.5 | 59 | 126 | 272 |
| **Avenida Pico** | | | | |
| East of SR-241 | 66.6 | 60 | 129 | 277 |
| **Antonio Parkway** | | | | |
| North of New Ortega Hwy. | 69.6 | 93 | 201 | 433 |
| North of SR-74 | 70.4 | 106 | 228 | 492 |
| **La Pata** | | | | |
| South of Ortega Hwy. | 66.8 | 62 | 133 | 286 |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Hwy. | 59.0 | RW | 40 | 86 |
| **F Street** | | | | |
| Oso Pkwy. to C St. | 66.7 | 60 | 129 | 278 |
| C St. to New Ortega Hwy. | 64.4 | 42 | 91 | 195 |
| **C Street** | | | | |
| Northeast of F St. | 61.1 | RW | 55 | 118 |
| North of New Ortega Hwy. | 63.8 | RW | 83 | 179 |
| New Ortega Hwy. to Ortega Hwy. | 66.0 | 54 | 117 | 252 |
| Ortega Hwy. to Talega | 64.8 | 45 | 97 | 210 |
| South of Talega | 62.0 | RW | 64 | 137 |
| **Talega** | | | | |
| South of C St. | 59.0 | RW | 40 | 86 |

1. From Roadway Centerline.

RW-Contour does not extend beyond roadway right-of-way.

Table 18 assesses the traffic noise impacts based on the traffic noise level information presented above. At this time, detailed plans showing specific locations of uses for Alternative B-4R have

not been developed. Therefore, the analysis presented in Table 18 assumes a worst-case situation where development is located at the edge of the roadway right-of-way.

Table 18 presents the same information for Alternative B-4R that Table 16 presented for the proposed project in Section 2.4.1. The same assumptions and requirements described in the description of Table 16 apply to Table 18. Refer to the description of the contents Table 16, presented prior to the table in Section 2.4.1, for an understanding of the contents of Table 18.

**Table 18**
**Alternative B-4R Traffic Noise Impacts Analysis**

| Roadway Segment | Unmitigated Outdoor Noise Level | Barrier Height* for Residential Area | Building Noise Reduction Required to Meet Interior Noise Standard | | |
|---|---|---|---|---|---|
| | | | Residential | Office | Retail |
| **SR-241** | | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***74*** | 9.0 | ***27*** | ***22*** | 17 |
| Crown Valley Pkwy. to C St. | ***74*** | 9.0 | ***27*** | ***22*** | 17 |
| C St. to Ortega Hwy. | ***73*** | 8.5 | ***27*** | ***22*** | 17 |
| Ortega Hwy. to Avnda. Pico | ***73*** | 8.5 | ***27*** | ***22*** | 17 |
| South of Avnda. Pico | ***72*** | 7.5 | ***26*** | ***21*** | 16 |
| **SR-74 (Ortega Hwy.)** | | | | | |
| West of La Pata | ***77*** | 11.0 | ***30*** | ***25*** | ***20*** |
| East of La Pata | ***68*** | 7.0 | ***20*** | 15 | 10 |
| East of C St. | ***65*** | 5.5 | 17 | 12 | 7 |
| East of New Ortega Hwy. | ***73*** | 8.5 | ***26*** | ***21*** | 16 |
| **New Ortega Hwy.** | | | | | |
| Antonio Pkwy. to A St. | ***73*** | 8.0 | ***26*** | ***21*** | 16 |
| A St. to C St. | ***73*** | 8.0 | ***26*** | ***21*** | 16 |
| C St. to F St. | ***71*** | 7.0 | ***23*** | 18 | 13 |
| F St. to SR-74 | ***71*** | 7.5 | ***24*** | 19 | 14 |
| **Avenida Pico** | | | | | |
| East of SR-241 | ***71*** | 7.0 | ***24*** | 19 | 14 |
| **Antonio Parkway** | | | | | |
| North of New Ortega Hwy. | ***74*** | 8.5 | ***27*** | ***22*** | 17 |
| North of SR-74 | ***75*** | 9.0 | ***28*** | ***23*** | 18 |
| **La Pata** | | | | | |
| South of Ortega Hwy. | ***73*** | 7.5 | ***25*** | ***20*** | 15 |
| **A Street** | | | | | |
| South of Oso Pkwy. | ***66*** | 5.0 | 18 | 13 | 8 |
| North of New Ortega Hwy. | ***66*** | 5.0 | 18 | 13 | 8 |

*Maximum Noise Barrier Height to Reduce Outdoor Noise Levels to Below 65 CNEL. Note that the analysis assumes that the barrier can be located at the highest point between the roadway and outdoor living area. If this cannot be accommodated a higher barrier may be required.

**Table 18 (Continued)**
**Alternative B-4R Traffic Noise Impacts Analysis**

| Roadway Segment | Unmitigated Outdoor Noise Level | Barrier Height* for Residential Area | Building Noise Reduction Required to Meet Interior Noise Standard | | |
|---|---|---|---|---|---|
| | | | Residential | Office | Retail |
| **F Street** | | | | | |
| Oso Pkwy. to C St. | ***74*** | 8.0 | ***26*** | ***21*** | 16 |
| C St. to New Ortega Hwy. | ***71*** | 7.0 | ***23*** | 18 | 13 |
| **C Street** | | | | | |
| Northeast of F St. | ***69*** | 6.5 | ***21*** | 16 | 11 |
| North of New Ortega Hwy. | ***72*** | 7.0 | ***23*** | 18 | 13 |
| New Ortega Hwy. to Ortega Hwy. | ***74*** | 8.5 | ***26*** | ***21*** | 16 |
| Ortega Hwy. to Talega | ***73*** | 8.0 | ***24*** | 19 | 14 |
| South of Talega | ***70*** | 7.0 | ***22*** | 17 | 12 |
| **Talega** | | | | | |
| South of C St. | ***66*** | 5.0 | 18 | 13 | 8 |

*Maximum Noise Barrier Height to Reduce Outdoor Noise Levels to Below 65 CNEL. Note that the analysis assumes that the barrier can be located at the highest point between the roadway and outdoor living area. If this cannot be accommodated a higher barrier may be required.

Table 18 shows that maximum noise barrier heights between 5 and 11 feet will reduce noise levels along all roadways within the Alternative B-4R to below the County's outdoor noise standard of 65 CNEL. Greater setbacks and elevation differences between the roadway and outdoor living areas will result in lower wall heights. Further, Table 15 shows a maximum outdoor-to-indoor noise reduction of 30 dB is required to achieve the County's interior noise standards. As discussed above, noise reductions of less than 12 dB are achieved with standard construction and open windows. Noise reductions between 12 and 20 dB are achieved with standard construction and closed windows. Noise reductions between 20 and 26 dB may require upgraded windows to meet the interior noise standard. Noise reductions between 26 and 32 dB typically require upgraded windows and may require thicker walls and upgraded roof/ceiling assemblies, but are achievable. Noise reductions in excess of 32 dB are extremely difficult to achieve.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

Alternative B-4R would include the same components as the Project that have the potential to result in a significant noise impact to the residential uses proposed by the project from other activities proposed by the project as discussed in Section 2.4.2. These uses include commercial

uses, a golf course and a Sports Park. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial uses and the golf course facilities proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.2 Alternative B-5*

Alternative B-5 would develop approximately 7,170 acres of the project site with 14,000 dwelling units, 1.14 million square feet of urban activity center, 400,000 square feet of Neighborhood Center, and 4.04 million square feet of business park. The traffic study prepared for the project projected average daily traffic volumes by roadway link for this alternative under several different roadway scenarios. Therefore, traffic noise impacts are quantitatively analyzed. Other potential noise impacts are measured relative to the proposed project.

#### 2.5.2.1 Long Term Off-Site Impacts

Development of Alternative B-5 would develop approximately 5240 fewer acres than the proposed project and construct approximately 380,000 more square feet of commercial uses. To the extent that less grading would be required for development of Alternative B-5, noise impacts due to construction would be reduced somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Alternative B-5. This analysis showed that development of Alternative B-5 would not cause any significant off-site traffic noise impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from Alternative B-5. This analysis found that residences along Oso Parkway east of Antonio Parkway would be subjected to a cumulative noise level increase of greater than 3 dB due to the development of Alternative B-5 and experience a resulting future worst-case traffic noise level of greater than the County's 65 CNEL standard. Additionally, Alternative B-5 considerably contributes to this increase. Specifically, this occurs at homes backing up to Oso Parkway along Acanthus and Radiance Lane. Therefore, these homes would be significantly cumulatively impacted by traffic noise with the development Alternative B-5. All other homes along this segment of Oso Parkway are projected to experience future worst-case noise levels of less than 65 CNEL and would not be significantly impacted.

A detailed analysis of the performance of the sound walls found that some of the homes backing up to Oso Parkway along Acanthus and Radiance Lane are projected to be exposed to future traffic noise levels in excess of 65 CNEL with the development of Alternative B-5. All of the other existing sound walls are projected to reduce future traffic noise levels to below 65 CNEL. Residences along Oso Parkway east of Antonio Parkway would be subjected to a cumulative noise level increase of greater than 3 dB due to the development of Alternative B-5 and experience a resulting future worst-case traffic noise level of greater than the County's 65 CNEL standard. Additionally, Alternative B-5 considerably contributes to this increase. Therefore, these homes would be significantly cumulatively impacted by traffic noise with the development Alternative B-5.

Alternative B-5 is projected to generate about the same amount of traffic as the Project.

However, most of the development with Alternative B-5 is located in the northerly section of the site where the Project is more distributed. Therefore, more of the project traffic will utilize roadways around north end of the project. Generally, traffic noise level increases on roadways around the northern portion of the site would be greater than the Project and traffic noise level increases would be less on roadways around the southern portion of the site.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-5 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-5 is roughly the same as for the Project. Alternative B-5 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.2.2 Long Term On-Site Impacts

The distances to the future 60, 65 and 70 CNEL contours for the roadways impacting Alternative B-5 are presented in Table 19. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix.

**Table 19**
**Future Traffic Noise Levels Impacting Alternative B-5**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **SR-241** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 74.3 | 194 | 418 | 901 |
| Crown Valley Pkwy. to C St. | 74.3 | 194 | 418 | 901 |
| C St. to Ortega Hwy. | 73.0 | 158 | 341 | 734 |
| Ortega Hwy. to Avnda. Pico | 72.4 | 144 | 311 | 670 |
| South of Avnda. Pico | 71.5 | 127 | 273 | 589 |
| **SR-74 (Ortega Hwy.)** | | | | |
| West of La Pata | 72.8 | 154 | 332 | 715 |
| East of La Pata | 64.1 | 40 | 87 | 186 |
| East of C St. | 60.3 | RW | 49 | 105 |
| East of New Ortega Hwy. | 67.0 | 63 | 136 | 292 |
| **New Ortega Hwy.** | | | | |
| Antonio Pkwy. to A St. | 69.4 | 91 | 196 | 421 |
| A St. to C St. | 69.6 | 94 | 203 | 437 |
| C St. to F St. | 67.8 | 72 | 155 | 333 |
| F St. to SR-74 | 68.4 | 78 | 168 | 362 |
| **Avenida Pico** | | | | |
| East of SR-241 | 56.2 | RW | RW | 56 |

1. From Roadway Centerline.
RW-Contour does not extend beyond roadway right-of-way.

**Table 19 (Continued)**
**Future Traffic Noise Levels Impacting Alternative B-5**

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Antonio Parkway** | | | | |
| North of New Ortega Hwy. | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 115 | 248 | 535 |
| **La Pata** | | | | |
| South of Ortega Hwy. | 67.2 | 65 | 140 | 302 |
| **A Street** | | | | |
| South of Oso Pkwy. | 62.0 | RW | 64 | 137 |
| North of New Ortega Hwy. | 61.6 | RW | 59 | 128 |
| **F Street** | | | | |
| Oso Pkwy. to C St. | 67.8 | 72 | 155 | 333 |
| C St. to New Ortega Hwy. | 65.7 | 51 | 111 | 239 |
| **C Street** | | | | |
| Northeast of F St. | 66.2 | 56 | 120 | 259 |
| North of New Ortega Hwy. | 65.5 | 50 | 108 | 232 |
| New Ortega Hwy. to Ortega Hwy. | 65.5 | 50 | 108 | 232 |
| Ortega Hwy. to Talega | 62.8 | RW | 72 | 155 |
| South of Talega | 61.1 | RW | 55 | 118 |
| **Talega** | | | | |
| South of C St. | 59.8 | RW | 45 | 97 |

1. From Roadway Centerline.
RW-Contour does not extend beyond roadway right-of-way.

Table 19 assesses the traffic noise impacts based on the traffic noise level information presented above. At this time, detailed plans showing specific locations of uses for Alternative B-5 have not been developed. Therefore, the analysis presented in Table 17 assumes a worst-case situation where development is located at the edge of the roadway right-of-way.

Table 20 presents the same information for Alternative B-5 that Table 16 presented for the Project in Section 2.4.1. The same assumptions and requirements described in the description of Table 26 apply to Table 20. Refer to the description of the contents Table 16, presented prior to the table, for an understanding of the contents of Table 20.

## Table 20
## Alternative B-5 Traffic Noise Impacts Analysis

| Roadway Segment | Unmitigated Outdoor Noise Level | Barrier Height* for Residential Area | Building Noise Reduction Required to Meet Interior Noise Standard | | |
|---|---|---|---|---|---|
| | | | Residential | Office | Retail |
| **SR-241** | | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***74*** | 9.0 | ***28*** | ***23*** | 18 |
| Crown Valley Pkwy. to C St. | ***74*** | 9.0 | ***28*** | ***23*** | 18 |
| C St. to Ortega Hwy. | ***73*** | 8.5 | ***27*** | ***22*** | 17 |
| Ortega Hwy. to Avnda. Pico | ***72*** | 8.5 | ***26*** | ***21*** | 16 |
| South of Avnda. Pico | ***72*** | 7.5 | ***25*** | ***20*** | 15 |
| **SR-74 (Ortega Hwy.)** | | | | | |
| West of La Pata | ***77*** | 11.0 | ***30*** | ***25*** | ***20*** |
| East of La Pata | ***71*** | 7.0 | ***23*** | 18 | 13 |
| East of C St. | ***67*** | 5.0 | 19 | 14 | 9 |
| East of New Ortega Hwy. | ***74*** | 8.5 | ***26*** | ***21*** | 16 |
| **New Ortega Hwy.** | | | | | |
| Antonio Pkwy. to A St. | ***74*** | 8.0 | ***27*** | ***22*** | 17 |
| A St. to C St. | ***74*** | 8.0 | ***27*** | ***22*** | 17 |
| C St. to F St. | ***72*** | 7.0 | ***25*** | ***20*** | 15 |
| F St. to SR-74 | ***73*** | 7.5 | ***26*** | ***21*** | 16 |
| **Avenida Pico** | | | | | |
| East of SR-241 | 61 | 7.0 | 14 | 9 | 4 |
| **Antonio Parkway** | | | | | |
| North of New Ortega Hwy. | ***75*** | 8.5 | ***27*** | ***22*** | 17 |
| North of SR-74 | ***75*** | 9.0 | ***28*** | ***23*** | 18 |
| **La Pata** | | | | | |
| South of Ortega Hwy. | ***73*** | 7.5 | ***26*** | ***21*** | 16 |
| **A Street** | | | | | |
| South of Oso Pkwy. | ***69*** | 5.0 | ***21*** | 16 | 11 |
| North of New Ortega Hwy. | ***68*** | 5.0 | ***20*** | 15 | 10 |
| **F Street** | | | | | |
| Oso Pkwy. to C St. | ***75*** | 8.0 | ***27*** | ***22*** | 17 |
| C St. to New Ortega Hwy. | ***73*** | 7.0 | ***25*** | ***20*** | 15 |
| **C Street** | | | | | |
| Northeast of F St. | ***74*** | 6.5 | ***26*** | ***21*** | 16 |
| North of New Ortega Hwy. | ***73*** | 7.0 | ***25*** | ***20*** | 15 |
| New Ortega Hwy. to Ortega Hwy. | ***73*** | 8.5 | ***25*** | ***20*** | 15 |
| Ortega Hwy. to Talega | ***71*** | 8.0 | ***22*** | 17 | 12 |
| South of Talega | ***69*** | 7.0 | ***21*** | 16 | 11 |
| **Talega** | | | | | |
| South of C St. | ***67*** | 5.0 | 19 | 14 | 9 |

*Maximum Noise Barrier Height to Reduce Outdoor Noise Levels to Below 65 CNEL. Note that the analysis assumes that the barrier can be located at the highest point between the roadway and outdoor living area. If this cannot be accommodated a higher barrier may be required.

Table 20 shows that maximum noise barrier heights between 5 and 11 feet will reduce noise levels along all roadways within the Alternative B-5 to below the County's outdoor noise standard of 65 CNEL. Greater setbacks and elevation differences between the roadway and outdoor living areas will result in lower wall heights. Further, Table 20 shows a maximum outdoor-to-indoor noise reduction of 30 dB is required to achieve the County's interior noise standards. As discussed above, noise reductions of less than 12 dB are achieved with standard construction and open windows. Noise reductions between 12 and 20 dB are achieved with standard construction and closed windows. Noise reductions between 20 and 26 dB may require upgraded windows to meet the interior noise standard. Noise reductions between 26 and 32 dB typically require upgraded windows and may require thicker walls and upgraded roof/ceiling assemblies, but are achievable. Noise reductions in excess of 32 dB are extremely difficult to achieve.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

Alternative B-5 does not include any development in the southern portion of the project site near Camp Pendleton Marine Corps Base. Therefore, Alternative B-5 would not be impacted by noise generated by activities at the base.

Alternative B-5 does not include the development of any golf courses. Therefore the potential impacts from Golf Course operations would not be realized with Alternative B-5. Additionally, a Sports Park is not specifically identified in the design of Alternative B-5. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review. Alternative B-5 does include development of commercial uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial uses a proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.3 Alternative B-6*

Alternative B-6 would develop approximately 6,740 acres of the project site with 14,000 dwelling units, 1.04 million square feet of urban activity center, 500,000 square feet of Neighborhood Center, and 4.04 million square feet of business park. The traffic study prepared for the project did not project average daily traffic volumes by roadway link for this alternative. Therefore, traffic noise impacts are not quantitatively analyzed. Potential noise impacts are measured relative to the proposed project.

#### 2.5.3.1 Long Term Off-Site Impacts

Development of Alternative B-6 would develop approximately 954 fewer acres than the proposed project and construct approximately 380,000 more square feet of commercial uses. To the extent that less grading would be required for development of Alternative B-6, noise impacts due to construction would be reduced somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

The traffic study prepared for the project did estimate the total daily trips generated by Alternative B-6. The uses proposed for Alternative B-6 are projected to generate 183,906 daily vehicle trips. This is 568 trips, or 0.31% greater than the Project. The traffic study indicates that the distribution of traffic for Alternative B-6 would be substantially similar to the Project. Therefore, traffic noise impacts with Alternative B-6 would be effectively the same as the Project. The small increase in traffic with Alternative B-6 would not affect predicted noise levels.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Project. This analysis showed that development the Project would not cause any significant off-site traffic noise impacts. Therefore, the development of Alternative B-6 would also not be expected to result in any significant off-site impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from the Project. This analysis showed that there would be no significant cumulative off-site traffic noise impacts with the development of the Project. Therefore, no cumulative off-site traffic noise impacts would be expected to occur with the development of Alternative B-6.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-6 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-6 is roughly the same as for the Project. Alternative B-6 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.3.2 Long Term On-Site Impacts

As discussed above, average daily traffic volumes with Alternative B-6 would be substantially similar to those generated by the Project. Therefore, traffic noise levels impacting Alternative B-6 would be similar to those impacting the Project. The analysis presented in Section 2.4.1 showed that traffic noise levels with the project would not exceed the County of Orange Noise

Standards discussed in Section 1.3.1 with appropriate noise barriers and building designs. This would be true for Alternative B-6 also.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

Alternative B-6 does not include the development of any golf courses. Therefore the potential impacts from Golf Course operations would not be realized with Alternative B-6. Additionally, a Sports Park is not specifically identified in the design of Alternative B-6. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review. Alternative B-6 does include development of commercial uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial uses a proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.4 Alternative B-8*

Alternative B-8 would develop approximately 3,680 acres of the project site with 8,400 dwelling units, 915,000 square feet of urban activity center, 200,000 square feet of Neighborhood Center, and 1.373 million square feet of business park. The traffic study prepared for the project did not project average daily traffic volumes by roadway link for this alternative. Therefore, traffic noise impacts are not quantitatively analyzed. Potential noise impacts are measured relative to the proposed project.

#### 2.5.4.1 Long Term Off-Site Impacts

Development of Alternative B-8 would develop approximately 4,014 fewer acres than the proposed project and construct approximately 2.712 million fewer square feet of commercial uses. To the extent that less construction would be required for development of Alternative B-8, noise impacts due to construction would be reduced somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

The traffic study prepared for the project did estimate the total daily trips generated by Alternative B-8. The uses proposed for Alternative B-8 are projected to generate 126,925 daily vehicle trips. This is 56,413 trips, or 30.8% less than the Project. The traffic study indicates that the distribution of traffic for Alternative B-6 would be substantially similar to the Alternative B-4R except to the south were it is similar to Alternative B-5. Alternative B-6 is projected to generate 10,919 fewer daily vehicle trips than Alternative B-4R. Traffic noise impacts with Alternative B-6 would be expected to be somewhat less than Alternative B-4R for most of the area around the project and similar to Alternative B-5 to the south.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Alternatives B-4R and B-5. This analysis showed that development the Alternatives B-4R and B-5 would not cause any significant off-site traffic noise impacts. Therefore, the development of Alternative B-8 would also not be expected to result in any significant off-site impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from the Alternatives B-4R and B-5. This analysis showed that there would be no significant cumulative off-site traffic noise impacts with the development of Alternative B-4R. Alternative B-5 would result in an off site impact along Oso Parkway east of Antonio Parkway. However, this is not south of the project and therefore not representative of Alternative B-8. Therefore, no cumulative off-site traffic noise impacts would be expected to occur with the development of Alternative B-8.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-8 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-8 is roughly the same as for the Project. Alternative B-8 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.4.2 Long Term On-Site Impacts

As discussed above, average daily traffic volumes with Alternative B-8 would be substantially similar to those with the Alternative B-4R for most of the site and similar to Alternative B-5 near the southern end of the site. Therefore, traffic noise levels impacting Alternative B-8 would be similar to those impacting the Alternative B-4R for most of the site and Alternative B-5 to the south.. The analysis presented in Sections 2.5.1.1 and 2.5.2.1 showed that traffic noise levels with the project would not exceed the County of Orange Noise Standards discussed in Section 1.3.1 with appropriate noise barriers and building designs under Alternatives B-4R and B-5. This would be true for Alternative B-8 also.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

Alternative B-8 does not include any development in the southern portion of the project site near Camp Pendleton Marine Corps Base. Therefore, Alternative B-8 would not be impacted by noise generated by activities at the base.

Alternative B-8 does not include the development of any golf courses. Therefore the potential impacts from Golf Course operations would not be realized with Alternative B-8. Additionally, a Sports Park is not specifically identified in the design of Alternative B-8. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review.

Alternative B-8 does include development of commercial uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial uses a proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.5 Alternative B-9*

Alternative B-9 would develop approximately 6,582 acres of the site with 13,600 dwelling units, 1.04 million square feet of urban activity center, 500,000 square feet of Neighborhood Center, and 3.66 million square feet of business park. The traffic study prepared for the project did not project average daily traffic volumes by roadway link for this alternative. Therefore, traffic noise impacts are not quantitatively analyzed. Potential noise impacts are measured relative to the proposed project.

#### 2.5.5.1 Long Term Off-Site Impacts

Development of Alternative B-9 would develop approximately 1,112 fewer acres than the proposed project and construct 400 fewer dwelling units. To the extent that less construction would be required for development of Alternative B-9, noise impacts due to construction would be reduced somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

The traffic study prepared for the project did not estimate the total daily trips generated by Alternative B-9. However, based on the proposed development described above, Alternative B-9 would be expected to generate slightly lower traffic volumes as the proposed project. Therefore, traffic noise impacts with Alternative B-9 would be effectively the same as the Project. The small decrease in traffic with Alternative B-6 would not affect predicted noise levels.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Project. This analysis showed that development the Project would not cause any significant off-site traffic noise impacts. Therefore, the development of Alternative B-9 would also not be expected to result in any significant off-site impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from the Project. This analysis showed that there would be no significant cumulative off-site traffic noise impacts with the development of the Project. Therefore, no cumulative off-site traffic noise impacts would be expected to occur with the development of Alternative B-9.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-9 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-9 is roughly the same as for the Project. Alternative B-9 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.5.2 Long Term On-Site Impacts

As discussed above, average daily traffic volumes with Alternative B-9 would be substantially similar to those generated by the Project. Therefore, traffic noise levels impacting Alternative B-

9 would be similar to those impacting the Project. The analysis presented in Section 2.4.1 showed that traffic noise levels with the project would not exceed the County of Orange Noise Standards discussed in Section 1.3.1 with appropriate noise barriers and building designs. This would be true for Alternative B-9 also.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

A Sports Park is not specifically identified in the design of Alternative B-9. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review. Alternative B-9 does include development of commercial and golf course uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial uses a proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.6 Alternative B-10*

Alternative B-10 would develop approximately 7,683 acres of the project site with 14,450 dwelling units, 1.08 million square feet of urban activity center, 550,000 square feet of Neighborhood Center, and 3.965 million square feet of business park. The traffic study prepared for the project did not project average daily traffic volumes by roadway link for this alternative. Therefore, traffic noise impacts are not quantitatively analyzed. Potential noise impacts are measured relative to the proposed project.

#### 2.5.6.1 Long Term Off-Site Impacts

Development of Alternative B-10 would develop approximately 10 fewer acres than the proposed project and construct approximately 395,000 more square feet of commercial uses and 450 more dwelling units. To the extent that less grading would be required for development of Alternative B-10, noise impacts due to grading would be reduced somewhat. The increased development (square feet of commercial uses and dwelling unit) would increase the impacts due to structure activities somewhat but grading activities represent the most significant construction activity in terms of noise. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

The traffic study prepared for the project estimated the total daily trips generated by Alternative B-10. The uses proposed for Alternative B-10 are projected to generate 183,360 daily vehicle trips. This is 22 trips, or 0.01% greater than the Project. The traffic study indicates that the distribution of traffic for Alternative B-10 would be substantially similar to the Project. Therefore, traffic noise impacts with Alternative B-10 would be effectively the same as the Project. The small increase in traffic with Alternative B-10 would not affect predicted noise

levels.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Project. This analysis showed that development the Project would not cause any significant off-site traffic noise impacts. Therefore, the development of Alternative B-10 would also not be expected to result in any significant off-site impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from the Project. This analysis showed that there would be no significant cumulative off-site traffic noise impacts with the development of the Project. Therefore, no cumulative off-site traffic noise impacts would be expected to occur with the development of Alternative B-10.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-10 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-10 is roughly the same as for the Project. Alternative B-6 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.6.2 Long Term On-Site Impacts

As discussed above, average daily traffic volumes with Alternative B-10 would be substantially similar to those generated by the Project. Therefore, traffic noise levels impacting Alternative B-10 would be similar to those impacting the Project. The analysis presented in Section 2.4.1 showed that traffic noise levels with the project would not exceed the County of Orange Noise Standards discussed in Section 1.3.1 with appropriate noise barriers and building designs. This would be true for Alternative B-10 also.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

A Sports Park is not specifically identified in the design of Alternative B-10. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review. Alternative B-10 does include development of commercial uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial and golf course uses proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

### *2.5.7 Alternative B-11*

Alternative B-11 would develop approximately 8,621 acres of the project site with 19,200 dwelling units, 1.28 million square feet of urban activity center, 600,000 square feet of Neighborhood Center, and 1.76 million square feet of business park. The traffic study prepared for the project did not project average daily traffic volumes by roadway link for this alternative. Therefore, traffic noise impacts are not quantitatively analyzed. Potential noise impacts are measured relative to the proposed project.

#### 2.5.7.1 Long Term Off-Site Impacts

Development of Alternative B-110 would develop approximately 927 more acres than the proposed project and construct approximately 1.56 fewer million square feet of commercial uses and 520 more dwelling units. To the extent that more grading would be required for development of Alternative B-11, noise impacts due to grading would be increased somewhat. Construction activities would still be required to comply with the County of Orange Standard Condition N10 and would not result in a significant noise impact.

The traffic study prepared for the project estimated the total daily trips generated by Alternative B-11. The uses proposed for Alternative B-11 are projected to generate 191,911 daily vehicle trips. This is 8,573 trips, or 4.68% greater than the Project. The traffic study indicates that the distribution of traffic for Alternative B-11 would be substantially similar to the Project. While Alternative B-11 would generate more vehicle trips than the Project, traffic noise levels would not increase by more than 0.2 dB over those with the project. Therefore, traffic noise impacts with Alternative B-11 would be effectively the same as the Project. The small increase in traffic noise levels with Alternative B-11 would not affect predicted traffic noise impacts.

Section 2.3.1 analyzed the potential off-site traffic noise impacts from Project. This analysis showed that development the Project would not cause any significant off-site traffic noise impacts. Therefore, the development of Alternative B-11 would also not be expected to result in any significant off-site impacts. Section 2.3.2 analyzed the potential cumulative off-site traffic noise impacts from the Project. This analysis showed that there would be no significant cumulative off-site traffic noise impacts with the development of the Project. Therefore, no cumulative off-site traffic noise impacts would be expected to occur with the development of Alternative B-11.

Section 2.3.4 analyzed the potential off-site noise impacts from on-site activities due to the Project. This analysis showed that the Project would not result in a significant noise impact due to on-site activities. Areas near existing development that would be developed for Alternative B-11 would occur in generally the same areas as the Project. Therefore, the potential for noise impacts from on-site activities for Alternative B-11 is roughly the same as for the Project. Alternative B-6 would not be expected to result in any significant off-site noise impacts from on-site activities.

#### 2.5.7.2 Long Term On-Site Impacts

As discussed above, average daily traffic volumes with Alternative B-11 would be substantially similar to those generated by the Project. Therefore, traffic noise levels impacting Alternative B-11 would be similar to those impacting the Project. The analysis presented in Section 2.4.1

showed that traffic noise levels with the project would not exceed the County of Orange Noise Standards discussed in Section 1.3.1 with appropriate noise barriers and building designs. This would be true for Alternative B-11 as well.

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. This condition requires acoustical studies that show compliance with the residential outdoor noise standard to be completed prior to issuance of grading permits. Acoustical studies that demonstrate compliance with the residential interior noise standard are required prior to issuance of building permits. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. Acoustical studies that demonstrate compliance with the applicable interior noise standards are required prior to issuance of building permits.

A Sports Park is not specifically identified in the design of Alternative B-11. However, this does not eliminate the potential for a similar facility during subsequent Area Plan Review. Alternative B-11 does include development of commercial uses that could be located adjacent to residential uses. As discussed in Section 2.4.2, the application of County of Orange Standard Condition N08 will ensure that commercial and golf course uses proposed by the project will not significantly impact any proposed residential uses. The Sports Park is specifically exempted from the Noise Ordinance and will not result in a significant noise impact.

# 3.0 MITIGATION MEASURES

## 3.1 Temporary Impacts

It is possible that at some point during construction, construction equipment will generate noise levels in excess of the Noise Ordinance limits. However, the County of Orange Noise Ordinance exempts noise generated by construction from complying with the Noise Ordinance limits during the hours between 7 a.m. and 8 p.m. on weekdays and Saturdays. This exemption does not include Sundays and holidays. No noise generating activities are expected outside of these hours. In addition, the County of Orange Standard Condition N10 requires compliance with the Noise Ordinance, the use of mufflers, and locating stock piles away from residential areas. Therefore, the construction of the project will not result in a significant noise impact.

## 3.2 Long Term Off-Site Impacts

The analysis shows that the development of the proposed project and Alternative B-4R would not result in any significant impacts due to traffic noise increases. Therefore, no mitigation is required for the proposed project or Alternative B-4R.

The analysis presented in Section 2.3.2 shows that cumulative traffic noise increases with Alternative B-5 would significantly impact existing residences along Oso Parkway East of Antonio Parkway (specifically homes that back up to Oso Parkway along Acanthus and Radiance Lane) and the the traffic generated by Alternative B-5 would considerably contribute to this impact.

Design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most efficient method of reducing outdoor noise exposure levels. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is broken by the barrier. The greater the distance the sound must travel around the barrier to reach the receiver, the greater the noise reduction of the barrier. A preliminary analysis indicates that walls with heights of 7 feet or less would be required along Oso Parkway and walls with heights of 9 feet or less would be required along SR-74 (Ortega Highway). These wall heights assume that the wall is constructed at the highest point between the roadway and the residence.

<u>If Alternative B-5 is selected, prior to issuance of Certificates of Occupancy for any portion of the project, where feasible, a noise barrier that will reduce future worst-case with project noise levels to below 65 CNEL shall be constructed for the homes backing up to Oso Parkway along Acanthus and Radiance Lane. Prior to construction of the wall, a detailed study should be performed by a qualified acoustical consultant to determine the specific height and location of the noise barrier required to reduce future worst-case with project noise levels to below 65 CNEL. This study shall be submitted to and approved by the County prior to construction of the noise barrier.</u>

The impacted residences are located at elevations above the roadway. In these cases the most practical place to locate a noise barrier is at the edge of the residential pad. In fact, in some areas it would be infeasible to construct an effective noise barrier at the bottom of the slope. In some cases the slope between the road and the homes is publicly owned and in other cases it is

privately owned. Building barriers on private property would require the consent of the property owner, which cannot be guaranteed at this time. If owner consent cannot be obtained it may be infeasible to construct a reasonable noise barrier within the public right-of-way that reduces noise levels to below 65 CNEL. Therefore, it cannot be guaranteed that the mitigation measure specified above will completely mitigate the identified significant impacts. Therefore, Alternative B-5 could result in significant unavoidable traffic noise impacts.

## 3.3 Long Term On-Site Impacts

### *3.3.1 Traffic Noise*

Application of County of Orange Standard Condition N01 will ensure appropriate noise abatement is included in the project design so that no residential uses are significantly impacted by traffic noise. The application of Standard Condition N02 will ensure that non-residential uses proposed by the project are not significantly impacted by traffic noise. The analysis presented in Section 2.4.1 shows that the County's noise standards are achievable with feasable measures. No mitigation is required.

### *3.3.2 On-Site Activities*

Application of County of Orange Standard Condition N08 will ensure that commercial uses proposed by the project will not significantly impact any proposed residential uses. The analysis presented in Section 2.4.2 shows that the County's noise standards are achievable without extraordinary measures. No mitigation is required.

# 4.0 UNAVOIDABLE NOISE IMPACTS

Development of the proposed project or Alternative B-4 would not result in any unavoidable noise impacts.

As discussed in Section 3.2, mitigation of off-site traffic noise impacts with the development of Alternative B-5 may not be possible without permission from impacted residents to construct a sound wall on their property. Sound barriers that can be constructed on public right-of-way in a manner to reduce noise levels at the affected residence to below the County's 65 CNEL standard will fully mitigate the impact. Where this is not possible due to the relative topography between the road and the residence, permission to construct a sound wall on the resident's property will be requested. However, at this time it cannot be guaranteed that this permission will be granted. Unavoidable significant noise impacts could occur with Alternative B-5 where it is not feasible to construct an effective sound wall on public property and the affected resident does not grant permission for construction of a sound wall on their property.

There are no other unavoidable noise impacts associated with the Alternative B-5.

# APPENDIX

## Traffic Data Used To Calculate Noise Levels (ADT's in 1,000's)

| | | | | | No Project | | | | | | Proposed Project (B-4) | | | | | | | | | B-4R Alt. | | | B-5 Alt. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway Segment | | | Speed (mph) | Mix | Exist. | 2010 No Proj. | 2025 No Proj. (CCS) | 2025 Exist. Zoning (CCS) | 2025 Exist. Zoning (MPAH) | 2025 OCP-2000 (MPAH) | Exist. Plus Proj. | 2010 (CCS) | 2010 (CCS +LP) | 2010 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (MPAH) | 2025 (MPAH +Amnd.) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) |
| **I-5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| La Paz Rd. | to | Oso Pkwy. | 65 | 2 | 298 | 329 | 345 | 348 | 338 | 351 | 302 | 335 | 334 | 333 | 349 | 348 | 339 | 341 | 341 | 349 | 347 | 339 | 348 | 347 | 339 |
| Oso Pkwy. | to | Crown Valley Pkwy. | 65 | 2 | 281 | 304 | 323 | 324 | 311 | 320 | 281 | 309 | 307 | 305 | 322 | 320 | 311 | 313 | 313 | 322 | 319 | 312 | 319 | 316 | 308 |
| Crown Valley Pkwy. | to | Avery Pkwy. | 65 | 2 | 242 | 277 | 298 | 300 | 282 | 282 | 242 | 280 | 277 | 275 | 296 | 291 | 282 | 283 | 283 | 296 | 291 | 282 | 293 | 288 | 279 |
| Avery Pkwy. | to | Junipero Serra | 65 | 2 | 233 | 291 | 336 | 340 | 310 | 321 | 237 | 297 | 294 | 291 | 340 | 335 | 317 | 316 | 316 | 340 | 334 | 318 | 336 | 330 | 314 |
| Junipero Serra | to | Ortega Highway | 65 | 2 | 227 | 283 | 326 | 331 | 305 | 315 | 232 | 289 | 286 | 283 | 331 | 326 | 309 | 311 | 311 | 331 | 325 | 308 | 327 | 321 | 305 |
| Ortega Highway | to | San Juan Creek | 65 | 2 | 210 | 268 | 310 | 312 | 280 | 284 | 212 | 270 | 261 | 261 | 312 | 301 | 283 | 282 | 284 | 311 | 301 | 283 | 309 | 298 | 280 |
| San Juan Creek | to | Stonehill | 65 | 2 | 208 | 266 | 310 | 312 | 276 | 280 | 209 | 268 | 258 | 258 | 311 | 299 | 280 | 278 | 280 | 310 | 299 | 280 | 307 | 295 | 276 |
| Stonehill | to | Cmno. La Ramblas | 65 | 2 | 196 | 255 | 298 | 301 | 264 | 268 | 197 | 256 | 246 | 246 | 299 | 287 | 267 | 266 | 268 | 299 | 287 | 268 | 296 | 283 | 264 |
| Cmno. La Ramblas | to | Cmno. Los Mares | 65 | 2 | 210 | 268 | 314 | 316 | 279 | 283 | 211 | 269 | 260 | 260 | 314 | 301 | 282 | 282 | 284 | 313 | 301 | 282 | 309 | 296 | 277 |
| Cmno. de Los Mares | to | Vista Hermosa | 65 | 2 | 202 | 258 | 303 | 305 | 275 | 278 | 203 | 259 | 250 | 250 | 304 | 294 | 275 | 278 | 280 | 303 | 293 | 275 | 298 | 288 | 270 |
| Vista Hermosa | to | Avnda. Pico | 65 | 2 | 188 | 240 | 282 | 286 | 264 | 265 | 193 | 241 | 238 | 238 | 287 | 283 | 260 | 265 | 266 | 286 | 283 | 260 | 283 | 279 | 256 |
| South | of | Avnda. Pico | 65 | 2 | 154 | 177 | 214 | 214 | 193 | 192 | 155 | 177 | 177 | 177 | 215 | 215 | 191 | 193 | 193 | 215 | 215 | 191 | 214 | 214 | 191 |
| **SR-73** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oso Pkwy. | to | Crown Valley Pkwy. | 65 | 3 | 45 | 63 | 86 | 89 | 82 | 92 | 52 | 66 | 65 | 65 | 93 | 92 | 84 | 86 | 85 | 93 | 92 | 84 | 92 | 91 | 83 |
| Crown Valley Pkwy. | to | I-5 | 65 | 3 | 44 | 60 | 82 | 85 | 76 | 86 | 52 | 63 | 63 | 62 | 90 | 89 | 81 | 81 | 80 | 89 | 89 | 81 | 88 | 87 | 80 |
| **SR-241** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | Antonio Pkwy. | 65 | 4 | 18 | 22 | 27 | 29 | 48 | 66 | 26 | 24 | 24 | 26 | 35 | 37 | 57 | 54 | 55 | 35 | 36 | 56 | 36 | 38 | 58 |
| Antonio Pkwy. | to | Oso Pkwy. | 65 | 4 | 8 | 12 | 15 | 17 | 39 | 57 | 18 | 13 | 13 | 15 | 25 | 25 | 49 | 46 | 47 | 24 | 24 | 48 | 26 | 26 | 50 |
| Oso Pkwy. | to | Crown Valley Pkwy. | 65 | 4 | -- | -- | -- | -- | 28 | 49 | -- | -- | -- | -- | -- | -- | 49 | 41 | 46 | -- | -- | 45 | -- | -- | 53 |
| Crown Valley Pkwy. | to | C St. | 65 | 4 | -- | -- | -- | -- | 29 | 50 | -- | -- | -- | -- | -- | -- | 49 | 50 | 46 | -- | -- | 45 | -- | -- | 53 |
| C St. | to | Ortega Highway | 65 | 4 | -- | -- | -- | -- | 29 | 50 | -- | -- | -- | -- | -- | -- | 40 | 50 | 38 | -- | -- | 38 | -- | -- | 39 |
| Ortega Highway | to | Avnda. Pico | 65 | 4 | -- | -- | -- | -- | 31 | 40 | -- | -- | -- | -- | -- | -- | 39 | 37 | 36 | -- | -- | 37 | -- | -- | 34 |
| South | of | Avnda. Pico | 65 | 4 | -- | -- | -- | -- | 27 | 30 | -- | -- | -- | -- | -- | -- | 30 | 27 | 28 | -- | -- | 29 | -- | -- | 28 |
| **La Paz Road** | | | | | | | | | | | | | | | | | | | | | | | | | |
| I-5 | to | Marguerite | 50 | 1 | 30 | 28 | 29 | 30 | 29 | 32 | 32 | 29 | 28 | 29 | 31 | 31 | 30 | 30 | 30 | 31 | 31 | 30 | 31 | 31 | 30 |
| Marguerite | to | Felipe Rd. | 50 | 1 | 21 | 21 | 21 | 21 | 21 | 22 | 22 | 21 | 21 | 21 | 22 | 22 | 21 | 21 | 21 | 22 | 22 | 21 | 22 | 22 | 21 |
| **Oso Parkway** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | Cabot Rd. | 50 | 1 | 30 | 34 | 35 | 35 | 35 | 37 | 31 | 34 | 34 | 34 | 36 | 36 | 36 | 35 | 35 | 36 | 36 | 36 | 37 | 37 | 37 |
| Cabot Rd. | to | I-5 | 50 | 1 | 45 | 49 | 51 | 51 | 52 | 55 | 46 | 50 | 50 | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 53 | 53 | 53 |
| East | of | I-5 | 50 | 1 | 56 | 61 | 61 | 61 | 58 | 65 | 60 | 62 | 61 | 63 | 65 | 64 | 61 | 60 | 61 | 64 | 64 | 61 | 69 | 68 | 64 |
| West | of | Marguerite | 50 | 1 | 39 | 56 | 61 | 61 | 53 | 61 | 60 | 57 | 56 | 58 | 65 | 64 | 56 | 55 | 56 | 64 | 64 | 56 | 69 | 68 | 60 |
| Marguerite | to | Felipe Rd. | 50 | 1 | 39 | 45 | 45 | 47 | 44 | 55 | 47 | 48 | 47 | 49 | 53 | 53 | 49 | 47 | 48 | 52 | 52 | 48 | 58 | 58 | 53 |
| Felipe Rd. | to | Antonio Pkwy. | 50 | 1 | 39 | 42 | 42 | 45 | 43 | 58 | 50 | 45 | 45 | 47 | 53 | 53 | 49 | 47 | 48 | 52 | 52 | 48 | 59 | 58 | 53 |
| East | of | Antonio Pkwy. | 50 | 1 | 29 | 31 | 32 | 37 | 25 | 33 | 45 | 32 | 33 | 39 | 48 | 49 | 38 | 28 | 38 | 47 | 48 | 36 | 58 | 60 | 46 |
| West | of | SR-241 | 50 | 1 | 26 | 23 | 26 | 27 | 18 | 24 | 42 | 24 | 24 | 32 | 42 | 44 | 31 | 22 | 31 | 41 | 42 | 30 | 49 | 51 | 36 |
| East | of | SR-241 | 50 | 1 | 20 | 23 | 24 | 24 | 17 | 17 | 20 | 23 | 23 | 23 | 24 | 24 | 24 | 17 | 24 | 24 | 24 | 24 | 25 | 25 | 25 |

## Traffic Data Used To Calculate Noise Levels (ADT's in 1,000's)

| | | | | | No Project | | | | | | Proposed Project (B-4) | | | | | | | | | B-4R Alt. | | | B-5 Alt. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway Segment | | | Speed (mph) | Mix | Exist. | 2010 No Proj. | 2025 No Proj. (CCS) | 2025 Exist. Zoning (CCS) | 2025 Exist. Zoning (MPAH) | 2025 OCP-2000 (MPAH) | Exist. Plus Proj. | 2010 (CCS) | 2010 (CCS +LP) | 2010 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (MPAH) | 2025 (MPAH +Amnd.) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) |
| **Crown Valley Parkway** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | Moulton Pkwy. | 50 | 1 | 36 | 39 | 39 | 40 | 38 | 38 | 36 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 38 | 39 | 39 | 39 | 39 | 39 | 39 |
| Mounton Pkwy. | to | Greenfield | 50 | 1 | 41 | 41 | 43 | 43 | 40 | 40 | 41 | 41 | 41 | 41 | 42 | 42 | 42 | 40 | 39 | 42 | 42 | 42 | 43 | 43 | 43 |
| Greenfield | to | SR-241 | 50 | 1 | 56 | 56 | 59 | 59 | 58 | 59 | 56 | 57 | 57 | 56 | 59 | 59 | 59 | 58 | 58 | 59 | 59 | 59 | 60 | 60 | 59 |
| SR-241 | to | I-5 | 50 | 1 | 60 | 59 | 61 | 61 | 60 | 62 | 61 | 60 | 60 | 60 | 62 | 61 | 61 | 60 | 61 | 62 | 61 | 61 | 62 | 62 | 62 |
| East | of | I-5 | 50 | 1 | 70 | 82 | 86 | 87 | 85 | 96 | 72 | 86 | 84 | 83 | 88 | 86 | 86 | 86 | 85 | 88 | 86 | 86 | 88 | 86 | 86 |
| West | of | Marguerite | 50 | 1 | 39 | 59 | 62 | 65 | 63 | 81 | 46 | 65 | 63 | 62 | 69 | 68 | 67 | 67 | 66 | 68 | 67 | 66 | 70 | 69 | 68 |
| East | of | Marguerite | 50 | 1 | 37 | 56 | 60 | 63 | 62 | 83 | 47 | 64 | 62 | 61 | 70 | 68 | 68 | 69 | 67 | 68 | 67 | 67 | 71 | 70 | 70 |
| West | of | Antonio Pkwy. | 50 | 1 | 24 | 35 | 39 | 41 | 41 | 64 | 35 | 43 | 41 | 40 | 50 | 48 | 48 | 49 | 47 | 48 | 46 | 47 | 52 | 50 | 50 |
| East | of | Antonio Pkwy. | 50 | 1 | | -- | | | 13 | 53 | | -- | -- | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- |
| West | of | SR-241 | 50 | 1 | -- | -- | -- | -- | 8 | 14 | -- | -- | -- | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- |
| East | of | SR-241 | 50 | 1 | -- | -- | -- | -- | 7 | 7 | -- | -- | -- | -- | -- | -- | -- | 8 | -- | -- | -- | -- | -- | -- | -- |
| **Paseo de Colinas** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | Cabot Rd. | 45 | 1 | 23 | 27 | 27 | 28 | 24 | 24 | 23 | 27 | 27 | 27 | 27 | 27 | 27 | 24 | 24 | 27 | 27 | 27 | 27 | 27 | 27 |
| Cabot Rd. | to | I-5 | 45 | 1 | 17 | 19 | 20 | 20 | 16 | 17 | 17 | 19 | 19 | 19 | 20 | 20 | 19 | 16 | 16 | 20 | 20 | 19 | 20 | 20 | 20 |
| West | of | I-5 | 45 | 1 | 28 | 23 | 33 | 33 | 33 | 33 | 28 | 23 | 23 | 23 | 34 | 34 | 33 | 21 | 33 | 34 | 34 | 33 | 34 | 34 | 33 |
| **Avery** | | | | | | | | | | | | | | | | | | | | | | | | | |
| I-5 | to | Marguerite | 45 | 1 | 36 | 37 | 37 | 37 | 37 | 37 | 36 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 37 | 36 | 36 | 36 | 36 | 34 |
| East | of | Marguerite | 45 | 1 | 10 | 10 | 11 | 11 | 11 | 11 | 10 | 11 | 10 | 10 | 11 | 10 | 10 | 10 | 10 | 11 | 10 | 10 | 10 | 10 | 10 |
| **Camino los Padres** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | I-5 | 45 | 1 | -- | -- | -- | -- | 12 | 12 | -- | -- | -- | -- | -- | -- | -- | 13 | 13 | -- | -- | -- | -- | -- | -- |
| **Junipero Serra** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | I-5 | 45 | 1 | 14 | 18 | 21 | 21 | 26 | 27 | 14 | 18 | 18 | 18 | 22 | 21 | 21 | 28 | 28 | 21 | 21 | 21 | 21 | 21 | 21 |
| East | of | I-5 | 45 | 1 | 16 | 17 | 19 | 19 | 19 | 19 | 16 | 17 | 17 | 17 | 19 | 18 | 18 | 19 | 19 | 19 | 19 | 18 | 19 | 18 | 18 |
| **SR-74 (Ortega Highway)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cmno. Capastrano | to | Del Obispo | 50 | 5 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 14 |
| West | of | I-5 | 50 | 5 | 37 | 39 | 42 | 42 | 40 | 40 | 38 | 39 | 39 | 40 | 43 | 43 | 43 | 40 | 41 | 43 | 42 | 42 | 43 | 43 | 43 |
| I-5 | to | Rancho Viejo | 50 | 5 | 45 | 50 | 54 | 59 | 49 | 63 | 51 | 56 | 52 | 50 | 60 | 57 | 56 | 57 | 55 | 57 | 54 | 54 | 61 | 57 | 56 |
| West | of | La Novia | 50 | 5 | 34 | 38 | 41 | 45 | 37 | 53 | 41 | 45 | 41 | 39 | 48 | 45 | 44 | 47 | 45 | 44 | 42 | 41 | 48 | 45 | 44 |
| East | of | La Novia | 50 | 5 | 28 | 33 | 37 | 42 | 30 | 46 | 38 | 41 | 37 | 35 | 47 | 43 | 43 | 40 | 38 | 43 | 39 | 40 | 48 | 43 | 43 |
| West | of | La Pata | 50 | 5 | 23 | 28 | 31 | 38 | 25 | 43 | 36 | 36 | 32 | 30 | 44 | 41 | 40 | 38 | 35 | 39 | 37 | 36 | 45 | 41 | 40 |
| East | of | La Pata | 50 | 5 | 15 | 15 | 16 | 24 | 11 | 48 | 5 | 15 | 15 | 15 | 5 | 6 | 5 | 30 | 5 | 3 | 3 | 3 | 6 | 6 | 6 |
| West | of | SR-241 | 45 | 5 | -- | 15 | -- | -- | 10 | 19 | -- | 15 | 15 | 15 | -- | -- | 5 | 17 | 5 | -- | -- | -- | -- | -- | -- |
| East | of | SR-241 | 45 | 5 | -- | 15 | -- | -- | 13 | 14 | -- | 15 | 15 | 15 | -- | -- | 2 | 14 | 2 | -- | -- | -- | -- | -- | -- |
| East | of | C St. | 45 | 5 | -- | 15 | -- | -- | -- | -- | 2 | 15 | 15 | 15 | 2 | 2 | -- | 14 | -- | 2 | 2 | 2 | 3 | 3 | 2 |
| Eas | of | New Ortega Hwy | 45 | 5 | 10 | 10 | 11 | 12 | -- | -- | 12 | 10 | 10 | 10 | 13 | 13 | 14 | 14 | 14 | 12 | 12 | 13 | 13 | 14 | 14 |
| **San Juan Creek Road** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | I-5 | 45 | 1 | 18 | 22 | 24 | 24 | 24 | 28 | 18 | 22 | 22 | 21 | 24 | 23 | 23 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 |
| East | of | Valle Rd. | 45 | 1 | 13 | 16 | 18 | 19 | 15 | 20 | 13 | 17 | 15 | 15 | 17 | 16 | 16 | 17 | 16 | 17 | 16 | 16 | 17 | 16 | 16 |
| West | of | La Novia | 45 | 1 | 10 | 14 | 16 | 16 | 13 | 18 | 10 | 14 | 13 | 13 | 15 | 14 | 14 | 15 | 14 | 15 | 14 | 14 | 15 | 14 | 14 |
| East | of | La Novia | 45 | 1 | 8 | 12 | 12 | 11 | 10 | 16 | 9 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 12 | 13 | 13 | 13 | 13 | 13 | 13 |
| West | of | La Pata | 45 | 1 | -- | -- | -- | -- | 4 | 10 | -- | -- | -- | -- | -- | -- | -- | 9 | 8 | -- | -- | -- | -- | -- | -- |

## Traffic Data Used To Calculate Noise Levels (ADT's in 1,000's)

| | | | | | No Project | | | | | | Proposed Project (B-4) | | | | | | | | | B-4R Alt. | | | B-5 Alt. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway Segment | | | Speed (mph) | Mix | Exist. | 2010 No Proj. | 2025 No Proj. (CCS) | 2025 Exist. Zoning (CCS) | 2025 Exist. Zoning (MPAH) | 2025 OCP-2000 (MPAH) | Exist. Plus Proj. | 2010 (CCS) | 2010 (CCS +LP) | 2010 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (MPAH) | 2025 (MPAH +Amnd.) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) |
| **New Ortega Highway** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antonio Pkwy. | to | A St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 48 | 35 | 35 | 21 | 49 | 51 | 52 | -- | 51 | 40 | 42 | 43 | 50 | 54 | 54 |
| A St. | to | C St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 48 | 33 | 33 | 20 | 49 | 51 | 52 | -- | 52 | 40 | 43 | 44 | 53 | 57 | 57 |
| C St. | to | F St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 29 | 11 | 11 | 6 | 30 | 31 | 29 | -- | 30 | 24 | 25 | 24 | 36 | 37 | 38 |
| F St. | to | SR-74 | 45 | 1 | -- | -- | -- | -- | -- | -- | 34 | -- | -- | -- | 35 | 35 | 36 | -- | 35 | 27 | 27 | 28 | 42 | 42 | 43 |
| **Camino las Ramblas** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | I-5 | 45 | 1 | 10 | 12 | 13 | 13 | 13 | 13 | 10 | 12 | 12 | 12 | 13 | 13 | 13 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 13 |
| West | of | Cmno. Los Mares | 45 | 1 | -- | -- | -- | -- | 6 | 7 | -- | -- | -- | -- | -- | -- | -- | 6 | 6 | -- | -- | -- | -- | -- | -- |
| Cmno. de Los Mares | to | La Pata | 45 | 1 | -- | -- | -- | -- | 6 | 7 | -- | -- | -- | -- | -- | -- | -- | 6 | 6 | -- | -- | -- | -- | -- | -- |
| **Camino de Los Mares** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | I-5 | 45 | 1 | 35 | 36 | 40 | 40 | 35 | 35 | 35 | 36 | 36 | 36 | 39 | 38 | 36 | 34 | 34 | 39 | 39 | 36 | 39 | 39 | 36 |
| West | of | Cmno. Vera Cruz | 45 | 1 | 18 | 15 | 19 | 20 | 16 | 16 | 18 | 15 | 14 | 14 | 19 | 17 | 17 | 16 | 16 | 19 | 18 | 17 | 19 | 17 | 17 |
| Cmno. Vera Crus | to | Cmno. del Rio | 45 | 1 | 9 | 12 | 12 | 12 | 12 | 12 | 9 | 12 | 10 | 10 | 12 | 11 | 11 | 12 | 12 | 12 | 11 | 11 | 12 | 11 | 11 |
| North | of | Cmno. del Rio | 45 | 1 | -- | -- | -- | -- | 4 | 4 | -- | -- | -- | -- | -- | -- | -- | 4 | 4 | -- | -- | -- | -- | -- | -- |
| **Camino del Rio** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cmno. de Los Mares | to | La Pata | 45 | 1 | -- | 5 | -- | -- | 8 | 9 | -- | 5 | 5 | 5 | -- | -- | 5 | 8 | 8 | -- | 5 | 5 | -- | 5 | 5 |
| **Avenida Vista Hermosa** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | I-5 | 50 | 1 | 20 | 34 | 38 | 39 | 29 | 31 | 21 | 34 | 32 | 32 | 39 | 39 | 32 | 31 | 31 | 39 | 38 | 32 | 38 | 38 | 31 |
| Cmno. Vera Cruz | to | La Pata | 50 | 1 | -- | 35 | 40 | 41 | 24 | 26 | -- | 35 | 35 | 35 | 42 | 43 | 31 | 25 | 25 | 42 | 43 | 31 | 41 | 43 | 31 |
| La Pata | to | Talega | 50 | 1 | -- | 21 | 25 | 25 | 16 | 17 | -- | 21 | 18 | 18 | 26 | 22 | 18 | 16 | 17 | 26 | 22 | 18 | 27 | 23 | 19 |
| Talega | to | Pico | 50 | 1 | -- | 3 | 4 | 4 | 6 | 8 | -- | 3 | 5 | 5 | 7 | 7 | 8 | 7 | 8 | 6 | 7 | 7 | 6 | 7 | 7 |
| **Avenida Pico** | | | | | | | | | | | | | | | | | | | | | | | | | |
| West | of | I-5 | 50 | 1 | 25 | 25 | 28 | 29 | 29 | 29 | 26 | 25 | 25 | 25 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| East | of | I-5 | 50 | 1 | 38 | 47 | 54 | 57 | 42 | 45 | 43 | 48 | 41 | 41 | 59 | 54 | 47 | 44 | 46 | 59 | 54 | 47 | 51 | 47 | 41 |
| West | of | La Pata | 50 | 1 | 23 | 21 | 26 | 30 | 18 | 24 | 32 | 21 | 18 | 18 | 35 | 34 | 26 | 21 | 24 | 34 | 33 | 25 | 25 | 24 | 18 |
| La Pata | to | Vista Hermosa | 50 | 1 | 11 | 8 | 9 | 14 | 14 | 26 | 26 | 8 | 9 | 9 | 24 | 24 | 25 | 21 | 25 | 22 | 23 | 23 | 10 | 10 | 13 |
| East | of | Vista Hermosa | 50 | 1 | 6 | 10 | 10 | 16 | 19 | 34 | 27 | 10 | 9 | 9 | 27 | 27 | 31 | 27 | 31 | 25 | 25 | 29 | 10 | 9 | 17 |
| East | of | SR-241 | 50 | 1 | -- | -- | -- | -- | 7 | 32 | 22 | -- | -- | -- | 22 | 22 | 26 | 24 | 26 | 20 | 19 | 22 | 2 | -- | -- |
| **Cabot Street** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | Oso Pkwy. | 45 | 1 | 20 | 22 | 23 | 23 | 23 | 24 | 20 | 22 | 22 | 22 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| South | of | Oso Pkwy. | 45 | 1 | 16 | 14 | 15 | 15 | 15 | 15 | 16 | 15 | 15 | 14 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| North | of | Crown Valley Pkwy. | 45 | 1 | 11 | 12 | 13 | 13 | 13 | 13 | 11 | 12 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Crown Valley Pkwy. | to | Paseo de Colinas | 45 | 1 | 11 | 9 | 10 | 10 | 10 | 10 | 11 | 9 | 9 | 9 | 10 | 9 | 9 | 10 | 9 | 10 | 10 | 10 | 10 | 10 | 9 |
| **Greenfield** | | | | | | | | | | | | | | | | | | | | | | | | | |
| South | of | SR-73 | 45 | 1 | 23 | 23 | 24 | 24 | 23 | 24 | 23 | 23 | 23 | 23 | 24 | 24 | 24 | 23 | 23 | 24 | 24 | 24 | 25 | 25 | 24 |
| **Marguerite** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | La Paz Rd. | 50 | 1 | 36 | 34 | 35 | 35 | 34 | 34 | 36 | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 35 | 35 | 34 | 35 | 35 | 34 |
| South | of | La Paz Rd. | 50 | 1 | 34 | 36 | 38 | 39 | 38 | 40 | 36 | 37 | 37 | 37 | 40 | 40 | 39 | 39 | 39 | 39 | 39 | 39 | 40 | 40 | 39 |
| North | of | Oso Pkwy. | 50 | 1 | 32 | 33 | 34 | 36 | 35 | 37 | 34 | 34 | 34 | 33 | 36 | 36 | 35 | 36 | 35 | 36 | 36 | 35 | 37 | 37 | 36 |
| South | of | Oso Pkwy. | 50 | 1 | 27 | 30 | 31 | 31 | 31 | 31 | 27 | 30 | 30 | 29 | 31 | 31 | 30 | 30 | 30 | 31 | 31 | 31 | 30 | 30 | 30 |
| Oso Pkwy. | to | Crown Valley Pkwy. | 50 | 1 | 32 | 35 | 37 | 38 | 37 | 38 | 32 | 36 | 35 | 35 | 37 | 37 | 36 | 37 | 36 | 37 | 37 | 36 | 37 | 36 | 36 |
| South | of | Crown Valley Pkwy. | 50 | 1 | 27 | 25 | 26 | 26 | 25 | 28 | 28 | 25 | 25 | 25 | 27 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 | 27 | 26 |
| North | of | Avery | 50 | 1 | 30 | 29 | 30 | 30 | 29 | 29 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 29 | 28 | 28 | 29 | 28 | 28 |

## Traffic Data Used To Calculate Noise Levels (ADT's in 1,000's)

| Roadway Segment | | | Speed (mph) | Mix | No Project | | | | | | Proposed Project (B-4) | | | | | | | | | B-4R Alt. | | | B-5 Alt. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exist. | 2010 No Proj. | 2025 No Proj. (CCS) | 2025 Exist. Zoning (CCS) | 2025 Exist. Zoning (MPAH) | 2025 OCP-2000 (MPAH) | Exist. Plus Proj. | 2010 (CCS) | 2010 (CCS +LP) | 2010 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (MPAH) | 2025 (MPAH +Amnd.) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) |
| **Rancho Viejo** | | | | | | | | | | | | | | | | | | | | | | | | | |
| South | of | Avery | 45 | 1 | 16 | 18 | 19 | 19 | 18 | 18 | 16 | 18 | 18 | 18 | 19 | 19 | 18 | 18 | 18 | 19 | 19 | 18 | 19 | 19 | 18 |
| North | of | Trabuco Canyon | 45 | 1 | 10 | 11 | 12 | 12 | 11 | 11 | 10 | 11 | 11 | 10 | 12 | 12 | 11 | 11 | 11 | 12 | 12 | 11 | 12 | 12 | 11 |
| Trabuco Canyon | to | Junipero Serra | 45 | 1 | 10 | 11 | 12 | 13 | 12 | 12 | 11 | 11 | 11 | 11 | 13 | 12 | 12 | 12 | 12 | 13 | 12 | 12 | 13 | 12 | 12 |
| South | of | Juniperro | 45 | 1 | 9 | 9 | 11 | 11 | 11 | 12 | 9 | 10 | 10 | 10 | 11 | 11 | 10 | 12 | 11 | 11 | 11 | 10 | 11 | 11 | 10 |
| North | of | Ortega Highway | 45 | 1 | 9 | 10 | 10 | 11 | 11 | 12 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 11 |
| **Felipe Road** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | La Paz Rd. | 45 | 1 | 15 | 15 | 16 | 16 | 17 | 17 | 15 | 16 | 16 | 16 | 16 | 16 | 16 | 17 | 17 | 16 | 16 | 15 | 16 | 16 | 15 |
| South | of | La Paz Rd. | 45 | 1 | 16 | 16 | 17 | 17 | 18 | 19 | 17 | 17 | 17 | 17 | 18 | 18 | 17 | 18 | 18 | 18 | 18 | 17 | 18 | 18 | 17 |
| Oso Pkwy. | to | Marguerite Pkwy. | 45 | 1 | 12 | 12 | 12 | 12 | 12 | 13 | 12 | 12 | 12 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| **Golden Lantern** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | Crown Valley Pkwy. | 45 | 1 | 23 | 27 | 32 | 32 | 30 | 32 | 23 | 28 | 28 | 28 | 31 | 31 | 31 | 31 | 31 | 32 | 31 | 31 | 32 | 31 | 31 |
| Crown Valley Pkwy. | to | Paseo de Colinas | 45 | 1 | 26 | 27 | 30 | 31 | 29 | 31 | 26 | 28 | 28 | 28 | 31 | 30 | 30 | 29 | 29 | 31 | 30 | 30 | 31 | 30 | 30 |
| Paseo de Colinas | to | Marina Mills | 45 | 1 | 35 | 38 | 42 | 42 | 39 | 40 | 35 | 39 | 38 | 38 | 42 | 41 | 40 | 39 | 39 | 42 | 41 | 40 | 42 | 41 | 40 |
| **Camino Capistrano** | | | | | | | | | | | | | | | | | | | | | | | | | |
| South | of | Paseo de Colinas | 45 | 1 | 5 | 5 | 6 | 6 | 7 | 7 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 6 |
| North | of | Junipero Serra | 45 | 1 | 5 | 5 | 5 | 5 | 14 | 14 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 15 | 15 | 5 | 5 | 5 | 5 | 5 | 5 |
| Junipero Serra | to | Roso | 45 | 1 | 11 | 15 | 18 | 18 | 19 | 20 | 11 | 15 | 15 | 15 | 19 | 18 | 18 | 20 | 20 | 19 | 18 | 18 | 18 | 18 | 17 |
| Roso | to | Ortega Highway | 45 | 1 | 13 | 14 | 15 | 16 | 14 | 14 | 13 | 14 | 14 | 14 | 16 | 15 | 15 | 14 | 14 | 16 | 15 | 15 | 16 | 15 | 15 |
| Ortega Highway | to | Del Obispo | 45 | 1 | 14 | 17 | 19 | 19 | 16 | 16 | 14 | 17 | 16 | 16 | 19 | 18 | 18 | 16 | 16 | 19 | 18 | 18 | 19 | 18 | 18 |
| Del Obispo | to | San Juan Creek | 45 | 1 | 19 | 23 | 26 | 26 | 23 | 25 | 19 | 23 | 22 | 22 | 26 | 25 | 24 | 23 | 23 | 26 | 25 | 24 | 26 | 25 | 24 |
| South | of | San Juan Creek Rd. | 45 | 1 | 24 | 29 | 32 | 32 | 30 | 31 | 24 | 29 | 29 | 29 | 32 | 31 | 30 | 30 | 30 | 32 | 31 | 30 | 32 | 31 | 30 |
| **Antonio Parkway** | | | | | | | | | | | | | | | | | | | | | | | | | |
| North | of | SR-241 | 50 | 1 | 29 | 38 | 41 | 41 | 40 | 41 | 29 | 38 | 38 | 38 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| Empressa | to | SR-241 | 50 | 1 | 25 | 34 | 35 | 34 | 34 | 35 | 25 | 34 | 34 | 34 | 34 | 36 | 35 | 35 | 35 | 34 | 36 | 35 | 34 | 36 | 35 |
| Empressa | to | Banderas | 50 | 1 | 26 | 37 | 37 | 37 | 36 | 37 | 26 | 38 | 38 | 37 | 37 | 39 | 37 | 36 | 37 | 37 | 39 | 37 | 37 | 39 | 37 |
| South | of | Banderas | 50 | 1 | 34 | 43 | 44 | 44 | 41 | 44 | 35 | 45 | 45 | 44 | 44 | 46 | 42 | 41 | 41 | 44 | 46 | 41 | 45 | 47 | 42 |
| North | of | Oso Pkwy. | 50 | 1 | 35 | 42 | 43 | 43 | 41 | 43 | 36 | 44 | 45 | 44 | 44 | 46 | 41 | 41 | 41 | 43 | 46 | 41 | 45 | 47 | 42 |
| Oso Pkwy. | to | Crown Valley Pkwy. | 50 | 1 | 29 | 43 | 49 | 51 | 44 | 56 | 30 | 51 | 53 | 47 | 50 | 55 | 52 | 47 | 52 | 48 | 53 | 50 | 53 | 58 | 54 |
| South | of | Crown Valley Pkwy. | 50 | 1 | 16 | 28 | 33 | 34 | 34 | 42 | 25 | 45 | 47 | 37 | 42 | 48 | 48 | 47 | 49 | 39 | 46 | 46 | 41 | 47 | 48 |
| North | of | New Ortega Hwy | 50 | 1 | 12 | 17 | 21 | 21 | 22 | 31 | 20 | 39 | 42 | 32 | 41 | 47 | 48 | 45 | 49 | 35 | 43 | 43 | 40 | 47 | 49 |
| North | of | SR-74 | 50 | 1 | 12 | 17 | 21 | 21 | 22 | 31 | 33 | 27 | 32 | 30 | 43 | 58 | 45 | 40 | 47 | 37 | 52 | 40 | 44 | 59 | 46 |
| **La Pata** | | | | | | | | | | | | | | | | | | | | | | | | | |
| South | of | Ortega Highway | 50 | 1 | 3 | 3 | 3 | 4 | 14 | 23 | 5 | 4 | 12 | 12 | 5 | 25 | 12 | 22 | 20 | 4 | 23 | 10 | 6 | 25 | 12 |
| San Juan Creek Rd. | to | Cmno. La Ramblas | 50 | 1 | -- | -- | -- | -- | 13 | 17 | -- | -- | 12 | 12 | -- | 25 | 12 | 14 | 14 | -- | 23 | 10 | -- | 25 | 12 |
| Cmno. La Ramblas | to | Cmno. del Rio | 50 | 1 | -- | -- | -- | -- | 11 | 14 | -- | -- | 11 | 11 | -- | 22 | 9 | 13 | 13 | -- | 21 | 8 | -- | 22 | 9 |
| Cmno. del Rio | to | Vista Hermosa | 50 | 1 | -- | -- | -- | -- | 20 | 23 | -- | -- | 12 | 12 | -- | 24 | 14 | 22 | 22 | -- | 23 | 13 | -- | 24 | 13 |
| Vista Hermosa | to | Avnda. Pico | 50 | 1 | -- | 28 | 33 | 34 | 31 | 34 | -- | 28 | 30 | 30 | 35 | 41 | 31 | 33 | 34 | 34 | 40 | 30 | 33 | 40 | 30 |
| South | of | Avnda. Pico | 50 | 1 | 5 | 3 | 6 | 6 | 10 | 13 | 8 | 3 | 3 | 3 | 9 | 10 | 11 | 11 | 11 | 9 | 9 | 10 | 8 | 8 | 9 |
| **Camino Vera Cruz** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cmno. de Los Mares | to | Vista Hermosa | 45 | 1 | 9 | 16 | 21 | 21 | 11 | 11 | 9 | 16 | 18 | 17 | 21 | 22 | 22 | 11 | 11 | 21 | 22 | 22 | 21 | 21 | 21 |

## Traffic Data Used To Calculate Noise Levels (ADT's in 1,000's)

| | | | | | No Project | | | | | | Proposed Project (B-4) | | | | | | | | | B-4R Alt. | | | B-5 Alt. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Roadway Segment | | | Speed (mph) | Mix | Exist. | 2010 No Proj. | 2025 No Proj. (CCS) | 2025 Exist. Zoning (CCS) | 2025 Exist. Zoning (MPAH) | 2025 OCP-2000 (MPAH) | Exist. Plus Proj. | 2010 (CCS) | 2010 (CCS +LP) | 2010 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (MPAH) | 2025 (MPAH +Amnd.) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) | 2025 (CCS) | 2025 (CCS +LP) | 2025 (CCS +LP +FTCS) |
| **Camino las Ramblas** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | I-5 | 45 | 1 | 10 | 12 | 13 | 13 | 13 | 13 | 10 | 12 | 12 | 12 | 13 | 13 | 13 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 13 |
| West | of | Cmno. Los Mares | 45 | 1 | -- | -- | -- | -- | 6 | 7 | -- | -- | -- | -- | -- | -- | -- | 6 | 6 | -- | -- | -- | -- | -- | -- |
| Cmno. de Los Mares | to | La Pata | 45 | 1 | -- | -- | -- | -- | 6 | 7 | -- | -- | -- | -- | -- | -- | -- | 6 | 6 | -- | -- | -- | -- | -- | -- |
| **A Street** | | | | | | | | | | | | | | | | | | | | | | | | | |
| South | of | Oso Pkwy. | 45 | 1 | -- | -- | -- | 8 | 2 | 7 | 5 | -- | -- | -- | 5 | 5 | 5 | -- | 5 | 4 | 4 | 5 | 10 | 10 | 10 |
| North | of | New Ortega Hwy | 45 | 1 | -- | -- | -- | 6 | 5 | 47 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | -- | 6 | 5 | 5 | 5 | 9 | 9 | 9 |
| West | of | SR-241 | 45 | 1 | -- | -- | -- | -- | 5 | 47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| East | of | SR-241 | 45 | 1 | -- | -- | -- | -- | 2 | 33 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **F Street** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oso Pkwy. | to | C St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 33 | -- | -- | 14 | 33 | 33 | -- | -- | -- | 29 | 29 | -- | 38 | 38 | -- |
| C St. | to | New Ortega Hwy | 45 | 1 | -- | -- | -- | -- | -- | -- | 18 | -- | -- | 5 | 18 | 18 | -- | -- | -- | 16 | 17 | -- | 22 | 23 | -- |
| **C Street** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Northeast | of | F St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 13 | -- | -- | -- | 13 | 13 | 13 | -- | 13 | 8 | 8 | 8 | 26 | 26 | 26 |
| North | of | New Ortega Hwy | 45 | 1 | -- | -- | -- | -- | -- | -- | 17 | 10 | 10 | 7 | 17 | 17 | 15 | -- | 15 | 15 | 14 | 13 | 18 | 18 | 22 |
| New Ortega Hwy | to | Ortega Hwy | 45 | 1 | -- | -- | -- | -- | -- | -- | 33 | -- | -- | -- | 33 | 28 | 24 | -- | 23 | 25 | 20 | 18 | 22 | 17 | 17 |
| Ortega Highway | to | Talega | 45 | 1 | -- | -- | -- | -- | -- | -- | 27 | -- | -- | -- | 27 | 20 | 15 | -- | 14 | 19 | 12 | 9 | 12 | 5 | 5 |
| South | of | Talega | 45 | 1 | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | 16 | 13 | 8 | -- | 8 | 10 | 7 | 5 | 8 | -- | -- |
| **Talega** | | | | | | | | | | | | | | | | | | | | | | | | | |
| East | of | Vista Hermosa | 45 | 1 | 1 | 10 | 10 | 10 | 10 | 11 | 6 | 10 | 11 | 11 | 15 | 12 | 12 | 10 | 11 | 15 | 12 | 11 | 15 | 12 | 12 |
| South | of | C St. | 45 | 1 | -- | -- | -- | -- | -- | -- | 6 | -- | -- | -- | 6 | 1 | 1 | -- | 1 | 5 | 1 | 1 | 6 | 1 | 1 |

# Day/Evening/Night Traffic Distributions Used For CNEL Calculations

**1. Arterial Roadways**

| | Day | Eve | Night |
|---|---|---|---|
| **Auto** | 75.51% | 12.57% | 9.34% |
| **MT** | 1.56% | 0.09% | 0.19% |
| **HT** | 0.64% | 0.02% | 0.08% |

**2. I-5**

| | Day | Eve | Night |
|---|---|---|---|
| **Auto** | 74.65% | 11.48% | 9.57% |
| **MT** | 1.48% | 0.23% | 0.19% |
| **HT** | 1.87% | 0.29% | 0.24% |

**3. SR-73**

| | Day | Eve | Night |
|---|---|---|---|
| **Auto** | 77.14% | 11.87% | 9.89% |
| **MT** | 0.70% | 0.11% | 0.09% |
| **HT** | 0.16% | 0.02% | 0.02% |

**4. SR-241**

| | Day | Eve | Night |
|---|---|---|---|
| **Auto** | 73.32% | 11.28% | 9.40% |
| **MT** | 2.34% | 0.36% | 0.30% |
| **HT** | 2.34% | 0.36% | 0.30% |

**5. SR-74**

| | Day | Eve | Night |
|---|---|---|---|
| **Auto** | 68.87% | 10.60% | 8.83% |
| **MT** | 2.57% | 0.40% | 0.33% |
| **HT** | 6.55% | 1.01% | 0.84% |

## Existing Traffic Noise CNEL Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| La Paz Rd. to Oso Pkwy. | 81.5 | 588 | 1,266 | 2,728 |
| Oso Pkwy. to Crown Valley Pkwy. | 81.3 | 565 | 1,218 | 2,623 |
| Crown Valley Pkwy. to Avery Pkwy. | 80.6 | 512 | 1,102 | 2,375 |
| Avery Pkwy. to Junipero Serra | 80.5 | 499 | 1,075 | 2,315 |
| Junipero Serra to Ortega Highway | 80.4 | 490 | 1,056 | 2,275 |
| Ortega Highway to San Juan Creek | 80.0 | 465 | 1,003 | 2,160 |
| San Juan Creek to Stonehill | 80.0 | 462 | 996 | 2,147 |
| Stonehill to Cmno. Las Ramblas | 79.7 | 445 | 958 | 2,063 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 80.0 | 465 | 1,003 | 2,160 |
| Cmno. de Los Mares to Vista Hermosa | 79.8 | 454 | 977 | 2,105 |
| Vista Hermosa to Avnda. Pico | 79.5 | 432 | 931 | 2,007 |
| South of Avnda. Pico | 78.7 | 378 | 815 | 1,757 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 72.5 | 147 | 317 | 684 |
| Crown Valley Pkwy. to I-5 | 72.4 | 145 | 313 | 673 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 69.6 | 94 | 204 | 438 |
| Antonio Pkwy. to Oso Pkwy. | 66.1 | 55 | 119 | 255 |
| **La Paz Road** | | | | |
| I-5 to Marguerite | 68.0 | 73 | 158 | 341 |
| Marguerite to Felipe Rd. | 66.4 | 58 | 125 | 269 |
| **Oso Parkway** | | | | |
| West of Cabot Rd. | 68.0 | 73 | 158 | 341 |
| Cabot Rd. to I-5 | 69.8 | 96 | 207 | 447 |
| East of I-5 | 70.7 | 111 | 240 | 517 |
| West of Marguerite | 69.1 | 88 | 189 | 406 |
| Marguerite to Felipe Rd. | 69.1 | 88 | 189 | 406 |
| Felipe Rd. to Antonio Pkwy. | 69.1 | 88 | 189 | 406 |
| East of Antonio Pkwy. | 67.8 | 72 | 155 | 333 |
| West of SR-241 | 67.4 | 67 | 144 | 310 |
| East of SR-241 | 66.2 | 56 | 121 | 260 |
| **Crown Valley Parkway** | | | | |
| West of Moulton Pkwy. | 68.8 | 83 | 179 | 385 |
| Mounton Pkwy. to Greenfield | 69.3 | 90 | 195 | 420 |
| Greenfield to SR-241 | 70.7 | 111 | 240 | 517 |
| SR-241 to I-5 | 71.0 | 117 | 251 | 541 |
| East of I-5 | 71.7 | 129 | 278 | 600 |
| West of Marguerite | 69.1 | 88 | 189 | 406 |
| East of Marguerite | 68.9 | 84 | 182 | 392 |
| West of Antonio Pkwy. | 67.0 | 63 | 136 | 294 |

## Existing Traffic Noise CNEL Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Paseo de Colinas** | | | | |
| West of Cabot Rd. | 65.7 | 51 | 111 | 239 |
| Cabot Rd. to I-5 | 64.4 | 42 | 91 | 195 |
| West of I-5 | 66.5 | 59 | 126 | 272 |
| **Avery** | | | | |
| I-5 to Marguerite | 67.6 | 69 | 149 | 322 |
| East of Marguerite | 62.0 | RW | 64 | 137 |
| **Junipero Serra** | | | | |
| West of I-5 | 63.5 | RW | 80 | 171 |
| East of I-5 | 64.1 | 40 | 87 | 187 |
| **SR-74 (Ortega Highway)** | | | | |
| Cmno. Capastrano to Del Obispo | 67.4 | 67 | 145 | 312 |
| West of I-5 | 72.0 | 135 | 291 | 627 |
| I-5 to Rancho Viejo | 72.8 | 154 | 332 | 715 |
| West of La Novia | 71.6 | 128 | 275 | 593 |
| East of La Novia | 70.7 | 112 | 242 | 521 |
| West of La Pata | 69.9 | 98 | 212 | 457 |
| East of La Pata | 68.0 | 74 | 159 | 344 |
| East of New Ortega Highway | 65.5 | 50 | 108 | 233 |
| **San Juan Creek Road** | | | | |
| East of I-5 | 64.6 | 44 | 94 | 203 |
| East of Valle Rd. | 63.2 | RW | 76 | 163 |
| West of La Novia | 62.0 | RW | 64 | 137 |
| East of La Novia | 61.1 | RW | 55 | 118 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 62.0 | RW | 64 | 137 |
| **Camino de Los Mares** | | | | |
| East of I-5 | 67.5 | 68 | 147 | 316 |
| West of Cmno. Vera Cruz | 64.6 | 44 | 94 | 203 |
| Cmno. Vera Crus to Cmno. del Rio | 61.6 | RW | 59 | 128 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 66.2 | 56 | 121 | 260 |
| **Avenida Pico** | | | | |
| West of I-5 | 67.2 | 65 | 140 | 302 |
| East of I-5 | 69.0 | 86 | 185 | 399 |
| West of La Pata | 66.8 | 62 | 133 | 286 |
| La Pata to Vista Hermosa | 63.6 | RW | 81 | 175 |
| East of Vista Hermosa | 61.0 | RW | 54 | 117 |

## Existing Traffic Noise CNEL Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Cabot Street** | | | | |
| North of Oso Pkwy. | 65.1 | 47 | 101 | 217 |
| South of Oso Pkwy. | 64.1 | 40 | 87 | 187 |
| North of Crown Valley Pkwy. | 62.5 | RW | 68 | 146 |
| Crown Valley Pkwy. to Paseo de Colinas | 62.5 | RW | 68 | 146 |
| **Greenfield** | | | | |
| South of SR-73 | 65.7 | 51 | 111 | 239 |
| **Marguerite** | | | | |
| North of La Paz Rd. | 68.8 | 83 | 179 | 385 |
| South of La Paz Rd. | 68.5 | 80 | 172 | 371 |
| North of Oso Pkwy. | 68.3 | 77 | 165 | 356 |
| South of Oso Pkwy. | 67.5 | 68 | 148 | 318 |
| Oso Pkwy. to Crown Valley Pkwy. | 68.3 | 77 | 165 | 356 |
| South of Crown Valley Pkwy. | 67.5 | 68 | 148 | 318 |
| North of Avery | 68.0 | 73 | 158 | 341 |
| **Rancho Viejo** | | | | |
| South of Avery | 64.1 | 40 | 87 | 187 |
| North of Trabuco Canyon | 62.0 | RW | 64 | 137 |
| Trabuco Canyon to Junipero Serra | 62.0 | RW | 64 | 137 |
| South of Juniperro | 61.6 | RW | 59 | 128 |
| North of Ortega Highway | 61.6 | RW | 59 | 128 |
| **Felipe Road** | | | | |
| North of La Paz Rd. | 63.8 | RW | 83 | 179 |
| South of La Paz Rd. | 64.1 | 40 | 87 | 187 |
| Oso Pkwy. to Marguerite Pkwy. | 62.8 | RW | 72 | 155 |
| **Golden Lantern** | | | | |
| North of Crown Valley Pkwy. | 65.7 | 51 | 111 | 239 |
| Crown Valley Pkwy. to Paseo de Colinas | 66.2 | 56 | 120 | 259 |
| Paseo de Colinas to Marina Mills | 67.5 | 68 | 147 | 316 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.0 | RW | 40 | 86 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 62.5 | RW | 68 | 146 |
| Roso to Ortega Highway | 63.2 | RW | 76 | 163 |
| Ortega Highway to Del Obispo | 63.5 | RW | 80 | 171 |
| Del Obispo to San Juan Creek | 64.8 | 45 | 97 | 210 |
| South of San Juan Creek Rd. | 65.8 | 53 | 114 | 245 |

## Existing Traffic Noise CNEL Levels

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Antonio Parkway** | | | | |
| North of SR-241 | 67.8 | 72 | 155 | 333 |
| Empressa to SR-241 | 67.2 | 65 | 140 | 302 |
| Empressa to Banderas | 67.4 | 67 | 144 | 310 |
| South of Banderas | 68.5 | 80 | 172 | 371 |
| North of Oso Pkwy. | 68.7 | 81 | 175 | 378 |
| Oso Pkwy. to Crown Valley Pkwy. | 67.8 | 72 | 155 | 333 |
| South of Crown Valley Pkwy. | 65.3 | 48 | 104 | 224 |
| North of New Ortega Highway | 64.0 | RW | 86 | 185 |
| North of SR-74 | 64.0 | RW | 86 | 185 |
| **La Pata** | | | | |
| South of Ortega Highway | 58.0 | RW | RW | 73 |
| South of Avnda. Pico | 60.2 | RW | 48 | 103 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 61.6 | RW | 59 | 128 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 62.0 | RW | 64 | 137 |
| **Talega** | | | | |
| East of Vista Hermosa | 52.0 | RW | RW | RW |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Traffic Noise CNEL Changes For Existing + Project Conditions

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **I-5** | |
| La Paz Rd. to Oso Pkwy. | 0.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.0 |
| Avery Pkwy. to Junipero Serra | 0.1 |
| Junipero Serra to Ortega Highway | 0.1 |
| Ortega Highway to San Juan Creek | 0.0 |
| San Juan Creek to Stonehill | 0.0 |
| Stonehill to Cmno. La Ramblas | 0.0 |
| Cmno. La Ramblas to Cmno. de Los Mares | 0.0 |
| Cmno. de Los Mares to Vista Hermosa | 0.0 |
| Vista Hermosa to Avnda. Pico | 0.1 |
| South of Avnda. Pico | 0.0 |
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.6 |
| Crown Valley Pkwy. to I-5 | 0.7 |
| **SR-241** | |
| North of Antonio Pkwy. | 1.6 |
| Antonio Pkwy. to Oso Pkwy. | ***3.5*** |
| **La Paz Road** | |
| I-5 to Marguerite | 0.3 |
| Marguerite to Felipe Rd. | 0.2 |
| **Oso Parkway** | |
| West of Cabot Rd. | 0.1 |
| Cabot Rd. to I-5 | 0.1 |
| East of I-5 | 0.3 |
| West of Marguerite | 1.9 |
| Marguerite to Felipe Rd. | 0.8 |
| Felipe Rd. to Antonio Pkwy. | 1.1 |
| East of Antonio Pkwy. | 1.9 |
| West of SR-241 | 2.1 |
| East of SR-241 | 0.0 |
| **Crown Valley Parkway** | |
| West of Moulton Pkwy. | 0.0 |
| Mounton Pkwy. to Greenfield | 0.0 |
| Greenfield to SR-241 | 0.0 |
| SR-241 to I-5 | 0.1 |
| East of I-5 | 0.1 |
| West of Marguerite | 0.7 |
| East of Marguerite | 1.0 |
| West of Antonio Pkwy. | 1.6 |

## Traffic Noise CNEL Changes For Existing + Project Conditions

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Paseo de Colinas** | |
| West of Cabot Rd. | 0.0 |
| Cabot Rd. to I-5 | 0.0 |
| West of I-5 | 0.0 |
| **Avery** | |
| I-5 to Marguerite | 0.0 |
| East of Marguerite | 0.0 |
| **Junipero Serra** | |
| West of I-5 | 0.0 |
| East of I-5 | 0.0 |
| **SR-74 (Ortega Highway)** | |
| Cmno. Capastrano to Del Obispo | 0.0 |
| West of I-5 | 0.1 |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.8 |
| East of La Novia | 1.3 |
| West of La Pata | 1.9 |
| East of La Pata | -4.8 |
| East of New Ortega Highway | 0.8 |
| **San Juan Creek Road** | |
| East of I-5 | 0.0 |
| East of Valle Rd. | 0.0 |
| West of La Novia | 0.0 |
| East of La Novia | 0.5 |
| **Camino las Ramblas** | |
| East of I-5 | 0.0 |
| **Camino de Los Mares** | |
| East of I-5 | 0.0 |
| West of Cmno. Vera Cruz | 0.0 |
| Cmno. Vera Crus to Cmno. del Rio | 0.0 |
| **Avenida Vista Hermosa** | |
| East of I-5 | 0.2 |
| **Avenida Pico** | |
| West of I-5 | 0.2 |
| East of I-5 | 0.5 |
| West of La Pata | 1.4 |
| La Pata to Vista Hermosa | ***3.7*** |
| East of Vista Hermosa | ***6.5*** |
| **Cabot Street** | |
| North of Oso Pkwy. | 0.0 |
| South of Oso Pkwy. | 0.0 |
| North of Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.0 |

## Traffic Noise CNEL Changes For Existing + Project Conditions

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Greenfield** | |
| South of SR-73 | 0.0 |
| **Marguerite** | |
| North of La Paz Rd. | 0.0 |
| South of La Paz Rd. | 0.2 |
| North of Oso Pkwy. | 0.3 |
| South of Oso Pkwy. | 0.0 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.0 |
| South of Crown Valley Pkwy. | 0.2 |
| North of Avery | 0.0 |
| **Rancho Viejo** | |
| South of Avery | 0.0 |
| North of Trabuco Canyon | 0.0 |
| Trabuco Canyon to Junipero Serra | 0.4 |
| South of Juniperro | 0.0 |
| North of Ortega Highway | 0.5 |
| **Felipe Road** | |
| North of La Paz Rd. | 0.0 |
| South of La Paz Rd. | 0.3 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 |
| **Golden Lantern** | |
| North of Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.0 |
| Paseo de Colinas to Marina Mills | 0.0 |
| **Camino Capistrano** | |
| South of Paseo de Colinas | 0.0 |
| North of Junipero Serra | 0.0 |
| Junipero Serra to Roso | 0.0 |
| Roso to Ortega Highway | 0.0 |
| Ortega Highway to Del Obispo | 0.0 |
| Del Obispo to San Juan Creek | 0.0 |
| South of San Juan Creek Rd. | 0.0 |
| **Antonio Parkway** | |
| North of SR-241 | 0.0 |
| Empressa to SR-241 | 0.0 |
| Empressa to Banderas | 0.0 |
| South of Banderas | 0.1 |
| North of Oso Pkwy. | 0.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.1 |
| South of Crown Valley Pkwy. | 1.9 |
| North of New Ortega Highway | 2.2 |
| North of SR-74 | ***4.4*** |

## Traffic Noise CNEL Changes For Existing + Project Conditions

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **La Pata** | |
| South of Ortega Highway | 2.2 |
| South of Avnda. Pico | 2.0 |
| **Camino Vera Cruz** | |
| Cmno. de Los Mares to Vista Hermosa | 0.0 |
| **Camino las Ramblas** | |
| East of I-5 | 0.0 |
| **Talega** | |
| East of Vista Hermosa | ***7.8*** |

## 2010 Traffic Noise CNEL Changes Due To Phase 1 of Project

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **I-5** | |
| La Paz Rd. to Oso Pkwy. | 0.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.1 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.0 |
| Avery Pkwy. to Junipero Serra | 0.1 |
| Junipero Serra to Ortega Highway | 0.1 |
| Ortega Highway to San Juan Creek | 0.0 |
| San Juan Creek to Stonehill | 0.0 |
| Stonehill to Cmno. La Ramblas | 0.0 |
| Cmno. La Ramblas to Cmno. de Los Mares | 0.0 |
| Cmno. de Los Mares to Vista Hermosa | 0.0 |
| Vista Hermosa to Avnda. Pico | 0.0 |
| South of Avnda. Pico | 0.0 |
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.2 |
| Crown Valley Pkwy. to I-5 | 0.2 |
| **SR-241** | |
| North of Antonio Pkwy. | 0.4 |
| Antonio Pkwy. to Oso Pkwy. | 0.3 |
| **La Paz Road** | |
| I-5 to Marguerite | 0.2 |
| Marguerite to Felipe Rd. | 0.0 |
| **Oso Parkway** | |
| West of Cabot Rd. | 0.0 |
| Cabot Rd. to I-5 | 0.1 |
| East of I-5 | 0.1 |
| West of Marguerite | 0.1 |
| Marguerite to Felipe Rd. | 0.3 |
| Felipe Rd. to Antonio Pkwy. | 0.3 |
| East of Antonio Pkwy. | 0.1 |
| West of SR-241 | 0.2 |
| East of SR-241 | 0.0 |
| **Crown Valley Parkway** | |
| West of Moulton Pkwy. | 0.0 |
| Mounton Pkwy. to Greenfield | 0.0 |
| Greenfield to SR-241 | 0.1 |
| SR-241 to I-5 | 0.1 |
| East of I-5 | 0.2 |
| West of Marguerite | 0.4 |
| East of Marguerite | 0.6 |
| West of Antonio Pkwy. | 0.9 |
| East of Antonio Pkwy. | -- |
| West of SR-241 | -- |
| East of SR-241 | -- |

## 2010 Traffic Noise CNEL Changes Due To Phase 1 of Project

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Paseo de Colinas** | |
| West of Cabot Rd. | 0.0 |
| Cabot Rd. to I-5 | 0.0 |
| West of I-5 | 0.0 |
| **Avery** | |
| I-5 to Marguerite | 0.0 |
| East of Marguerite | 0.4 |
| **Junipero Serra** | |
| West of I-5 | 0.0 |
| East of I-5 | 0.0 |
| **SR-74 (Ortega Highway)** | |
| Cmno. Capastrano to Del Obispo | 0.0 |
| West of I-5 | 0.0 |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.7 |
| East of La Novia | 0.9 |
| West of La Pata | 1.1 |
| East of La Pata | 0.0 |
| West of SR-241 | 0.0 |
| East of SR-241 | 0.0 |
| East of C St. | 0.0 |
| East of New Ortega Highway | 0.0 |
| **San Juan Creek Road** | |
| East of I-5 | 0.0 |
| East of Valle Rd. | 0.3 |
| West of La Novia | 0.0 |
| East of La Novia | 0.3 |
| **Camino las Ramblas** | |
| East of I-5 | 0.0 |
| **Camino de Los Mares** | |
| East of I-5 | 0.0 |
| West of Cmno. Vera Cruz | 0.0 |
| Cmno. Vera Crus to Cmno. del Rio | 0.0 |
| **Camino del Rio** | |
| Cmno. de Los Mares to La Pata | 0.0 |
| **Avenida Vista Hermosa** | |
| East of I-5 | 0.0 |
| Cmno. Vera Cruz to La Pata | 0.0 |
| La Pata to Talega | 0.0 |
| Talega to Pico | 0.0 |

## 2010 Traffic Noise CNEL Changes Due To Phase 1 of Project

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Avenida Pico** | |
| West of I-5 | 0.0 |
| East of I-5 | 0.1 |
| West of La Pata | 0.0 |
| La Pata to Vista Hermosa | 0.0 |
| East of Vista Hermosa | 0.0 |
| **Cabot Street** | |
| North of Oso Pkwy. | 0.0 |
| South of Oso Pkwy. | 0.3 |
| North of Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.0 |
| **Greenfield** | |
| South of SR-73 | 0.0 |
| **Marguerite** | |
| North of La Paz Rd. | 0.1 |
| South of La Paz Rd. | 0.1 |
| North of Oso Pkwy. | 0.1 |
| South of Oso Pkwy. | 0.0 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.1 |
| South of Crown Valley Pkwy. | 0.0 |
| North of Avery | 0.0 |
| **Rancho Viejo** | |
| South of Avery | 0.0 |
| North of Trabuco Canyon | 0.0 |
| Trabuco Canyon to Junipero Serra | 0.0 |
| South of Juniperro | 0.5 |
| North of Ortega Highway | 0.0 |
| **Felipe Road** | |
| North of La Paz Rd. | 0.3 |
| South of La Paz Rd. | 0.3 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 |
| **Golden Lantern** | |
| North of Crown Valley Pkwy. | 0.2 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.2 |
| Paseo de Colinas to Marina Mills | 0.1 |
| **Camino Capistrano** | |
| South of Paseo de Colinas | 0.0 |
| North of Junipero Serra | 0.0 |
| Junipero Serra to Roso | 0.0 |
| Roso to Ortega Highway | 0.0 |
| Ortega Highway to Del Obispo | 0.0 |
| Del Obispo to San Juan Creek | 0.0 |
| South of San Juan Creek Rd. | 0.0 |

## 2010 Traffic Noise CNEL Changes Due To Phase 1 of Project

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Antonio Parkway** | |
| North of SR-241 | 0.0 |
| Empressa to SR-241 | 0.0 |
| Empressa to Banderas | 0.1 |
| South of Banderas | 0.2 |
| North of Oso Pkwy. | 0.2 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.7 |
| South of Crown Valley Pkwy. | 2.1 |
| North of New Ortega Highway | ***3.6*** |
| North of SR-74 | 2.0 |
| **La Pata** | |
| South of Ortega Highway | 1.2 |
| Vista Hermosa to Avnda. Pico | 0.0 |
| South of Avnda. Pico | 0.0 |
| **Camino Vera Cruz** | |
| Cmno. de Los Mares to Vista Hermosa | 0.0 |
| **Camino las Ramblas** | |
| East of I-5 | 0.0 |
| **Talega** | |
| East of Vista Hermosa | 0.0 |

## Traffic Noise CNEL Changes Due To Project

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **I-5** | | | |
| La Paz Rd. to Oso Pkwy. | 0.1 | 0.1 | 0.0 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.0 | 0.0 | -0.1 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.0 | 0.0 | -0.1 |
| Avery Pkwy. to Junipero Serra | 0.1 | 0.1 | 0.0 |
| Junipero Serra to Ortega Highway | 0.1 | 0.1 | 0.0 |
| Ortega Highway to San Juan Creek | 0.0 | 0.0 | 0.0 |
| San Juan Creek to Stonehill | 0.0 | 0.0 | 0.0 |
| Stonehill to Cmno. La Ramblas | 0.0 | 0.0 | 0.0 |
| Cmno. La Ramblas to Cmno. de Los Mares | 0.0 | 0.0 | -0.1 |
| Cmno. de Los Mares to Vista Hermosa | 0.0 | 0.0 | -0.1 |
| Vista Hermosa to Avnda. Pico | 0.1 | 0.1 | 0.0 |
| South of Avnda. Pico | 0.0 | 0.0 | 0.0 |
| **SR-73** | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.3 | 0.3 | 0.3 |
| Crown Valley Pkwy. to I-5 | 0.4 | 0.4 | 0.3 |
| **SR-241** | | | |
| North of Antonio Pkwy. | 1.1 | 1.1 | 1.2 |
| Antonio Pkwy. to Oso Pkwy. | 2.2 | 2.0 | 2.4 |
| **La Paz Road** | | | |
| I-5 to Marguerite | 0.3 | 0.3 | 0.3 |
| Marguerite to Felipe Rd. | 0.2 | 0.2 | 0.2 |
| **Oso Parkway** | | | |
| West of Cabot Rd. | 0.1 | 0.1 | 0.2 |
| Cabot Rd. to I-5 | 0.1 | 0.1 | 0.2 |
| East of I-5 | 0.3 | 0.2 | 0.5 |
| West of Marguerite | 0.3 | 0.2 | 0.5 |
| Marguerite to Felipe Rd. | 0.7 | 0.6 | 1.1 |
| Felipe Rd. to Antonio Pkwy. | 1.0 | 0.9 | 1.5 |
| East of Antonio Pkwy. | 1.8 | 1.7 | 2.6 |
| West of SR-241 | 2.1 | 2.0 | 2.8 |
| East of SR-241 | 0.0 | 0.0 | 0.2 |
| **Crown Valley Parkway** | | | |
| West of Moulton Pkwy. | 0.0 | 0.0 | 0.0 |
| Mounton Pkwy. to Greenfield | -0.1 | -0.1 | 0.0 |
| Greenfield to SR-241 | 0.0 | 0.0 | 0.1 |
| SR-241 to I-5 | 0.1 | 0.1 | 0.1 |
| East of I-5 | 0.1 | 0.1 | 0.1 |
| West of Marguerite | 0.5 | 0.4 | 0.5 |
| East of Marguerite | 0.7 | 0.5 | 0.7 |
| West of Antonio Pkwy. | 1.1 | 0.9 | 1.2 |

## Traffic Noise CNEL Changes Due To Project

| Roadway Segment | Traffic Noise CNEL Change Project | B-4R | B-5 |
|---|---|---|---|
| **Paseo de Colinas** | | | |
| West of Cabot Rd. | 0.0 | 0.0 | 0.0 |
| Cabot Rd. to I-5 | 0.0 | 0.0 | 0.0 |
| West of I-5 | 0.1 | 0.1 | 0.1 |
| **Avery** | | | |
| I-5 to Marguerite | 0.0 | 0.0 | -0.1 |
| East of Marguerite | 0.0 | 0.0 | -0.4 |
| **Junipero Serra** | | | |
| West of I-5 | 0.2 | 0.0 | 0.0 |
| East of I-5 | 0.0 | 0.0 | 0.0 |
| **SR-74 (Ortega Highway)** | | | |
| Cmno. Capastrano to Del Obispo | 0.0 | 0.0 | 0.3 |
| West of I-5 | 0.1 | 0.1 | 0.1 |
| I-5 to Rancho Viejo | 0.5 | 0.2 | 0.5 |
| West of La Novia | 0.7 | 0.3 | 0.7 |
| East of La Novia | 1.0 | 0.7 | 1.1 |
| West of La Pata | 1.5 | 1.0 | 1.6 |
| East of La Pata | -5.1 | -7.3 | -4.3 |
| East of New Ortega Highway | 0.7 | 0.4 | 0.7 |
| **San Juan Creek Road** | | | |
| East of I-5 | 0.0 | 0.0 | 0.0 |
| East of Valle Rd. | -0.2 | -0.2 | -0.2 |
| West of La Novia | -0.3 | -0.3 | -0.3 |
| East of La Novia | 0.3 | 0.3 | 0.3 |
| **Camino las Ramblas** | | | |
| East of I-5 | 0.0 | 0.0 | 0.0 |
| **Camino de Los Mares** | | | |
| East of I-5 | -0.1 | -0.1 | -0.1 |
| West of Cmno. Vera Cruz | 0.0 | 0.0 | 0.0 |
| Cmno. Vera Crus to Cmno. del Rio | 0.0 | 0.0 | 0.0 |
| **Avenida Vista Hermosa** | | | |
| East of I-5 | 0.1 | 0.1 | 0.0 |
| Cmno. Vera Cruz to La Pata | 0.2 | 0.2 | 0.1 |
| La Pata to Talega | 0.2 | 0.2 | 0.3 |
| Talega to Pico | 2.4 | 1.8 | 1.8 |
| **Avenida Pico** | | | |
| West of I-5 | 0.2 | 0.2 | 0.0 |
| East of I-5 | 0.4 | 0.4 | -0.2 |
| West of La Pata | 1.3 | 1.2 | -0.2 |
| La Pata to Vista Hermosa | ***4.3*** | ***3.9*** | 0.5 |
| East of Vista Hermosa | ***4.3*** | ***4.0*** | 0.0 |

## Traffic Noise CNEL Changes Due To Project

| Roadway Segment | Traffic Noise CNEL Change Project | B-4R | B-5 |
|---|---|---|---|
| **Cabot Street** | | | |
| North of Oso Pkwy. | 0.0 | 0.0 | 0.0 |
| South of Oso Pkwy. | 0.0 | 0.0 | 0.0 |
| North of Crown Valley Pkwy. | 0.0 | 0.0 | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.0 | 0.0 | 0.0 |
| **Greenfield** | | | |
| South of SR-73 | 0.0 | 0.0 | 0.2 |
| **Marguerite** | | | |
| North of La Paz Rd. | 0.0 | 0.0 | 0.0 |
| South of La Paz Rd. | 0.2 | 0.1 | 0.2 |
| North of Oso Pkwy. | 0.2 | 0.2 | 0.4 |
| South of Oso Pkwy. | 0.0 | 0.0 | -0.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.0 | 0.0 | 0.0 |
| South of Crown Valley Pkwy. | 0.2 | 0.0 | 0.2 |
| North of Avery | -0.1 | -0.1 | -0.1 |
| **Rancho Viejo** | | | |
| South of Avery | 0.0 | 0.0 | 0.0 |
| North of Trabuco Canyon | 0.0 | 0.0 | 0.0 |
| Trabuco Canyon to Junipero Serra | 0.3 | 0.3 | 0.3 |
| South of Juniperro | 0.0 | 0.0 | 0.0 |
| North of Ortega Highway | 0.4 | 0.4 | 0.4 |
| **Felipe Road** | | | |
| North of La Paz Rd. | 0.0 | 0.0 | 0.0 |
| South of La Paz Rd. | 0.2 | 0.2 | 0.2 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 | 0.0 | 0.0 |
| **Golden Lantern** | | | |
| North of Crown Valley Pkwy. | -0.1 | 0.0 | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.1 | 0.1 | 0.1 |
| Paseo de Colinas to Marina Mills | 0.0 | 0.0 | 0.0 |
| **Camino Capistrano** | | | |
| South of Paseo de Colinas | 0.0 | 0.0 | 0.0 |
| North of Junipero Serra | 0.0 | 0.0 | 0.0 |
| Junipero Serra to Roso | 0.2 | 0.2 | 0.0 |
| Roso to Ortega Highway | 0.3 | 0.3 | 0.3 |
| Ortega Highway to Del Obispo | 0.0 | 0.0 | 0.0 |
| Del Obispo to San Juan Creek | 0.0 | 0.0 | 0.0 |
| South of San Juan Creek Rd. | 0.0 | 0.0 | 0.0 |

## Traffic Noise CNEL Changes Due To Project

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **Antonio Parkway** | | | |
| North of SR-241 | 0.0 | 0.0 | 0.0 |
| Empressa to SR-241 | -0.1 | -0.1 | -0.1 |
| Empressa to Banderas | 0.0 | 0.0 | 0.0 |
| South of Banderas | 0.0 | 0.0 | 0.1 |
| North of Oso Pkwy. | 0.1 | 0.0 | 0.2 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.1 | -0.1 | 0.3 |
| South of Crown Valley Pkwy. | 1.0 | 0.7 | 0.9 |
| North of New Ortega Highway | 2.9 | 2.2 | 2.8 |
| North of SR-74 | ***3.1*** | 2.5 | ***3.2*** |
| **La Pata** | | | |
| South of Ortega Highway | 2.2 | 1.2 | ***3.0*** |
| Vista Hermosa to Avnda. Pico | 0.3 | 0.1 | 0.0 |
| South of Avnda. Pico | 1.8 | 1.8 | 1.2 |
| **Camino Vera Cruz** | | | |
| Cmno. de Los Mares to Vista Hermosa | 0.0 | 0.0 | 0.0 |
| **Camino las Ramblas** | | | |
| East of I-5 | 0.0 | 0.0 | 0.0 |
| **Talega** | | | |
| East of Vista Hermosa | 1.8 | 1.8 | 1.8 |

## Traffic Noise CNEL Changes Due To Project & MPAH Amendments

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **I-5** | |
| La Paz Rd. to Oso Pkwy. | 0.0 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.0 |
| Avery Pkwy. to Junipero Serra | 0.1 |
| Junipero Serra to Ortega Highway | 0.1 |
| Ortega Highway to San Juan Creek | 0.1 |
| San Juan Creek to Stonehill | 0.1 |
| Stonehill to Cmno. La Ramblas | 0.1 |
| Cmno. La Ramblas to Cmno. de Los Mares | 0.1 |
| Cmno. de Los Mares to Vista Hermosa | 0.1 |
| Vista Hermosa to Avnda. Pico | 0.0 |
| South of Avnda. Pico | 0.0 |
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 0.2 |
| Crown Valley Pkwy. to I-5 | 0.2 |
| **SR-241** | |
| North of Antonio Pkwy. | 0.6 |
| Antonio Pkwy. to Oso Pkwy. | 0.8 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.2 |
| Crown Valley Pkwy. to C St. | 2.0 |
| C St. to Ortega Highway | 1.2 |
| Ortega Highway to Avnda. Pico | 0.6 |
| South of Avnda. Pico | 0.2 |
| **La Paz Road** | |
| I-5 to Marguerite | 0.1 |
| Marguerite to Felipe Rd. | 0.0 |
| **Oso Parkway** | |
| West of Cabot Rd. | 0.0 |
| Cabot Rd. to I-5 | 0.0 |
| East of I-5 | 0.2 |
| West of Marguerite | 0.2 |
| Marguerite to Felipe Rd. | 0.4 |
| Felipe Rd. to Antonio Pkwy. | 0.5 |
| East of Antonio Pkwy. | 1.8 |
| West of SR-241 | 2.4 |
| East of SR-241 | 1.5 |

## Traffic Noise CNEL Changes Due To Project & MPAH Amendments

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Crown Valley Parkway** | |
| West of Moulton Pkwy. | 0.0 |
| Mounton Pkwy. to Greenfield | -0.1 |
| Greenfield to SR-241 | 0.0 |
| SR-241 to I-5 | 0.1 |
| East of I-5 | 0.0 |
| West of Marguerite | 0.2 |
| East of Marguerite | 0.3 |
| West of Antonio Pkwy. | 0.6 |
| **Paseo de Colinas** | |
| West of Cabot Rd. | 0.0 |
| Cabot Rd. to I-5 | 0.0 |
| West of I-5 | 0.0 |
| **Avery** | |
| I-5 to Marguerite | -0.1 |
| East of Marguerite | -0.4 |
| **Camino los Padres** | |
| West of I-5 | 0.3 |
| **Junipero Serra** | |
| West of I-5 | 0.3 |
| East of I-5 | 0.0 |
| **SR-74 (Ortega Highway)** | |
| Cmno. Capastrano to Del Obispo | 0.0 |
| West of I-5 | 0.1 |
| I-5 to Rancho Viejo | 0.5 |
| West of La Novia | 0.9 |
| East of La Novia | 1.0 |
| West of La Pata | 1.5 |
| East of La Pata | -3.4 |
| West of SR-241 | -3.0 |
| East of SR-241 | -8.1 |
| East of C St. | **--** |
| East of New Ortega Highway | **--** |
| **San Juan Creek Road** | |
| East of I-5 | 0.2 |
| East of Valle Rd. | 0.3 |
| West of La Novia | 0.3 |
| East of La Novia | 0.8 |
| West of La Pata | ***3.0*** |
| **Camino las Ramblas** | |
| East of I-5 | -0.3 |
| West of Cmno. de Los Mares | 0.0 |
| Cmno. de Los Mares to La Pata | 0.0 |

## Traffic Noise CNEL Changes Due To Project & MPAH Amendments

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Camino de Los Mares** | |
| East of I-5 | -0.1 |
| West of Cmno. Vera Cruz | 0.0 |
| Cmno. Vera Crus to Cmno. del Rio | 0.0 |
| North of Cmno. del Rio | 0.0 |
| **Camino del Rio** | |
| Cmno. de Los Mares to La Pata | 0.0 |
| **Avenida Vista Hermosa** | |
| East of I-5 | 0.3 |
| Cmno. Vera Cruz to La Pata | 0.2 |
| La Pata to Talega | 0.3 |
| Talega to Pico | 1.2 |
| **Avenida Pico** | |
| West of I-5 | 0.0 |
| East of I-5 | 0.4 |
| West of La Pata | 1.2 |
| La Pata to Vista Hermosa | 2.5 |
| East of Vista Hermosa | 2.1 |
| East of SR-241 | ***5.7*** |
| **Cabot Street** | |
| North of Oso Pkwy. | 0.0 |
| South of Oso Pkwy. | 0.0 |
| North of Crown Valley Pkwy. | 0.0 |
| Crown Valley Pkwy. to Paseo de Colinas | -0.5 |
| **Greenfield** | |
| South of SR-73 | 0.0 |
| **Marguerite** | |
| North of La Paz Rd. | 0.0 |
| South of La Paz Rd. | 0.1 |
| North of Oso Pkwy. | 0.0 |
| South of Oso Pkwy. | -0.1 |
| Oso Pkwy. to Crown Valley Pkwy. | -0.1 |
| South of Crown Valley Pkwy. | 0.2 |
| North of Avery | -0.2 |
| **Rancho Viejo** | |
| South of Avery | 0.0 |
| North of Trabuco Canyon | 0.0 |
| Trabuco Canyon to Junipero Serra | 0.0 |
| South of Juniperro | 0.0 |
| North of Ortega Highway | 0.4 |
| **Felipe Road** | |
| North of La Paz Rd. | 0.0 |
| South of La Paz Rd. | 0.0 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 |

## Traffic Noise CNEL Changes Due To Project & MPAH Amendments

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Golden Lantern** | |
| North of Crown Valley Pkwy. | 0.1 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.0 |
| Paseo de Colinas to Marina Mills | 0.0 |
| **Camino Capistrano** | |
| South of Paseo de Colinas | 0.6 |
| North of Junipero Serra | 0.3 |
| Junipero Serra to Roso | 0.2 |
| Roso to Ortega Highway | 0.0 |
| Ortega Highway to Del Obispo | 0.0 |
| Del Obispo to San Juan Creek | 0.0 |
| South of San Juan Creek Rd. | 0.0 |
| **Antonio Parkway** | |
| North of SR-241 | 0.1 |
| Empressa to SR-241 | 0.1 |
| Empressa to Banderas | 0.1 |
| South of Banderas | 0.0 |
| North of Oso Pkwy. | 0.0 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.7 |
| South of Crown Valley Pkwy. | 1.6 |
| North of New Ortega Highway | ***3.5*** |
| North of SR-74 | ***3.3*** |
| **La Pata** | |
| South of Ortega Highway | 1.5 |
| San Juan Creek Rd. to Cmno. La Ramblas | 0.3 |
| Cmno. La Ramblas to Cmno. del Rio | 0.7 |
| Cmno. del Rio to Vista Hermosa | 0.4 |
| Vista Hermosa to Avnda. Pico | 0.4 |
| South of Avnda. Pico | 0.4 |
| **Camino Vera Cruz** | |
| Cmno. de Los Mares to Vista Hermosa | 0.0 |
| **Camino las Ramblas** | |
| East of I-5 | -0.3 |
| West of Cmno. de Los Mares | 0.0 |
| Cmno. de Los Mares to La Pata | 0.0 |
| **A Street** | |
| South of Oso Pkwy. | ***4.0*** |
| North of New Ortega Highway | 0.8 |
| **Talega** | |
| East of Vista Hermosa | 0.4 |

## 2010 Cumulative Traffic Noise CNEL Change Due To Phase 1 of the Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **I-5** | |
| La Paz Rd. to Oso Pkwy. | 0.5 - 0.5 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.4 - 0.4 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.6 - 0.6 |
| Avery Pkwy. to Junipero Serra | 1.0 - 1.1 |
| Junipero Serra to Ortega Highway | 1.0 - 1.0 |
| Ortega Highway to San Juan Creek | 0.9 - 1.1 |
| San Juan Creek to Stonehill | 0.9 - 1.1 |
| Stonehill to Cmno. La Ramblas | 1.0 - 1.2 |
| Cmno. La Ramblas to Cmno. de Los Mares | 0.9 - 1.1 |
| Cmno. de Los Mares to Vista Hermosa | 0.9 - 1.1 |
| Vista Hermosa to Avnda. Pico | 1.0 - 1.1 |
| South of Avnda. Pico | 0.6 - 0.6 |
| **SR-73** | |
| Oso Pkwy. to Crown Valley Pkwy. | 1.6 - 1.7 |
| Crown Valley Pkwy. to I-5 | 1.5 - 1.6 |
| **SR-241** | |
| North of Antonio Pkwy. | 1.2 - 1.6 |
| Antonio Pkwy. to Oso Pkwy. | 2.1 - 2.7 |
| **La Paz Road** | |
| I-5 to Marguerite | -0.3 - -0.1 |
| Marguerite to Felipe Rd. | 0.0 - 0.0 |
| **Oso Parkway** | |
| West of Cabot Rd. | 0.5 - 0.5 |
| Cabot Rd. to I-5 | 0.5 - 0.5 |
| East of I-5 | 0.4 - 0.5 |
| West of Marguerite | 1.6 - 1.7 |
| Marguerite to Felipe Rd. | 0.8 - 1.0 |
| Felipe Rd. to Antonio Pkwy. | 0.6 - 0.8 |
| East of Antonio Pkwy. | 0.4 - 1.3 |
| West of SR-241 | -0.3 - 0.9 |
| East of SR-241 | 0.6 - 0.6 |
| **Crown Valley Parkway** | |
| West of Moulton Pkwy. | 0.3 - 0.3 |
| Mounton Pkwy. to Greenfield | 0.0 - 0.0 |
| Greenfield to SR-241 | 0.0 - 0.1 |
| SR-241 to I-5 | 0.0 - 0.0 |
| East of I-5 | 0.7 - 0.9 |
| West of Marguerite | 2.0 - 2.2 |
| East of Marguerite | 2.2 - 2.4 |
| West of Antonio Pkwy. | 2.2 - 2.5 |

## 2010 Cumulative Traffic Noise CNEL Change Due To Phase 1 of the Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Paseo de Colinas** | |
| West of Cabot Rd. | 0.7 - 0.7 |
| Cabot Rd. to I-5 | 0.5 - 0.5 |
| West of I-5 | -0.9 - -0.9 |
| **Avery** | |
| I-5 to Marguerite | 0.1 - 0.1 |
| East of Marguerite | 0.0 - 0.4 |
| **Junipero Serra** | |
| West of I-5 | 1.1 - 1.1 |
| East of I-5 | 0.3 - 0.3 |
| **SR-74 (Ortega Highway)** | |
| Cmno. Capastrano to Del Obispo | 0.0 - 0.0 |
| West of I-5 | 0.2 - 0.3 |
| I-5 to Rancho Viejo | 0.5 - 0.9 |
| West of La Novia | 0.6 - 1.2 |
| East of La Novia | 1.0 - 1.7 |
| West of La Pata | 1.2 - 1.9 |
| East of La Pata | 0.0 - 0.0 |
| East of New Ortega Highway | 0.0 - 0.0 |
| **San Juan Creek Road** | |
| East of I-5 | 0.7 - 0.9 |
| East of Valle Rd. | 0.6 - 1.2 |
| West of La Novia | 1.1 - 1.5 |
| East of La Novia | 2.1 - 2.1 |
| **Camino las Ramblas** | |
| East of I-5 | 0.8 - 0.8 |
| **Camino de Los Mares** | |
| East of I-5 | 0.1 - 0.1 |
| West of Cmno. Vera Cruz | -1.1 - -0.8 |
| Cmno. Vera Crus to Cmno. del Rio | 0.5 - 1.2 |
| **Avenida Vista Hermosa** | |
| East of I-5 | 2.0 - 2.3 |
| **Avenida Pico** | |
| West of I-5 | 0.0 - 0.0 |
| East of I-5 | 0.3 - 1.0 |
| West of La Pata | -1.1 - -0.4 |
| La Pata to Vista Hermosa | -1.4 - -0.9 |
| East of Vista Hermosa | 1.8 - 2.2 |
| **Cabot Street** | |
| North of Oso Pkwy. | 0.4 - 0.4 |
| South of Oso Pkwy. | -0.6 - -0.3 |
| North of Crown Valley Pkwy. | 0.4 - 0.4 |
| Crown Valley Pkwy. to Paseo de Colinas | -0.9 - -0.9 |

## 2010 Cumulative Traffic Noise CNEL Change Due To Phase 1 of the Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **Greenfield** | |
| South of SR-73 | 0.0 - 0.0 |
| **Marguerite** | |
| North of La Paz Rd. | -0.1 - -0.1 |
| South of La Paz Rd. | 0.4 - 0.4 |
| North of Oso Pkwy. | 0.1 - 0.3 |
| South of Oso Pkwy. | 0.3 - 0.5 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.4 - 0.5 |
| South of Crown Valley Pkwy. | -0.3 - -0.3 |
| North of Avery | -0.1 - -0.1 |
| **Rancho Viejo** | |
| South of Avery | 0.5 - 0.5 |
| North of Trabuco Canyon | 0.0 - 0.4 |
| Trabuco Canyon to Junipero Serra | 0.4 - 0.4 |
| South of Juniperro | 0.5 - 0.5 |
| North of Ortega Highway | 0.5 - 0.5 |
| **Felipe Road** | |
| North of La Paz Rd. | 0.3 - 0.3 |
| South of La Paz Rd. | 0.3 - 0.3 |
| Oso Pkwy. to Marguerite Pkwy. | -0.4 - 0.0 |
| **Golden Lantern** | |
| North of Crown Valley Pkwy. | 0.9 - 0.9 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.3 - 0.3 |
| Paseo de Colinas to Marina Mills | 0.4 - 0.5 |
| **Camino Capistrano** | |
| South of Paseo de Colinas | 0.0 - 0.0 |
| North of Junipero Serra | 0.0 - 0.0 |
| Junipero Serra to Roso | 1.3 - 1.3 |
| Roso to Ortega Highway | 0.3 - 0.3 |
| Ortega Highway to Del Obispo | 0.6 - 0.8 |
| Del Obispo to San Juan Creek | 0.6 - 0.8 |
| South of San Juan Creek Rd. | 0.8 - 0.8 |
| **Antonio Parkway** | |
| North of SR-241 | 1.2 - 1.2 |
| Empressa to SR-241 | 1.3 - 1.3 |
| Empressa to Banderas | 1.5 - 1.6 |
| South of Banderas | 1.1 - 1.2 |
| North of Oso Pkwy. | 1.0 - 1.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.1 - 2.6 |
| South of Crown Valley Pkwy. | ***3.6 - 4.7*** |
| North of New Ortega Highway | ***4.3 - 5.4*** |
| North of SR-74 | ***3.5 - 4.3*** |

## 2010 Cumulative Traffic Noise CNEL Change Due To Phase 1 of the Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change |
|---|---|
| **La Pata** | |
| South of Ortega Highway | 1.2 - 6.0 |
| South of Avnda. Pico | -2.2 - -2.2 |
| **Camino Vera Cruz** | |
| Cmno. de Los Mares to Vista Hermosa | 2.5 - 3.0 |
| **Camino las Ramblas** | |
| East of I-5 | 0.8 - 0.8 |
| **Talega** | |
| East of Vista Hermosa | ***10.0 - 10.4*** |

## Cumulative Traffic Noise CNEL Change Due To Project & Other Development (Under Committed Circulation System)

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **I-5** | | | |
| La Paz Rd. to Oso Pkwy. | 0.7 | 0.7 | 0.7 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.6 | 0.6 | 0.6 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.9 | 0.9 | 0.8 |
| Avery Pkwy. to Junipero Serra | 1.6 | 1.6 | 1.6 |
| Junipero Serra to Ortega Highway | 1.6 | 1.6 | 1.6 |
| Ortega Highway to San Juan Creek | 1.7 | 1.7 | 1.7 |
| San Juan Creek to Stonehill | 1.7 | 1.7 | 1.7 |
| Stonehill to Cmno. La Ramblas | 1.8 | 1.8 | 1.8 |
| Cmno. La Ramblas to Cmno. Los Mares | 1.7 | 1.7 | 1.7 |
| Cmno. de Los Mares to Vista Hermosa | 1.8 | 1.8 | 1.7 |
| Vista Hermosa to Avnda. Pico | 1.8 | 1.8 | 1.8 |
| South of Avnda. Pico | 1.4 | 1.4 | 1.4 |
| **SR-73** | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***3.2*** | ***3.2*** | ***3.1*** |
| Crown Valley Pkwy. to I-5 | ***3.1*** | ***3.1*** | ***3.0*** |
| **SR-241** | | | |
| North of Antonio Pkwy. | 2.9 | 2.9 | ***3.0*** |
| Antonio Pkwy. to Oso Pkwy. | ***4.9*** | ***4.8*** | ***5.1*** |
| **La Paz Road** | | | |
| I-5 to Marguerite | 0.1 | 0.1 | 0.1 |
| Marguerite to Felipe Rd. | 0.2 | 0.2 | 0.2 |
| **Oso Parkway** | | | |
| West of Cabot Rd. | 0.8 | 0.8 | 0.9 |
| Cabot Rd. to I-5 | 0.6 | 0.6 | 0.7 |
| East of I-5 | 0.6 | 0.6 | 0.9 |
| West of Marguerite | 2.2 | 2.2 | 2.5 |
| Marguerite to Felipe Rd. | 1.3 | 1.2 | 1.7 |
| Felipe Rd. to Antonio Pkwy. | 1.3 | 1.2 | 1.8 |
| East of Antonio Pkwy. | 2.2 | 2.1 | ***3.0*** |
| West of SR-241 | 2.1 | 2.0 | 2.8 |
| East of SR-241 | 0.8 | 0.8 | 1.0 |
| **Crown Valley Parkway** | | | |
| West of Moulton Pkwy. | 0.3 | 0.3 | 0.3 |
| Mounton Pkwy. to Greenfield | 0.1 | 0.1 | 0.2 |
| Greenfield to SR-241 | 0.2 | 0.2 | 0.3 |
| SR-241 to I-5 | 0.1 | 0.1 | 0.1 |
| East of I-5 | 1.0 | 1.0 | 1.0 |
| West of Marguerite | 2.5 | 2.4 | 2.5 |
| East of Marguerite | 2.8 | 2.6 | 2.8 |
| West of Antonio Pkwy. | ***3.2*** | ***3.0*** | ***3.4*** |

## Cumulative Traffic Noise CNEL Change Due To Project & Other Development (Under Committed Circulation System)

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **Paseo de Colinas** | | | |
| West of Cabot Rd. | 0.7 | 0.7 | 0.7 |
| Cabot Rd. to I-5 | 0.7 | 0.7 | 0.7 |
| West of I-5 | 0.8 | 0.8 | 0.8 |
| **Avery** | | | |
| I-5 to Marguerite | 0.1 | 0.1 | 0.0 |
| East of Marguerite | 0.4 | 0.4 | 0.0 |
| **Junipero Serra** | | | |
| West of I-5 | 2.0 | 1.8 | 1.8 |
| East of I-5 | 0.7 | 0.7 | 0.7 |
| **SR-74 (Ortega Highway)** | | | |
| Cmno. Capastrano to Del Obispo | 0.0 | 0.0 | 0.3 |
| West of I-5 | 0.7 | 0.7 | 0.7 |
| I-5 to Rancho Viejo | 1.2 | 1.0 | 1.3 |
| West of La Novia | 1.5 | 1.1 | 1.5 |
| East of La Novia | 2.2 | 1.9 | 2.3 |
| West of La Pata | 2.8 | 2.3 | 2.9 |
| East of La Pata | -4.8 | -7.0 | -4.0 |
| East of New Ortega Highway | 1.1 | 0.8 | 1.1 |
| **San Juan Creek Road** | | | |
| East of I-5 | 1.2 | 1.2 | 1.2 |
| East of Valle Rd. | 1.2 | 1.2 | 1.2 |
| West of La Novia | 1.8 | 1.8 | 1.8 |
| East of La Novia | 2.1 | 2.1 | 2.1 |
| **Camino las Ramblas** | | | |
| East of I-5 | 1.1 | 1.1 | 1.1 |
| **Camino de Los Mares** | | | |
| East of I-5 | 0.5 | 0.5 | 0.5 |
| West of Cmno. Vera Cruz | 0.2 | 0.2 | 0.2 |
| Cmno. Vera Crus to Cmno. del Rio | 1.2 | 1.2 | 1.2 |
| **Avenida Vista Hermosa** | | | |
| East of I-5 | 2.9 | 2.9 | 2.8 |
| **Avenida Pico** | | | |
| West of I-5 | 0.6 | 0.6 | 0.5 |
| East of I-5 | 1.9 | 1.9 | 1.3 |
| West of La Pata | 1.8 | 1.7 | 0.4 |
| La Pata to Vista Hermosa | ***3.4*** | ***3.0*** | -0.4 |
| East of Vista Hermosa | ***6.5*** | ***6.2*** | 2.2 |
| **Cabot Street** | | | |
| North of Oso Pkwy. | 0.6 | 0.6 | 0.6 |
| South of Oso Pkwy. | -0.3 | -0.3 | -0.3 |
| North of Crown Valley Pkwy. | 0.7 | 0.7 | 0.7 |
| Crown Valley Pkwy. to Paseo de Colinas | -0.4 | -0.4 | -0.4 |

## Cumulative Traffic Noise CNEL Change Due To Project & Other Development (Under Committed Circulation System)

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **Greenfield** | | | |
| South of SR-73 | 0.2 | 0.2 | 0.4 |
| **Marguerite** | | | |
| North of La Paz Rd. | -0.1 | -0.1 | -0.1 |
| South of La Paz Rd. | 0.7 | 0.6 | 0.7 |
| North of Oso Pkwy. | 0.5 | 0.5 | 0.6 |
| South of Oso Pkwy. | 0.6 | 0.6 | 0.5 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.6 | 0.6 | 0.6 |
| South of Crown Valley Pkwy. | 0.0 | -0.2 | 0.0 |
| North of Avery | -0.1 | -0.1 | -0.1 |
| **Rancho Viejo** | | | |
| South of Avery | 0.7 | 0.7 | 0.7 |
| North of Trabuco Canyon | 0.8 | 0.8 | 0.8 |
| Trabuco Canyon to Junipero Serra | 1.1 | 1.1 | 1.1 |
| South of Juniperro | 0.9 | 0.9 | 0.9 |
| North of Ortega Highway | 0.9 | 0.9 | 0.9 |
| **Felipe Road** | | | |
| North of La Paz Rd. | 0.3 | 0.3 | 0.3 |
| South of La Paz Rd. | 0.5 | 0.5 | 0.5 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 | 0.0 | 0.0 |
| **Golden Lantern** | | | |
| North of Crown Valley Pkwy. | 1.3 | 1.4 | 1.4 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.8 | 0.8 | 0.8 |
| Paseo de Colinas to Marina Mills | 0.8 | 0.8 | 0.8 |
| **Camino Capistrano** | | | |
| South of Paseo de Colinas | 0.8 | 0.8 | 0.8 |
| North of Junipero Serra | 0.0 | 0.0 | 0.0 |
| Junipero Serra to Roso | 2.4 | 2.4 | 2.1 |
| Roso to Ortega Highway | 0.9 | 0.9 | 0.9 |
| Ortega Highway to Del Obispo | 1.3 | 1.3 | 1.3 |
| Del Obispo to San Juan Creek | 1.4 | 1.4 | 1.4 |
| South of San Juan Creek Rd. | 1.2 | 1.2 | 1.2 |
| **Antonio Parkway** | | | |
| North of SR-241 | 1.5 | 1.5 | 1.5 |
| Empressa to SR-241 | 1.3 | 1.3 | 1.3 |
| Empressa to Banderas | 1.5 | 1.5 | 1.5 |
| South of Banderas | 1.1 | 1.1 | 1.2 |
| North of Oso Pkwy. | 1.0 | 0.9 | 1.1 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.4 | 2.2 | 2.6 |
| South of Crown Valley Pkwy. | ***4.2*** | ***3.9*** | ***4.1*** |
| North of New Ortega Highway | ***5.3*** | ***4.6*** | ***5.2*** |
| North of SR-74 | ***5.5*** | ***4.9*** | ***5.6*** |

## Cumulative Traffic Noise CNEL Change Due To Project & Other Development (Under Committed Circulation System)

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **La Pata** | | | |
| South of Ortega Highway | 2.2 | 1.2 | ***3.0*** |
| South of Avnda. Pico | 2.6 | 2.6 | 2.0 |
| **Camino Vera Cruz** | | | |
| Cmno. de Los Mares to Vista Hermosa | ***3.7*** | ***3.7*** | ***3.7*** |
| **Camino las Ramblas** | | | |
| East of I-5 | 1.1 | 1.1 | 1.1 |
| **Talega** | | | |
| East of Vista Hermosa | ***11.8*** | ***11.8*** | ***11.8*** |

## 2025 Cumulative Traffic Noise CNEL Change Due To Project & Other Development & Changes In Road Network

| | Traffic Noise CNEL Change | | |
|---|---|---|---|
| **Roadway Segment** | **Project** | **B-4R** | **B-5** |
| **I-5** | | | |
| La Paz Rd. to Oso Pkwy. | 0.6 - 0.7 | 0.6 - 0.7 | 0.6 - 0.7 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.4 - 0.6 | 0.5 - 0.6 | 0.4 - 0.6 |
| Crown Valley Pkwy. to Avery Pkwy. | 0.7 - 0.9 | 0.7 - 0.9 | 0.6 - 0.8 |
| Avery Pkwy. to Junipero Serra | 1.3 - 1.6 | 1.4 - 1.6 | 1.3 - 1.6 |
| Junipero Serra to Ortega Highway | 1.3 - 1.6 | 1.3 - 1.6 | 1.3 - 1.6 |
| Ortega Highway to San Juan Creek | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| San Juan Creek to Stonehill | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| Stonehill to Cmno. La Ramblas | 1.3 - 1.8 | 1.4 - 1.8 | 1.3 - 1.8 |
| Cmno. La Ramblas to Cmno. Los Mares | 1.3 - 1.7 | 1.3 - 1.7 | 1.2 - 1.7 |
| Cmno. de Los Mares to Vista Hermosa | 1.3 - 1.8 | 1.3 - 1.8 | 1.3 - 1.7 |
| Vista Hermosa to Avnda. Pico | 1.4 - 1.8 | 1.4 - 1.8 | 1.3 - 1.8 |
| South of Avnda. Pico | 0.9 - 1.4 | 0.9 - 1.4 | 0.9 - 1.4 |
| **SR-73** | | | |
| Oso Pkwy. to Crown Valley Pkwy. | ***2.7 - 3.2*** | ***2.7 - 3.2*** | ***2.7 - 3.1*** |
| Crown Valley Pkwy. to I-5 | ***2.6 - 3.1*** | ***2.7 - 3.1*** | ***2.6 - 3.0*** |
| **SR-241** | | | |
| North of Antonio Pkwy. | 2.9 - 5.0 | 2.9 - 4.9 | ***3.0 - 5.1*** |
| Antonio Pkwy. to Oso Pkwy. | ***4.9 - 7.9*** | ***4.8 - 7.8*** | ***5.1 - 8.0*** |
| **La Paz Road** | | | |
| I-5 to Marguerite | 0.0 - 0.1 | 0.0 - 0.1 | 0.0 - 0.1 |
| Marguerite to Felipe Rd. | 0.0 - 0.2 | 0.0 - 0.2 | 0.0 - 0.2 |
| **Oso Parkway** | | | |
| West of Cabot Rd. | 0.7 - 0.8 | 0.8 - 0.8 | 0.9 - 0.9 |
| Cabot Rd. to I-5 | 0.6 - 0.6 | 0.6 - 0.6 | 0.7 - 0.7 |
| East of I-5 | 0.4 - 0.6 | 0.4 - 0.6 | 0.6 - 0.9 |
| West of Marguerite | 1.6 - 2.2 | 1.6 - 2.2 | 1.9 - 2.5 |
| Marguerite to Felipe Rd. | 0.9 - 1.3 | 0.9 - 1.2 | 1.3 - 1.7 |
| Felipe Rd. to Antonio Pkwy. | 0.9 - 1.3 | 0.9 - 1.2 | 1.3 - 1.8 |
| East of Antonio Pkwy. | 1.2 - 2.3 | 0.9 - 2.2 | ***2.0 - 3.2*** |
| West of SR-241 | 0.8 - 2.3 | 0.6 - 2.1 | 1.4 - 2.9 |
| East of SR-241 | 0.8 - 0.8 | 0.8 - 0.8 | 1.0 - 1.0 |
| **Crown Valley Parkway** | | | |
| West of Moulton Pkwy. | 0.2 - 0.3 | 0.3 - 0.3 | 0.3 - 0.3 |
| Mounton Pkwy. to Greenfield | -0.2 - 0.1 | 0.1 - 0.1 | 0.2 - 0.2 |
| Greenfield to SR-241 | 0.2 - 0.2 | 0.2 - 0.2 | 0.2 - 0.3 |
| SR-241 to I-5 | 0.1 - 0.1 | 0.1 - 0.1 | 0.1 - 0.1 |
| East of I-5 | 0.8 - 1.0 | 0.9 - 1.0 | 0.9 - 1.0 |
| West of Marguerite | 2.3 - 2.5 | 2.3 - 2.4 | 2.4 - 2.5 |
| East of Marguerite | 2.6 - 2.8 | 2.6 - 2.6 | 2.8 - 2.8 |
| West of Antonio Pkwy. | ***2.9 - 3.2*** | ***2.8 - 3.0*** | ***3.2 - 3.4*** |

## 2025 Cumulative Traffic Noise CNEL Change Due To Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **Paseo de Colinas** | | | |
| West of Cabot Rd. | 0.2 - 0.7 | 0.7 - 0.7 | 0.7 - 0.7 |
| Cabot Rd. to I-5 | -0.3 - 0.7 | 0.5 - 0.7 | 0.7 - 0.7 |
| West of I-5 | 0.7 - 0.8 | 0.7 - 0.8 | 0.7 - 0.8 |
| **Avery** | | | |
| I-5 to Marguerite | 0.0 - 0.1 | 0.0 - 0.1 | -0.2 - 0.0 |
| East of Marguerite | 0.0 - 0.4 | 0.0 - 0.4 | 0.0 - 0.0 |
| **Junipero Serra** | | | |
| West of I-5 | 1.8 - 3.0 | 1.8 - 1.8 | 1.8 - 1.8 |
| East of I-5 | 0.5 - 0.7 | 0.5 - 0.7 | 0.5 - 0.7 |
| **SR-74 (Ortega Highway)** | | | |
| Cmno. Capastrano to Del Obispo | 0.0 - 0.3 | 0.0 - 0.3 | 0.3 - 0.3 |
| West of I-5 | 0.4 - 0.7 | 0.6 - 0.7 | 0.7 - 0.7 |
| I-5 to Rancho Viejo | 0.9 - 1.2 | 0.8 - 1.0 | 0.9 - 1.3 |
| West of La Novia | 1.1 - 1.5 | 0.8 - 1.1 | 1.1 - 1.5 |
| East of La Novia | 1.3 - 2.2 | 1.4 - 1.9 | 1.9 - 2.3 |
| West of La Pata | 1.8 - 2.8 | 1.9 - 2.3 | 2.4 - 2.9 |
| East of La Pata | -4.8 - -4.0 | -7.0 - -7.0 | -4.0 - -4.0 |
| East of New Ortega Highway | 1.1 - 1.5 | 0.8 - 1.1 | 1.1 - 1.5 |
| **San Juan Creek Road** | | | |
| East of I-5 | 1.1 - 1.4 | 1.2 - 1.2 | 1.1 - 1.2 |
| East of Valle Rd. | 0.9 - 1.2 | 0.9 - 1.2 | 0.9 - 1.2 |
| West of La Novia | 1.5 - 1.8 | 1.5 - 1.8 | 1.5 - 1.8 |
| East of La Novia | 1.8 - 2.1 | 2.1 - 2.1 | 2.1 - 2.1 |
| **Camino las Ramblas** | | | |
| East of I-5 | 0.8 - 1.1 | 1.1 - 1.1 | 1.1 - 1.1 |
| **Camino de Los Mares** | | | |
| East of I-5 | -0.1 - 0.5 | 0.1 - 0.5 | 0.1 - 0.5 |
| West of Cmno. Vera Cruz | -0.5 - 0.2 | -0.2 - 0.2 | -0.2 - 0.2 |
| Cmno. Vera Crus to Cmno. del Rio | 0.9 - 1.2 | 0.9 - 1.2 | 0.9 - 1.2 |
| **Avenida Vista Hermosa** | | | |
| East of I-5 | 1.9 - 2.9 | 2.0 - 2.9 | 1.9 - 2.8 |
| **Avenida Pico** | | | |
| West of I-5 | 0.6 - 0.6 | 0.6 - 0.6 | 0.5 - 0.5 |
| East of I-5 | 0.8 - 1.9 | 0.9 - 1.9 | 0.3 - 1.3 |
| West of La Pata | 0.2 - 1.8 | 0.4 - 1.7 | -1.1 - 0.4 |
| La Pata to Vista Hermosa | ***3.4 - 3.6*** | ***3.0 - 3.2*** | -0.4 - 0.7 |
| East of Vista Hermosa | ***6.5 - 7.1*** | ***6.2 - 6.8*** | 1.8 - 4.5 |
| **Cabot Street** | | | |
| North of Oso Pkwy. | 0.6 - 0.6 | 0.6 - 0.6 | 0.6 - 0.6 |
| South of Oso Pkwy. | -0.3 - -0.3 | -0.3 - -0.3 | -0.3 - -0.3 |
| North of Crown Valley Pkwy. | 0.7 - 0.7 | 0.7 - 0.7 | 0.7 - 0.7 |
| Crown Valley Pkwy. to Paseo de Colinas | -0.9 - -0.4 | -0.4 - -0.4 | -0.9 - -0.4 |

## 2025 Cumulative Traffic Noise CNEL Change Due To Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **Greenfield** | | | |
| South of SR-73 | 0.0 - 0.2 | 0.2 - 0.2 | 0.2 - 0.4 |
| **Marguerite** | | | |
| North of La Paz Rd. | -0.2 - -0.1 | -0.2 - -0.1 | -0.2 - -0.1 |
| South of La Paz Rd. | 0.6 - 0.7 | 0.6 - 0.6 | 0.6 - 0.7 |
| North of Oso Pkwy. | 0.4 - 0.5 | 0.4 - 0.5 | 0.5 - 0.6 |
| South of Oso Pkwy. | 0.5 - 0.6 | 0.6 - 0.6 | 0.5 - 0.5 |
| Oso Pkwy. to Crown Valley Pkwy. | 0.5 - 0.6 | 0.5 - 0.6 | 0.5 - 0.6 |
| South of Crown Valley Pkwy. | -0.2 - 0.0 | -0.2 - -0.2 | -0.2 - 0.0 |
| North of Avery | -0.3 - -0.1 | -0.3 - -0.1 | -0.3 - -0.1 |
| **Rancho Viejo** | | | |
| South of Avery | 0.5 - 0.7 | 0.5 - 0.7 | 0.5 - 0.7 |
| North of Trabuco Canyon | 0.4 - 0.8 | 0.4 - 0.8 | 0.4 - 0.8 |
| Trabuco Canyon to Junipero Serra | 0.8 - 1.1 | 0.8 - 1.1 | 0.8 - 1.1 |
| South of Juniperro | 0.5 - 0.9 | 0.5 - 0.9 | 0.5 - 0.9 |
| North of Ortega Highway | 0.9 - 1.2 | 0.9 - 0.9 | 0.9 - 0.9 |
| **Felipe Road** | | | |
| North of La Paz Rd. | 0.3 - 0.5 | 0.0 - 0.3 | 0.0 - 0.3 |
| South of La Paz Rd. | 0.3 - 0.5 | 0.3 - 0.5 | 0.3 - 0.5 |
| Oso Pkwy. to Marguerite Pkwy. | 0.0 - 0.0 | 0.0 - 0.0 | 0.0 - 0.0 |
| **Golden Lantern** | | | |
| North of Crown Valley Pkwy. | 1.3 - 1.3 | 1.3 - 1.4 | 1.3 - 1.4 |
| Crown Valley Pkwy. to Paseo de Colinas | 0.5 - 0.8 | 0.6 - 0.8 | 0.6 - 0.8 |
| Paseo de Colinas to Marina Mills | 0.5 - 0.8 | 0.6 - 0.8 | 0.6 - 0.8 |
| **Camino Capistrano** | | | |
| South of Paseo de Colinas | 0.8 - 2.0 | 0.8 - 0.8 | 0.8 - 0.8 |
| North of Junipero Serra | 0.0 - 4.8 | 0.0 - 0.0 | 0.0 - 0.0 |
| Junipero Serra to Roso | 2.1 - 2.6 | 2.1 - 2.4 | 1.9 - 2.1 |
| Roso to Ortega Highway | 0.3 - 0.9 | 0.6 - 0.9 | 0.6 - 0.9 |
| Ortega Highway to Del Obispo | 0.6 - 1.3 | 1.1 - 1.3 | 1.1 - 1.3 |
| Del Obispo to San Juan Creek | 0.8 - 1.4 | 1.0 - 1.4 | 1.0 - 1.4 |
| South of San Juan Creek Rd. | 1.0 - 1.2 | 1.0 - 1.2 | 1.0 - 1.2 |
| **Antonio Parkway** | | | |
| North of SR-241 | 1.5 - 1.5 | 1.5 - 1.5 | 1.5 - 1.5 |
| Empressa to SR-241 | 1.3 - 1.6 | 1.3 - 1.6 | 1.3 - 1.6 |
| Empressa to Banderas | 1.5 - 1.8 | 1.5 - 1.8 | 1.5 - 1.8 |
| South of Banderas | 0.8 - 1.3 | 0.8 - 1.3 | 0.9 - 1.4 |
| North of Oso Pkwy. | 0.7 - 1.2 | 0.7 - 1.2 | 0.8 - 1.3 |
| Oso Pkwy. to Crown Valley Pkwy. | 2.4 - 2.8 | 2.2 - 2.6 | 2.6 - 3.0 |
| South of Crown Valley Pkwy. | ***4.2 - 4.9*** | ***3.9 - 4.6*** | ***4.1 - 4.8*** |
| North of New Ortega Highway | ***5.3 - 6.1*** | ***4.6 - 5.5*** | ***5.2 - 6.1*** |
| North of SR-74 | ***5.5 - 6.8*** | ***4.9 - 6.4*** | ***5.6 - 6.9*** |

## 2025 Cumulative Traffic Noise CNEL Change Due To Project & Other Development & Changes In Road Network

| Roadway Segment | Traffic Noise CNEL Change | | |
|---|---|---|---|
| | Project | B-4R | B-5 |
| **La Pata** | | | |
| South of Ortega Highway | 2.2 - 9.2 | 1.2 - 8.8 | ***3.0 - 9.2*** |
| South of Avnda. Pico | 2.6 - 3.4 | 2.6 - 3.0 | 2.0 - 2.6 |
| **Camino Vera Cruz** | | | |
| Cmno. de Los Mares to Vista Hermosa | ***0.9 - 3.9*** | ***3.7 - 3.9*** | ***3.7 - 3.7*** |
| **Camino las Ramblas** | | | |
| East of I-5 | 0.8 - 1.1 | 1.1 - 1.1 | 1.1 - 1.1 |
| **Talega** | | | |
| East of Vista Hermosa | ***10.4 - 11.8*** | ***10.4 - 11.8*** | ***10.8 - 11.8*** |

## Future Traffic Noise Levels With Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| La Paz Rd. to Oso Pkwy. | 82.2 | 653 | 1,407 | 3,031 |
| Oso Pkwy. to Crown Valley Pkwy. | 81.9 | 619 | 1,333 | 2,873 |
| Crown Valley Pkwy. to Avery Pkwy. | 81.5 | 585 | 1,261 | 2,716 |
| Avery Pkwy. to Junipero Serra | 82.1 | 642 | 1,383 | 2,979 |
| Junipero Serra to Ortega Highway | 82.0 | 630 | 1,358 | 2,926 |
| Ortega Highway to San Juan Creek | 81.7 | 606 | 1,306 | 2,813 |
| San Juan Creek to Stonehill | 81.7 | 605 | 1,303 | 2,807 |
| Stonehill to Cmno. Las Ramblas | 81.6 | 589 | 1,269 | 2,734 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.8 | 609 | 1,311 | 2,825 |
| Cmno. de Los Mares to Vista Hermosa | 81.6 | 596 | 1,283 | 2,765 |
| Vista Hermosa to Avnda. Pico | 81.4 | 573 | 1,235 | 2,660 |
| South of Avnda. Pico | 80.1 | 473 | 1,019 | 2,194 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.7 | 239 | 515 | 1,109 |
| Crown Valley Pkwy. to I-5 | 75.5 | 234 | 504 | 1,085 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.6 | 204 | 439 | 946 |
| Antonio Pkwy. to Oso Pkwy. | 74.0 | 184 | 397 | 855 |
| Oso Pkwy. to Crown Valley Pkwy. | 74.0 | 184 | 397 | 855 |
| Crown Valley Pkwy. to C St. | 74.0 | 184 | 397 | 855 |
| C St. to Ortega Highway | 73.1 | 161 | 347 | 747 |
| Ortega Highway to Avnda. Pico | 73.0 | 158 | 341 | 734 |
| South of Avnda. Pico | 71.8 | 133 | 286 | 616 |
| **La Paz Road** | | | | |
| I-5 to Marguerite | 68.1 | 75 | 162 | 349 |
| Marguerite to Felipe Rd. | 66.6 | 60 | 129 | 277 |
| **Oso Parkway** | | | | |
| West of Cabot Rd. | 68.8 | 83 | 179 | 385 |
| Cabot Rd. to I-5 | 70.4 | 106 | 228 | 492 |
| East of I-5 | 71.3 | 123 | 265 | 571 |
| West of Marguerite | 71.3 | 123 | 265 | 571 |
| Marguerite to Felipe Rd. | 70.5 | 107 | 231 | 498 |
| Felipe Rd. to Antonio Pkwy. | 70.5 | 107 | 231 | 498 |
| East of Antonio Pkwy. | 70.1 | 102 | 220 | 473 |
| West of SR-241 | 69.7 | 95 | 204 | 440 |
| East of SR-241 | 67.0 | 63 | 136 | 294 |

## Future Traffic Noise Levels With Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Crown Valley Parkway** | | | | |
| West of Moulton Pkwy. | 69.1 | 88 | 189 | 406 |
| Mounton Pkwy. to Greenfield | 69.5 | 92 | 198 | 427 |
| Greenfield to SR-241 | 70.9 | 115 | 248 | 535 |
| SR-241 to I-5 | 71.1 | 119 | 257 | 553 |
| East of I-5 | 72.7 | 151 | 324 | 699 |
| West of Marguerite | 71.6 | 128 | 276 | 594 |
| East of Marguerite | 71.7 | 129 | 278 | 600 |
| West of Antonio Pkwy. | 70.2 | 103 | 222 | 479 |
| **Paseo de Colinas** | | | | |
| West of Cabot Rd. | 66.4 | 57 | 123 | 265 |
| Cabot Rd. to I-5 | 65.1 | 47 | 101 | 217 |
| West of I-5 | 67.4 | 67 | 144 | 310 |
| **Avery** | | | | |
| I-5 to Marguerite | 67.7 | 71 | 152 | 328 |
| East of Marguerite | 62.5 | RW | 68 | 146 |
| **Camino los Padres** | | | | |
| West of I-5 | 63.2 | RW | 76 | 163 |
| **Junipero Serra** | | | | |
| West of I-5 | 66.5 | 59 | 126 | 272 |
| East of I-5 | 64.8 | 45 | 97 | 210 |
| **SR-74 (Ortega Highway)** | | | | |
| Cmno. Capastrano to Del Obispo | 67.7 | 71 | 152 | 328 |
| West of I-5 | 72.6 | 149 | 322 | 693 |
| I-5 to Rancho Viejo | 74.1 | 186 | 402 | 866 |
| West of La Novia | 73.1 | 161 | 346 | 746 |
| East of La Novia | 73.0 | 158 | 341 | 736 |
| West of La Pata | 72.7 | 152 | 327 | 704 |
| East of La Pata | 64.1 | 40 | 87 | 186 |
| West of SR-241 | 62.5 | RW | 68 | 147 |
| East of SR-241 | 58.5 | RW | RW | 80 |
| East of C St. | 58.5 | RW | RW | 80 |
| East of New Ortega Highway | 67.0 | 63 | 136 | 292 |
| **San Juan Creek Road** | | | | |
| East of I-5 | 66.0 | 54 | 117 | 252 |
| East of Valle Rd. | 64.4 | 42 | 91 | 195 |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| West of La Pata | 61.1 | RW | 55 | 118 |

## Future Traffic Noise Levels With Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **New Ortega Highway** | | | | |
| Antonio Pkwy. to A St. | 69.2 | 89 | 191 | 411 |
| A St. to C St. | 69.2 | 89 | 191 | 411 |
| C St. to F St. | 67.0 | 63 | 135 | 291 |
| F St. to SR-74 | 67.6 | 69 | 149 | 322 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |
| West of Cmno. de Los Mares | 59.8 | RW | 45 | 97 |
| Cmno. de Los Mares to La Pata | 59.8 | RW | 45 | 97 |
| **Camino de Los Mares** | | | | |
| East of I-5 | 68.0 | 73 | 157 | 339 |
| West of Cmno. Vera Cruz | 64.8 | 45 | 97 | 210 |
| Cmno. Vera Crus to Cmno. del Rio | 62.8 | RW | 72 | 155 |
| North of Cmno. del Rio | 58.1 | RW | RW | 74 |
| **Camino del Rio** | | | | |
| Cmno. de Los Mares to La Pata | 61.1 | RW | 55 | 118 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.1 | 88 | 189 | 406 |
| Cmno. Vera Cruz to La Pata | 69.6 | 93 | 201 | 433 |
| La Pata to Talega | 67.4 | 67 | 144 | 310 |
| Talega to Pico | 62.3 | RW | 66 | 141 |
| **Avenida Pico** | | | | |
| West of I-5 | 67.8 | 72 | 155 | 333 |
| East of I-5 | 70.9 | 115 | 248 | 535 |
| West of La Pata | 68.7 | 81 | 175 | 378 |
| La Pata to Vista Hermosa | 67.2 | 65 | 140 | 302 |
| East of Vista Hermosa | 68.1 | 75 | 162 | 349 |
| East of SR-241 | 67.4 | 67 | 144 | 310 |
| **Cabot Street** | | | | |
| North of Oso Pkwy. | 65.7 | 51 | 111 | 239 |
| South of Oso Pkwy. | 63.8 | RW | 83 | 179 |
| North of Crown Valley Pkwy. | 63.2 | RW | 76 | 163 |
| Crown Valley Pkwy. to Paseo de Colinas | 62.0 | RW | 64 | 137 |
| **Greenfield** | | | | |
| South of SR-73 | 65.8 | 53 | 114 | 245 |

## Future Traffic Noise Levels With Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Marguerite** | | | | |
| North of La Paz Rd. | 68.7 | 81 | 175 | 378 |
| South of La Paz Rd. | 69.2 | 89 | 192 | 413 |
| North of Oso Pkwy. | 68.8 | 83 | 179 | 385 |
| South of Oso Pkwy. | 68.1 | 75 | 162 | 349 |
| Oso Pkwy. to Crown Valley Pkwy. | 68.9 | 84 | 182 | 392 |
| South of Crown Valley Pkwy. | 67.5 | 68 | 148 | 318 |
| North of Avery | 67.8 | 72 | 155 | 333 |
| **Rancho Viejo** | | | | |
| South of Avery | 64.8 | 45 | 97 | 210 |
| North of Trabuco Canyon | 62.8 | RW | 72 | 155 |
| Trabuco Canyon to Junipero Serra | 63.2 | RW | 76 | 163 |
| South of Juniperro | 62.5 | RW | 68 | 146 |
| North of Ortega Highway | 62.8 | RW | 72 | 155 |
| **Felipe Road** | | | | |
| North of La Paz Rd. | 64.4 | 42 | 91 | 195 |
| South of La Paz Rd. | 64.6 | 44 | 94 | 203 |
| Oso Pkwy. to Marguerite Pkwy. | 62.8 | RW | 72 | 155 |
| **Golden Lantern** | | | | |
| North of Crown Valley Pkwy. | 67.0 | 63 | 135 | 291 |
| Crown Valley Pkwy. to Paseo de Colinas | 67.0 | 63 | 135 | 291 |
| Paseo de Colinas to Marina Mills | 68.3 | 77 | 165 | 356 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 61.1 | RW | 55 | 118 |
| North of Junipero Serra | 63.8 | RW | 83 | 179 |
| Junipero Serra to Roso | 65.1 | 47 | 101 | 217 |
| Roso to Ortega Highway | 64.1 | 40 | 87 | 187 |
| Ortega Highway to Del Obispo | 64.8 | 45 | 97 | 210 |
| Del Obispo to San Juan Creek | 66.2 | 56 | 120 | 259 |
| South of San Juan Creek Rd. | 67.1 | 64 | 138 | 297 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| South of Banderas | 69.8 | 98 | 210 | 453 |
| North of Oso Pkwy. | 69.8 | 98 | 210 | 453 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.6 | 110 | 237 | 511 |
| South of Crown Valley Pkwy. | 70.1 | 102 | 220 | 473 |
| North of New Ortega Highway | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 114 | 246 | 529 |

## Future Traffic Noise Levels With Project

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **La Pata** | | | | |
| South of Ortega Highway | 67.2 | 65 | 140 | 302 |
| San Juan Creek Rd. to Cmno. Las Ramblas | 67.2 | 65 | 140 | 302 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.6 | 60 | 129 | 277 |
| Cmno. del Rio to Vista Hermosa | 67.0 | 63 | 136 | 294 |
| Vista Hermosa to Avnda. Pico | 69.3 | 90 | 195 | 420 |
| South of Avnda. Pico | 63.6 | RW | 81 | 175 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.5 | 50 | 108 | 232 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |
| West of Cmno. de Los Mares | 59.8 | RW | 45 | 97 |
| Cmno. de Los Mares to La Pata | 59.8 | RW | 45 | 97 |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Highway | 59.8 | RW | 45 | 97 |
| West of SR-241 | -- | -- | -- | -- |
| East of SR-241 | -- | -- | -- | -- |
| **F Street** | | | | |
| Oso Pkwy. to C St. | 67.2 | 65 | 141 | 303 |
| C St. to New Ortega Highway | 64.6 | 44 | 94 | 203 |
| **C Street** | | | | |
| Northeast of F St. | 63.2 | RW | 76 | 163 |
| North of New Ortega Highway | 64.4 | 42 | 91 | 195 |
| New Ortega Highway to Ortega Highway | 67.2 | 65 | 141 | 303 |
| Ortega Highway to Talega | 66.4 | 57 | 123 | 265 |
| South of Talega | 64.1 | 40 | 87 | 187 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |
| South of C St. | 59.8 | RW | 45 | 97 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| La Paz Rd. to Oso Pkwy. | 82.2 | 653 | 1,407 | 3,031 |
| Oso Pkwy. to Crown Valley Pkwy. | 81.9 | 619 | 1,333 | 2,873 |
| Crown Valley Pkwy. to Avery Pkwy. | 81.5 | 585 | 1,261 | 2,716 |
| Avery Pkwy. to Junipero Serra | 82.1 | 642 | 1,383 | 2,979 |
| Junipero Serra to Ortega Highway | 82.0 | 630 | 1,358 | 2,926 |
| Ortega Highway to San Juan Creek | 81.7 | 605 | 1,303 | 2,807 |
| San Juan Creek to Stonehill | 81.7 | 603 | 1,300 | 2,801 |
| Stonehill to Cmno. Las Ramblas | 81.6 | 589 | 1,269 | 2,734 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.8 | 607 | 1,308 | 2,819 |
| Cmno. de Los Mares to Vista Hermosa | 81.6 | 594 | 1,280 | 2,758 |
| Vista Hermosa to Avnda. Pico | 81.4 | 572 | 1,232 | 2,654 |
| South of Avnda. Pico | 80.1 | 473 | 1,019 | 2,194 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.7 | 239 | 515 | 1,109 |
| Crown Valley Pkwy. to I-5 | 75.5 | 232 | 500 | 1,077 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.6 | 201 | 434 | 934 |
| Antonio Pkwy. to Oso Pkwy. | 73.9 | 182 | 391 | 843 |
| Oso Pkwy. to Crown Valley Pkwy. | 73.6 | 174 | 375 | 808 |
| Crown Valley Pkwy. to C St. | 73.6 | 174 | 375 | 808 |
| C St. to Ortega Highway | 72.9 | 155 | 335 | 722 |
| Ortega Highway to Avnda. Pico | 72.8 | 153 | 329 | 709 |
| South of Avnda. Pico | 71.7 | 130 | 280 | 603 |
| **La Paz Road** | | | | |
| I-5 to Marguerite | 68.1 | 75 | 162 | 349 |
| Marguerite to Felipe Rd. | 66.6 | 60 | 129 | 277 |
| **Oso Parkway** | | | | |
| West of Cabot Rd. | 68.8 | 83 | 179 | 385 |
| Cabot Rd. to I-5 | 70.4 | 106 | 228 | 492 |
| East of I-5 | 71.3 | 122 | 262 | 565 |
| West of Marguerite | 71.3 | 122 | 262 | 565 |
| Marguerite to Felipe Rd. | 70.4 | 106 | 228 | 492 |
| Felipe Rd. to Antonio Pkwy. | 70.4 | 106 | 228 | 492 |
| East of Antonio Pkwy. | 70.0 | 100 | 217 | 466 |
| West of SR-241 | 69.5 | 92 | 198 | 427 |
| East of SR-241 | 67.0 | 63 | 136 | 294 |

## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Crown Valley Parkway** | | | | |
| West of Moulton Pkwy. | 69.1 | 88 | 189 | 406 |
| Mounton Pkwy. to Greenfield | 69.5 | 92 | 198 | 427 |
| Greenfield to SR-241 | 70.9 | 115 | 248 | 535 |
| SR-241 to I-5 | 71.1 | 119 | 257 | 553 |
| East of I-5 | 72.7 | 151 | 324 | 699 |
| West of Marguerite | 71.5 | 127 | 273 | 588 |
| East of Marguerite | 71.5 | 127 | 273 | 588 |
| West of Antonio Pkwy. | 70.0 | 100 | 217 | 466 |
| **Paseo de Colinas** | | | | |
| West of Cabot Rd. | 66.4 | 57 | 123 | 265 |
| Cabot Rd. to I-5 | 65.1 | 47 | 101 | 217 |
| West of I-5 | 67.4 | 67 | 144 | 310 |
| **Avery** | | | | |
| I-5 to Marguerite | 67.7 | 71 | 152 | 328 |
| East of Marguerite | 62.5 | RW | 68 | 146 |
| **Junipero Serra** | | | | |
| West of I-5 | 65.3 | 48 | 104 | 225 |
| East of I-5 | 64.8 | 45 | 97 | 210 |
| **SR-74 (Ortega Highway)** | | | | |
| Cmno. Capastrano to Del Obispo | 67.7 | 71 | 152 | 328 |
| West of I-5 | 72.6 | 149 | 322 | 693 |
| I-5 to Rancho Viejo | 73.8 | 180 | 388 | 836 |
| West of La Novia | 72.7 | 152 | 327 | 704 |
| East of La Novia | 72.6 | 149 | 322 | 693 |
| West of La Pata | 72.2 | 140 | 301 | 650 |
| East of La Pata | 61.0 | RW | 55 | 117 |
| East of C St. | 58.5 | RW | RW | 80 |
| East of New Ortega Highway | 66.7 | 60 | 129 | 278 |
| **San Juan Creek Road** | | | | |
| East of I-5 | 65.8 | 53 | 114 | 245 |
| East of Valle Rd. | 64.4 | 42 | 91 | 195 |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| West of La Pata | -- | -- | -- | -- |
| **New Ortega Highway** | | | | |
| Antonio Pkwy. to A St. | 68.4 | 78 | 168 | 362 |
| A St. to C St. | 68.5 | 79 | 171 | 368 |
| C St. to F St. | 66.0 | 54 | 117 | 252 |
| F St. to SR-74 | 66.5 | 59 | 126 | 272 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |

## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Camino de Los Mares** | | | | |
| East of I-5 | 68.0 | 73 | 157 | 339 |
| West of Cmno. Vera Cruz | 64.8 | 45 | 97 | 210 |
| Cmno. Vera Crus to Cmno. del Rio | 62.8 | RW | 72 | 155 |
| **Camino del Rio** | | | | |
| Cmno. de Los Mares to La Pata | 59.0 | RW | 40 | 86 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.1 | 88 | 189 | 406 |
| Cmno. Vera Cruz to La Pata | 69.6 | 93 | 201 | 433 |
| La Pata to Talega | 67.4 | 67 | 144 | 310 |
| Talega to Pico | 61.7 | RW | 60 | 129 |
| **Avenida Pico** | | | | |
| West of I-5 | 67.8 | 72 | 155 | 333 |
| East of I-5 | 70.9 | 115 | 248 | 535 |
| West of La Pata | 68.5 | 80 | 172 | 371 |
| La Pata to Vista Hermosa | 66.8 | 62 | 133 | 286 |
| East of Vista Hermosa | 67.8 | 72 | 155 | 333 |
| East of SR-241 | 66.6 | 60 | 129 | 277 |
| **Cabot Street** | | | | |
| North of Oso Pkwy. | 65.7 | 51 | 111 | 239 |
| South of Oso Pkwy. | 63.8 | RW | 83 | 179 |
| North of Crown Valley Pkwy. | 63.2 | RW | 76 | 163 |
| Crown Valley Pkwy. to Paseo de Colinas | 62.0 | RW | 64 | 137 |
| **Greenfield** | | | | |
| South of SR-73 | 65.8 | 53 | 114 | 245 |
| **Marguerite** | | | | |
| North of La Paz Rd. | 68.7 | 81 | 175 | 378 |
| South of La Paz Rd. | 69.1 | 88 | 189 | 406 |
| North of Oso Pkwy. | 68.8 | 83 | 179 | 385 |
| South of Oso Pkwy. | 68.1 | 75 | 162 | 349 |
| Oso Pkwy. to Crown Valley Pkwy. | 68.9 | 84 | 182 | 392 |
| South of Crown Valley Pkwy. | 67.4 | 67 | 144 | 310 |
| North of Avery | 67.8 | 72 | 155 | 333 |
| **Rancho Viejo** | | | | |
| South of Avery | 64.8 | 45 | 97 | 210 |
| North of Trabuco Canyon | 62.8 | RW | 72 | 155 |
| Trabuco Canyon to Junipero Serra | 63.2 | RW | 76 | 163 |
| South of Juniperro | 62.5 | RW | 68 | 146 |
| North of Ortega Highway | 62.5 | RW | 68 | 146 |

## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Felipe Road** | | | | |
| North of La Paz Rd. | 64.1 | 40 | 87 | 187 |
| South of La Paz Rd. | 64.6 | 44 | 94 | 203 |
| Oso Pkwy. to Marguerite Pkwy. | 62.8 | RW | 72 | 155 |
| **Golden Lantern** | | | | |
| North of Crown Valley Pkwy. | 67.1 | 64 | 138 | 297 |
| Crown Valley Pkwy. to Paseo de Colinas | 67.0 | 63 | 135 | 291 |
| Paseo de Colinas to Marina Mills | 68.3 | 77 | 165 | 356 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.8 | RW | 45 | 97 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 64.8 | 45 | 97 | 210 |
| Roso to Ortega Highway | 64.1 | 40 | 87 | 187 |
| Ortega Highway to Del Obispo | 64.8 | 45 | 97 | 210 |
| Del Obispo to San Juan Creek | 66.2 | 56 | 120 | 259 |
| South of San Juan Creek Rd. | 67.1 | 64 | 138 | 297 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| South of Banderas | 69.8 | 98 | 210 | 453 |
| North of Oso Pkwy. | 69.8 | 98 | 210 | 453 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.5 | 107 | 231 | 498 |
| South of Crown Valley Pkwy. | 69.8 | 98 | 210 | 453 |
| North of New Ortega Highway | 69.6 | 93 | 201 | 433 |
| North of SR-74 | 70.4 | 106 | 228 | 492 |
| **La Pata** | | | | |
| South of Ortega Highway | 66.8 | 62 | 133 | 286 |
| San Juan Creek Rd. to Cmno. Las Ramblas | 66.8 | 62 | 133 | 286 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.4 | 58 | 125 | 269 |
| Cmno. del Rio to Vista Hermosa | 66.8 | 62 | 133 | 286 |
| Vista Hermosa to Avnda. Pico | 69.2 | 89 | 192 | 413 |
| South of Avnda. Pico | 63.2 | RW | 76 | 164 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.5 | 50 | 108 | 232 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |
| West of Cmno. de Los Mares | -- | -- | -- | -- |
| Cmno. de Los Mares to La Pata | -- | -- | -- | -- |
| **A Street** | | | | |
| South of Oso Pkwy. | 59.0 | RW | 40 | 86 |
| North of New Ortega Highway | 59.0 | RW | 40 | 86 |

## Future Traffic Noise Levels With Alternative B-4R

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **F Street** | | | | |
| Oso Pkwy. to C St. | 66.7 | 60 | 129 | 278 |
| C St. to New Ortega Highway | 64.4 | 42 | 91 | 195 |
| **C Street** | | | | |
| Northeast of F St. | 61.1 | RW | 55 | 118 |
| North of New Ortega Highway | 63.8 | RW | 83 | 179 |
| New Ortega Highway to Ortega Highway | 66.0 | 54 | 117 | 252 |
| Ortega Highway to Talega | 64.8 | 45 | 97 | 210 |
| South of Talega | 62.0 | RW | 64 | 137 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |
| South of C St. | 59.0 | RW | 40 | 86 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way

## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **I-5** | | | | |
| La Paz Rd. to Oso Pkwy. | 82.2 | 652 | 1,404 | 3,025 |
| Oso Pkwy. to Crown Valley Pkwy. | 81.8 | 615 | 1,325 | 2,855 |
| Crown Valley Pkwy. to Avery Pkwy. | 81.5 | 581 | 1,252 | 2,697 |
| Avery Pkwy. to Junipero Serra | 82.1 | 637 | 1,372 | 2,955 |
| Junipero Serra to Ortega Highway | 81.9 | 625 | 1,347 | 2,902 |
| Ortega Highway to San Juan Creek | 81.7 | 602 | 1,297 | 2,795 |
| San Juan Creek to Stonehill | 81.7 | 600 | 1,292 | 2,783 |
| Stonehill to Cmno. Las Ramblas | 81.5 | 585 | 1,261 | 2,716 |
| Cmno. Las Ramblas to Cmno. de Los Mares | 81.7 | 602 | 1,297 | 2,795 |
| Cmno. de Los Mares to Vista Hermosa | 81.5 | 588 | 1,266 | 2,728 |
| Vista Hermosa to Avnda. Pico | 81.3 | 568 | 1,223 | 2,636 |
| South of Avnda. Pico | 80.1 | 471 | 1,015 | 2,188 |
| **SR-73** | | | | |
| Oso Pkwy. to Crown Valley Pkwy. | 75.6 | 237 | 511 | 1,101 |
| Crown Valley Pkwy. to I-5 | 75.4 | 230 | 496 | 1,069 |
| **SR-241** | | | | |
| North of Antonio Pkwy. | 74.7 | 206 | 444 | 957 |
| Antonio Pkwy. to Oso Pkwy. | 74.1 | 187 | 402 | 866 |
| Oso Pkwy. to Crown Valley Pkwy. | 74.3 | 194 | 418 | 901 |
| Crown Valley Pkwy. to C St. | 74.3 | 194 | 418 | 901 |
| C St. to Ortega Highway | 73.0 | 158 | 341 | 734 |
| Ortega Highway to Avnda. Pico | 72.4 | 144 | 311 | 670 |
| South of Avnda. Pico | 71.5 | 127 | 273 | 589 |
| **La Paz Road** | | | | |
| I-5 to Marguerite | 68.1 | 75 | 162 | 349 |
| Marguerite to Felipe Rd. | 66.6 | 60 | 129 | 277 |
| **Oso Parkway** | | | | |
| West of Cabot Rd. | 68.9 | 84 | 182 | 392 |
| Cabot Rd. to I-5 | 70.5 | 107 | 231 | 498 |
| East of I-5 | 71.6 | 128 | 276 | 594 |
| West of Marguerite | 71.6 | 128 | 276 | 594 |
| Marguerite to Felipe Rd. | 70.9 | 114 | 246 | 529 |
| Felipe Rd. to Antonio Pkwy. | 70.9 | 115 | 248 | 535 |
| East of Antonio Pkwy. | 71.0 | 117 | 251 | 541 |
| West of SR-241 | 70.3 | 105 | 225 | 486 |
| East of SR-241 | 67.2 | 65 | 140 | 302 |

## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Crown Valley Parkway** | | | | |
| West of Moulton Pkwy. | 69.1 | 88 | 189 | 406 |
| Mounton Pkwy. to Greenfield | 69.6 | 93 | 201 | 433 |
| Greenfield to SR-241 | 71.0 | 117 | 251 | 541 |
| SR-241 to I-5 | 71.1 | 119 | 257 | 553 |
| East of I-5 | 72.7 | 151 | 324 | 699 |
| West of Marguerite | 71.7 | 129 | 278 | 600 |
| East of Marguerite | 71.7 | 130 | 281 | 606 |
| West of Antonio Pkwy. | 70.4 | 106 | 228 | 492 |
| **Paseo de Colinas** | | | | |
| West of Cabot Rd. | 66.4 | 57 | 123 | 265 |
| Cabot Rd. to I-5 | 65.1 | 47 | 101 | 217 |
| West of I-5 | 67.4 | 67 | 144 | 310 |
| **Avery** | | | | |
| I-5 to Marguerite | 67.6 | 69 | 149 | 322 |
| East of Marguerite | 62.0 | RW | 64 | 137 |
| **Junipero Serra** | | | | |
| West of I-5 | 65.3 | 48 | 104 | 225 |
| East of I-5 | 64.8 | 45 | 97 | 210 |
| **SR-74 (Ortega Highway)** | | | | |
| Cmno. Capastrano to Del Obispo | 67.7 | 71 | 152 | 328 |
| West of I-5 | 72.6 | 149 | 322 | 693 |
| I-5 to Rancho Viejo | 74.1 | 189 | 406 | 875 |
| West of La Novia | 73.1 | 161 | 346 | 746 |
| East of La Novia | 73.1 | 161 | 346 | 746 |
| West of La Pata | 72.8 | 154 | 332 | 715 |
| East of La Pata | 64.1 | 40 | 87 | 186 |
| East of C St. | 60.3 | RW | 49 | 105 |
| East of New Ortega Highway | 67.0 | 63 | 136 | 292 |
| **San Juan Creek Road** | | | | |
| East of I-5 | 65.8 | 53 | 114 | 245 |
| East of Valle Rd. | 64.4 | 42 | 91 | 195 |
| West of La Novia | 63.8 | RW | 83 | 179 |
| East of La Novia | 63.2 | RW | 76 | 163 |
| **New Ortega Highway** | | | | |
| Antonio Pkwy. to A St. | 69.4 | 91 | 196 | 421 |
| A St. to C St. | 69.6 | 94 | 203 | 437 |
| C St. to F St. | 67.8 | 72 | 155 | 333 |
| F St. to SR-74 | 68.4 | 78 | 168 | 362 |

## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |
| **Camino de Los Mares** | | | | |
| East of I-5 | 68.0 | 73 | 157 | 339 |
| West of Cmno. Vera Cruz | 64.8 | 45 | 97 | 210 |
| Cmno. Vera Crus to Cmno. del Rio | 62.8 | RW | 72 | 155 |
| **Camino del Rio** | | | | |
| Cmno. de Los Mares to La Pata | 59.0 | RW | 40 | 86 |
| **Avenida Vista Hermosa** | | | | |
| East of I-5 | 69.0 | 86 | 185 | 399 |
| Cmno. Vera Cruz to La Pata | 69.6 | 93 | 201 | 433 |
| La Pata to Talega | 67.5 | 68 | 148 | 318 |
| Talega to Pico | 61.7 | RW | 60 | 129 |
| **Avenida Pico** | | | | |
| West of I-5 | 67.7 | 70 | 151 | 326 |
| East of I-5 | 70.3 | 105 | 225 | 486 |
| West of La Pata | 67.2 | 65 | 140 | 302 |
| La Pata to Vista Hermosa | 64.4 | 42 | 91 | 195 |
| East of Vista Hermosa | 65.5 | 50 | 108 | 234 |
| East of SR-241 | 56.2 | RW | RW | 56 |
| **Cabot Street** | | | | |
| North of Oso Pkwy. | 65.7 | 51 | 111 | 239 |
| South of Oso Pkwy. | 63.8 | RW | 83 | 179 |
| North of Crown Valley Pkwy. | 63.2 | RW | 76 | 163 |
| Crown Valley Pkwy. to Paseo de Colinas | 62.0 | RW | 64 | 137 |
| **Greenfield** | | | | |
| South of SR-73 | 66.0 | 54 | 117 | 252 |
| **Marguerite** | | | | |
| North of La Paz Rd. | 68.7 | 81 | 175 | 378 |
| South of La Paz Rd. | 69.2 | 89 | 192 | 413 |
| North of Oso Pkwy. | 68.9 | 84 | 182 | 392 |
| South of Oso Pkwy. | 68.0 | 73 | 158 | 341 |
| Oso Pkwy. to Crown Valley Pkwy. | 68.9 | 84 | 182 | 392 |
| South of Crown Valley Pkwy. | 67.5 | 68 | 148 | 318 |
| North of Avery | 67.8 | 72 | 155 | 333 |
| **Rancho Viejo** | | | | |
| South of Avery | 64.8 | 45 | 97 | 210 |
| North of Trabuco Canyon | 62.8 | RW | 72 | 155 |
| Trabuco Canyon to Junipero Serra | 63.2 | RW | 76 | 163 |
| South of Juniperro | 62.5 | RW | 68 | 146 |
| North of Ortega Highway | 62.5 | RW | 68 | 146 |

## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **Felipe Road** | | | | |
| North of La Paz Rd. | 64.1 | 40 | 87 | 187 |
| South of La Paz Rd. | 64.6 | 44 | 94 | 203 |
| Oso Pkwy. to Marguerite Pkwy. | 62.8 | RW | 72 | 155 |
| **Golden Lantern** | | | | |
| North of Crown Valley Pkwy. | 67.1 | 64 | 138 | 297 |
| Crown Valley Pkwy. to Paseo de Colinas | 67.0 | 63 | 135 | 291 |
| Paseo de Colinas to Marina Mills | 68.3 | 77 | 165 | 356 |
| **Camino Capistrano** | | | | |
| South of Paseo de Colinas | 59.8 | RW | 45 | 97 |
| North of Junipero Serra | 59.0 | RW | 40 | 86 |
| Junipero Serra to Roso | 64.6 | 44 | 94 | 203 |
| Roso to Ortega Highway | 64.1 | 40 | 87 | 187 |
| Ortega Highway to Del Obispo | 64.8 | 45 | 97 | 210 |
| Del Obispo to San Juan Creek | 66.2 | 56 | 120 | 259 |
| South of San Juan Creek Rd. | 67.1 | 64 | 138 | 297 |
| **Antonio Parkway** | | | | |
| North of SR-241 | 69.3 | 90 | 195 | 420 |
| Empressa to SR-241 | 68.8 | 83 | 179 | 385 |
| Empressa to Banderas | 69.1 | 88 | 189 | 406 |
| South of Banderas | 69.9 | 99 | 213 | 460 |
| North of Oso Pkwy. | 69.9 | 99 | 213 | 460 |
| Oso Pkwy. to Crown Valley Pkwy. | 70.9 | 114 | 246 | 529 |
| South of Crown Valley Pkwy. | 70.0 | 100 | 217 | 466 |
| North of New Ortega Highway | 70.1 | 102 | 220 | 473 |
| North of SR-74 | 70.9 | 115 | 248 | 535 |
| **La Pata** | | | | |
| South of Ortega Highway | 67.2 | 65 | 140 | 302 |
| San Juan Creek Rd. to Cmno. Las Ramblas | 67.2 | 65 | 140 | 302 |
| Cmno. Las Ramblas to Cmno. del Rio | 66.6 | 60 | 129 | 277 |
| Cmno. del Rio to Vista Hermosa | 67.0 | 63 | 136 | 294 |
| Vista Hermosa to Avnda. Pico | 69.2 | 89 | 192 | 413 |
| South of Avnda. Pico | 62.8 | RW | 71 | 153 |
| **Camino Vera Cruz** | | | | |
| Cmno. de Los Mares to Vista Hermosa | 65.3 | 48 | 104 | 225 |
| **Camino las Ramblas** | | | | |
| East of I-5 | 63.2 | RW | 76 | 163 |
| **A Street** | | | | |
| South of Oso Pkwy. | 62.0 | RW | 64 | 137 |
| North of New Ortega Highway | 61.6 | RW | 59 | 128 |

## Future Traffic Noise Levels With Alternative B-5

| Roadway Segment | CNEL @ 100'[1] | Distance To CNEL Contour[1] (feet) 70 CNEL | 65 CNEL | 60 CNEL |
|---|---|---|---|---|
| **F Street** | | | | |
| Oso Pkwy. to C St. | 67.8 | 72 | 155 | 333 |
| C St. to New Ortega Highway | 65.7 | 51 | 111 | 239 |
| **C Street** | | | | |
| Northeast of F St. | 66.2 | 56 | 120 | 259 |
| North of New Ortega Highway | 65.5 | 50 | 108 | 232 |
| New Ortega Highway to Ortega Highway | 65.5 | 50 | 108 | 232 |
| Ortega Highway to Talega | 62.8 | RW | 72 | 155 |
| South of Talega | 61.1 | RW | 55 | 118 |
| **Talega** | | | | |
| East of Vista Hermosa | 63.8 | RW | 83 | 179 |
| South of C St. | 59.8 | RW | 45 | 97 |

1. From Roadway Centerline

RW - Contour Does Not Extend Beyond Roadway Right-of-Way