August 12, 2020

Ms. Cheryl Tubbs, Vice President
LILBURN CORPORATION
1905 Business Center Drive
San Bernardino, California 92408

Dear Ms. Tubbs:

INTRODUCTION

Ganddini Group, Inc. is pleased to provide this noise impact analysis for the proposed Chateau Senior Living Facility project. The project site is located north of Spring Valley Lake at 17853 Yates Road in an unincorporated portion of San Bernardino County and within the City of Victorville's Sphere of Influence. A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

The proposed project includes an application for a Conditional Use Permit (CUP) for the construction and operation of a residential care facility on an 18.47 acre site. Specifically, the project site is located north of Spring Valley Lake, off of Yates Road (see Figure 1). As shown on Figure 2, the approximate 274 bed continuing care retirement community is proposed to include: a two-story, 29,952 square foot medical office building, a two-story, 24,722 square foot amenities/rehabilitation building, a three-story 60,192 square foot assisted living building with 123 beds, a three-story 49,768 square foot independent living building with 52 units, and a two-story 47,659 square foot skilled nursing building with 99 beds.

The proposed project will feature a wellness center, within the medical office building, and will be equipped with offices, a pharmacy, chronic dialysis, behavioral health, diagnostic testing and clinical wellness suites; with an ambulatory surgical center. Other features include an amenity-rehab center to serve as a gathering spot for residents and visitor and feature a market, coffee and smoothie shop, cafeteria styled restaurant, bistro, gym, beauty salon and lounge. The second-floor outpatient rehab center offers pain management, audiology, speech pathology, massage, respiratory, physical & occupational therapies, and a training center.

It has been a pleasure for Ganddini Group, Inc. to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100.

Respectfully submitted,

Roma Stromberg, INCE/MS
Senior Noise Analyst

18-0022

I. NOISE AND VIBRATION FUNDAMENTALS

The purpose of this report is to provide an assessment of the noise impacts resulting from development of the proposed project and to identify mitigation measures that may be necessary to reduce those impacts. The noise issues related to the proposed land use and development have been evaluated in light of applicable federal, state and local policies, including those of the County of San Bernardino and the United States Department of Housing and Urban Development.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to noise analysis, a list of acronyms and a glossary of terms have been provided in Appendix A and Appendix B of this report, respectively.

Noise Fundamentals

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Appendix B. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 3 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (DNL). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting

accounts for the increased human sensitivity to noise during the evening and nighttime hours. DNL is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013).

Vibration Fundamentals

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors, L_{eq} and L_{max} can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 4 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown in the figure, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Vibration tolerance limits for sensitive instruments such as magnetic resonance imaging (MRI) or electron microscopes could be much lower than the human vibration perception threshold.

II EXISTING NOISE ENVIRONMENT

Sensitive Noise Receptors

The project site is bordered by Yates Road to the south, vacant land and Mojave Narrows Regional Park to the east and north, and vacant land and BNSF rail lines to the west.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas. Sensitive receptors that may be affected by project-generated noise include Mojave Narrows Regional Park located to the east and north and the single-family detached residential dwelling units located approximately 120 feet south (across Yates Road) of the project site. In addition, Green Tree East Elementary School is located approximately 0.4 miles to the west and single-family detached residential dwelling units are located approximately 0.48 miles to the west of the project site. Traffic noise and noise associated with the adjacent rail line may impact the proposed project.

Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, four (4) 10-minute daytime noise measurements were taken between 10:25 AM and 3:07 PM on April 13, 2018. In addition, one (1) 24-hour noise measurement was taken on April 13, 2018 starting at 5:00 PM and ending at 5:00 PM on April 14, 2018. Field worksheets and noise measurement output data are included in Appendix C.

As shown on Figure 5, short-term noise measurements were taken near existing single-family detached residential dwelling units located to the south of the project site (STNM1, STNM2 and STNM4) and at the northern end of the project site near Mojave Narrows Regional Park (STNM3). One long-term noise measurement (LTNM1) was taken approximately 65 feet east of the northbound rail line near the northwest corner of Horseshoe Lake northwest of the project site. Table 1 provides a summary of the short-term ambient noise data. Short-term ambient noise levels ranged between 45.9 and 64.5 dBA L_{eq}. Table 2 provides a summary of the hourly intervals for the long-term ambient noise data. Long-term ambient noise levels ranged from 53.9 to 71.4 Dba L_{eq} over the 24-hour period. The measured CNEL was 74.4 dBA and the measured DNL was 74.2 dBA. The dominant noise sources were from train noise, residential noise, and vehicles traveling along Ridgecrest Road and Yates Road.

III. REGULATORY SETTING

Federal Regulations

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the DNL should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five (5) dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA DNL (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

United States Department of Housing and Urban Development (HUD) Methodology

The Department of Housing and Urban Development (HUD) has established guidelines for evaluating noise impacts on residential land uses. According to the HUD regulations, sites where noise levels due not exceed 65 dBA DNL are acceptable for housing; and sites where the DNL ranges between 65 and 75 dBA are "normally unacceptable" but may be approved if additional sound attenuation is designed into new housing. Sites where the DNL exceeds 75 dBA are classified by HUD as "unacceptable."

State Regulations

State of California General Plan Guidelines 2003

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provide guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., DNL or CNEL) and in the upper limits for the Normally Acceptable outdoor exposure of noise-sensitive uses. The OPR Guidelines include a Noise and Land Use Compatibility

Matrix identifies acceptable and unacceptable community noise exposure limits for various land use categories. The County of San Bernardino has developed its own noise standards.

California Environmental Quality Act

The California Environmental Quality Act Guidelines (CEQA) (Appendix G) establishes thresholds for noise impact analysis. Two of these standards apply to what is referred to as a "substantial increase" in ambient noise levels. The County does not have a definition of a substantial increase, nor does CEQA establish a numerical value for this threshold. Noise generated by transportation sources propagates differently than noise generated by point sources. Therefore, for purposes of this analysis, the following two thresholds were utilized to evaluate the project's potential to result in substantial increases in ambient noise levels.

- Mobile Noise

  For purposes of this analysis, increases in noise levels associated with project-generated vehicle trips are considered substantial if they result in an increase of at least 3 dBA CNEL and: (1) the existing noise levels already exceed the applicable land use compatibility standard for the affected sensitive receptors set forth in the Noise Element of the County's General Plan; or (2) the project increases noise levels by at least 5 dBA CNEL and raises the ambient noise level from below the applicable land use compatibility standard for the affected sensitive receptors to above the standard.

- Stationary Noise

  Project operations, including noise from parking lot activities, loading and unloading of supplies and HVAC, may produce an increase in noise levels which disturbs the peace and quiet of adjacent residential areas or cause discomfort/annoyance to area residents. A 5 dBA increase is considered to be "readily audible", which seems to correlate most closely to "substantial increase." For the purposes of this report, a substantial permanent increase in ambient noise levels due to stationary noise sources shall be considered 5 dBA L_{eq}.

California Department of Transportation

The California Department of Transportation (Caltrans) has published one of the seminal works for the analysis of ground-borne noise and vibration relating to transportation- and construction-induced vibrations and although the project is not subject to these regulations, it serves as useful tools to evaluate vibration impacts. These guidelines recommend that a standard of 0.2 inches per section (in/sec) PPV not be exceeded for the protection of normal residential buildings (Caltrans 2002). This is the appropriate threshold for construction related ground-borne vibration impacts.

Federal Transportation Association Guidance Manual

The Federal Transportation Association Guidance Manual for Transit Noise and Vibration Impact Assessment suggests that the ground-borne vibration velocity should not exceed 80 VdB for infrequent events (fewer than 70 per day) and 72 VdB for frequent events (more than 70 per day) to minimize potential vibration impacts. In this case, the 72 VdB is the appropriate threshold for rail related ground-borne vibration impacts.

Local Regulations

County of San Bernardino General Plan

The County of San Bernardino General Plan Noise Element provides goals, policies and implementation measures that are intended to achieve and maintain land use compatibility with environmental noise levels and to ensure that County residents will be protected from excessive noise intrusion, both now and in the future. Goals and Policies applicable to the proposed project are presented below:

- Goal N 1. The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise generating and new noise sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.

  Policy N 1.2. Ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries.

  Policy 1.4. Enforce the state noise insulation standards (California Administrative Code, Title 24) and Chapter 35 of the California Building Code (CBC) 6.

  Policy N 1.6. Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

  Policy N 1.7. Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future.

- Goal N 2. The County will strive to preserve and maintain the quiet environment of mountain, desert and other rural areas.

  Policy N 2.1. The County will require appropriate and feasible on-site noise attenuating measures that may include noise walls, enclosure of noise generating equipment, site planning to locate noise sources away from sensitive receptors, and other comparable features.

County of San Bernardino Development Code

Section 83.01.080 of the County of San Bernardino Development Code establishes noise criteria not to be exceeded at the property line of adjacent land uses. These criteria would apply to on-site operational noise generated by the project. Adjacent and nearby park and residential land uses may be affected by project-generated operational noise. Sections of the code applicable to the proposed project are presented below.

- Noise Standards for Stationary Noise Sources

  Table 3, Noise Standards for Stationary Noise Sources, describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties. Stationary noise sources associated with the proposed project may impact nearby residential land uses. As shown in Table 3, the base exterior noise level standards for residential land uses are 55 dBA L_{eq} during

daytime hours and 45 dBA during nighttime hours; and the base noise level criteria for park land uses is 65 dBA (anytime). As described in Table 3, other criteria apply depending on the duration of the noise event. For example, the maximum event noise level standard for impacts to the adjacent residential land uses is 75 dBA L_{eq} during daytime hours and 65 dBA during nighttime hours. Typically, if the 30-minute L_{eq} is not exceeded the other shorter criteria, with the exception of the L_{max} would be likely to be exceeded.

- Noise Standards for Transportation Impacts to the Project

  The County of San Bernardino Development Code also sets forth interior and exterior noise level standards for transportation noise impacts to the proposed project (see Table 4). The noise level criteria of 45 dBA CNEL for interior noise and the 65 dBA CNEL apply to the proposed residential buildings as well as to the proposed medical professional offices.

- Noise Standards for Construction Noise

  Temporary construction, maintenance, repair, and demolition activities between 7:00 AM and 7:00 PM, except Sundays and Federal holidays are exempt from Section 83.01.080(g)(3) the San Bernardino Development Code.

  This Development Code Standard seems to be contradictory to the General Plan Policy N1.6 above. Therefore, to be conservative, it is assumed that construction noise is exempt only between the hours presented above under Ordinance 83.01.080(g)(3) above.

- Ground Vibration

  Section 83.01.090(a) of the County of San Bernardino Development Code prohibits the creation of ground vibration that can be felt without the aid of instruments at or beyond the lot-line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot-line. Construction and demolition related ground vibration is exempt from this requirement as long as it occurs between 7:00 AM and 7:00 PM Mondays through Saturdays and not on Sundays or Federal holidays. It is anticipated that project construction will occur within the exempt hours, therefore this threshold will not apply. The project does not proposed any non-construction related sources of ground-borne vibration

IV. ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

Noise Modeling and Input

Road Construction Noise Model (RCNM)

A worst-case construction noise scenario was modeled using a version of the Federal Highway Administration's Roadway Construction Noise Model (RCNM). RCNM utilizes standard noise emission levels for many different types of equipment and includes utilization percentage, impact, and shielding parameters. Modeling input parameters and output are provided in Appendix D.

Federal Highway Administration (FHWA) Traffic Noise Prediction Model

Existing and Existing Plus Project noise levels along Yates Road and other affected nearby roadway segments were modeled utilizing the FHWA Traffic Noise Prediction Model FHWA-RD-77-108 in order to quantify the proposed project's contribution to increases in ambient noise levels.

The FHWA Traffic Noise Prediction Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for: total average daily trips (ADT), roadway classification, width, speed and truck mix, roadway grade and site conditions (hard or soft ground surface). Surfaces adjacent to all modeled roadways were assumed to have a "hard site" to predict worst-case, conservative noise levels. A hard site, such as pavement, is highly reflective and does not attenuate noise as quickly as grass or other soft sites. Possible reductions in noise levels due to intervening topography and buildings were not accounted for in this analysis.

Existing and Existing Plus Project average daily trips and project vehicle mix were obtained from the project-specific Traffic Impact Analysis Ganddini Group, Inc., 2020).[1] The County of San Bernardino does not have a Day/Evening/Night (D/E/N) split published for use in acoustical studies. Therefore, vehicle/truck mixes and D/E/N splits for use in acoustical studies published by the Riverside County Department of Industrial Hygiene were utilized for noise modeling. Existing Plus Project vehicle mixes were calculated by adding the proposed project trips to existing conditions. FHWA Spreadsheets are included in Appendix E.

SoundPLAN

SoundPLAN acoustical modeling software was utilized to model transportation noise impacts to the project; and to model project operational worst-case stationary noise impacts from the proposed project to nearby sensitive uses (e.g., residences). SoundPLAN is capable of evaluating stationary noise sources (e.g., air conditioning units, parking lots, drive-thru menus, car wash equipment, vacuums, etc.) and much more. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

- Transportation Noise Impacts to the Project

[1] For the With Green Tree Extension Traffic Scenario, five of the existing average daily traffic volumes were not provided in the Traffic Impact Analysis prepared for the proposed project as they are in relation to a proposed roadway. Therefore, these existing average daily traffic volumes were obtained from the Interim Year (2015) Average Daily Traffic With Bridge Connection given in the Yucca Loma Bridge/Yates Road/Green Tree Boulevard Transportation Improvement Project Traffic Impact Analysis (Revised), Urban Crossroads, Inc. (August 6, 2008).

HUD Guidelines and Analysis

HUD has prepared a Noise Guidebook entitled *Noise Assessment Guidelines* which includes procedures, figures, work charts, and work sheets. The guidebook is based on HUD noise regulations at 24 Code of Federal Regulations (CFR) Part 51. The purpose of the guidelines is to provide a process for evaluating the acceptability of anticipated noise from identified noise sources in the area at residential dwelling units.

The HUD methodology includes noise associated with all roadways within 1,000 feet, rail lines within 3,000 feet and airports with 15 miles of the project site. Parameters taken into consideration for the calculation of roadway noise include vehicle type, distance from the centerline to the residential structure, the distance to the nearest stop sign, the average speed, the average daily trips, the night fraction of average daily trips, and the road gradient. The parameters utilized to calculate rail noise include distance of the rail line to the residential structure, the average speed, the number of engines per train, the number of railway cars per train, average train operations, the night fraction of average train operation, whether there are railway whistles or horns, and whether there are bolted rail tracks. Finally a determination is made as to whether any of the airports within 15 miles of the proposed residential structures would contribute to ambient noise levels on-site. That contribution is calculated and entered into the spreadsheet along with the other parameters listed above.

Transportation noise sources that may affect sensitive receptors at the project site include vehicular sources from Yates Road and rail sources from a portion of the Burlington Northern Santa Fe Rail track. Airport noise contribution was determined to not have an impact in the overall CNEL/DNL as the closest airport is located approximately five-miles north of the project site. Data regarding airports within 15 miles of the project site is provided in Appendix F.

Mobile Source Vehicular Impact Methodology

Yates Road is designated as a 4-lane Major Highway in the County of San Bernardino General Plan Circulation Element (2012) and borders the project's southern boundary. As a major highway, Yates Road is eventually expected to become a 104-foot 4-lane roadway (County of San Bernardino Land Use Services website accessed 04/13/2018). The County of San Bernardino does not provide published, expected buildout volumes for general plan roadways. However, the City of Victorville GP 2030 identifies Yates Road as a Major Arterial with a minimum 100 foot right-of-way. The City of Victorville General Plan assigns a capacity of 37,500 average daily traffic volumes to Major Arterials. As the County of San Bernardino has not published truck mix or day/evening/night vehicle splits for noise analysis, a vehicle/truck mix of 92 automobiles, 3% medium trucks and 2% heavy trucks and a day/evening/night split, consistent with what is suggested for use in acoustical studies (published by the Riverside County Department of Industrial Hygiene) was utilized for noise modeling. The observed speed was 35 miles per hour and road gradient was modeled at 1 percent. There are no stop signs along Yates Road in the vicinity of the proposed project.

Mobile Source Rail Impact Methodology

Rail Source Two BNSF rail tracks run generally parallel to the project site in a north/south direction, as close as 60 feet west of the project boundary. The two rail tracks cross each other just southwest of the project site and then are separated by approximately 220-336 feet, where

they are parallel to proposed independent living units, skilled nursing facilities and medical offices. Northbound and southbound lanes are split between the two rail tracks. Per the United States Department of Transportation (USDOT) Crossing Inventory Forms (see Appendix F), it is estimated that 52 trains pass-by the project site between the hours of 6:00 AM and 6:00 PM and 52 trains pass by the project site between the hours of 6:00 PM and 6:00 AM. The majority of trains are freight trains. The average speed is documented at 35 miles per hour. All of these parameters, along with HUD calculation spreadsheets, are provided in Appendix F.
SoundPLAN Analysis

The SoundPLAN noise model was also utilized to model transportation noise impacts to the proposed project. SoundPLAN input and output data is provided in Appendix G.

In order to calibrate the SoundPLAN model and to document the existing ambient noise environment, a field visit conducted on April 13-14, 2018. During the site visit, one 24-hour noise measurement of train pass-by activity (one-hour intervals), and observations of the condition of the rail tracks and trains was conducted. Based on field observations, freight trains had four diesel engines (two in the front and two at the rear). The train cars were a combination of box cars for solids and stackable, tank cars for bulk liquids and gases, and hopper cars for international and national freight containers, none were observed empty, but statistically it is possible. The frequency of passing freight trains was observed to be approximately one train every 10-15 minutes. No wheel flats were observed. The rail tracks were smooth. There were no fish plates joining the rails and no clickity-clack of the wheels rolling over joints was observed. The only observed sound was the deep base of the front four diesel locomotive engines as they passed, the sound of steel wheels rolling on steel rails, followed once more by the deep base sound of the rear two diesel locomotives pushing from behind. The measured hourly evening and nighttime hourly measurements were weighted (+5 dB and +10 dB, respectively), and added to the daytime hourly measurements to derive the CNEL, which was 74.4. The DNL was calculated by weighting the nighttime noise hours (+10 dB) and adding them to the daytime and evening hours. The measured DNL was 74.2. A line source assigned a noise reference level equivalent to 74.4 dBA CNEL at a distance of 65 feet was utilized to model rail related noise at the project site.

- Project Operational (Stationary Noise) Impacts to Sensitive Receptors

The SoundPLAN noise modeling software was also utilized to model noise associated with the operation of the proposed project. This model represents a worst-case operational noise scenario. Stationary noise sources associated with the proposed parking areas were included in the model. Noise associated with parking lots includes, but is not limited to idling cars/trucks, trucks diesel engines, exhaust systems, trailer coupling, air brakes, warning signal, doors closing, and starting engine noise. Noise levels associated with parking lots typically range between 44-63 dBA L_{eq} at a distance of 100 feet.

Peak-hour parking movements for each parking lot within the proposed project were determined by the use of the trip generation rates identified in the project-specific Traffic Impact Analysis. The location of the rooftop HVAC equipment was estimated and modeled as point sources placed on roof-tops. No rooftop parapets or shielding were modeled. A representative sound power level of 86.1 dB (York RTU 150 [12.5]) was utilized for modeling purposes. The results of the operational noise model are provided in Section VI and SoundPLAN inputs and outputs are provided in Appendix G.

V. IMPACT ANALYSIS

Noise Impacts

This impact discussion analyzes the potential for noise impacts to cause the exposure of a person to, or generation of, noise levels in excess of established County of San Bernardino noise standards related to: construction noise, transportation and railroad related noise impacts to, or from, the proposed project.

Construction Noise Impacts

Existing Mojave Narrows Regional Park uses to the east and north and single-family detached residential dwelling units located to the south of the project site may be affected by short-term noise impacts associated with the transport of workers, the movement of construction materials to and from the project site, ground clearing, excavation, grading, and building activities. Construction noise is considered a short-term impact and would be considered significant if construction activities are undertaken outside the allowable times as described by Section 83.01.080(g)(3) of the San Bernardino Development Code. This noise report analyzes the construction noise levels during the various phases of the project.

Construction noise varies depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work. Site grading is expected to produce the highest sustained construction noise levels. Typical noise sources and noise levels associated with the site grading phase of construction are shown in Table 5. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. A likely worst-case construction noise scenario during grading assumes the use of a grader, a dozer, a backhoe, an excavator, and a water truck (modeled as a dump truck) operating between 25 and 250 feet from the property line.

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels have the potential to reach 87.2 dBA L_{eq} and 91 dBA L_{max} at the property line during grading. Therefore, unmitigated noise levels have the potential to reach 74.2 dBA L_{eq} and 77 dBA L_{max} at the northern property lines of closes receptors, the single-family detached residential dwelling units located approximately 100 feet south of the project site. As shown in Table 1, ambient noise readings show that receptors in the project vicinity are already exposed to maximum (L_{max}) noise levels between 66.2 and 79.5 dBA.

As stated previously, per the County of San Bernardino Development Code, temporary construction, maintenance, repair, and demolition activities between 7:00 AM and 7:00 PM, except Sundays and Federal holidays, are exempt from Section 83.01.080(g)(3) of the San Bernardino Development Code. Although construction noise will have a temporary or periodic increase in the ambient noise levels above the existing within the project vicinity, construction activities are anticipated to occur during the permissible hours stated above. Therefore, construction-related noise impacts are considered to be less than significant. However, to be conservative and to reduce construction noise levels at the nearest sensitive receptors, recommended construction noise reduction measures are presented in Section VIII of this report.

Operational Noise Impacts to Off-Site Receptors Due to Project-generated Trips

During operation, the proposed project is expected to generate approximately 2,927 average daily trips with 221 trips during the AM peak-hour and 253 trips during the PM peak-hour. A worst-case, project-generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated from the centerline of the roadway to the roadway right-of-way. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference in with- and without- project conditions. Roadway input parameters including average daily traffic volumes (ADTs), speeds, and vehicle distribution data are shown in Table 6.

Existing Year (without Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 7.

Existing Year (With Project without Green Tree Boulevard Extension): This scenario refers to existing year plus project without Green Tree Boulevard extension traffic noise conditions and is demonstrated in Table 7.

Existing Year (without Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 8.

Existing Year (With Project with Green Tree Boulevard Extension): This scenario refers to existing year plus project with Green Tree Boulevard extension traffic noise conditions and is demonstrated in Table 8.

As shown in Table 7, modeled Existing traffic noise levels range between 60.3-80.6 dBA CNEL at the right-of-way of each modeled roadway segment; and the modeled Existing Plus Project Without Green Tree Boulevard Extension traffic noise levels range between 60.6-80.6 dBA CNEL at the right-of-way of each modeled roadway segment.

As shown in Table 8, modeled Existing traffic noise levels range between 60.3-80.6 dBA CNEL at the right-of-way of each modeled roadway segment; and the modeled Existing Plus Project With Green Tree Boulevard Extension traffic noise levels range between 60.6-80.6 dBA CNEL at the right-of-way of each modeled roadway segment.
As stated previously, increases in noise levels associated with project-generated vehicle trips will be considered substantial if they result in an increase of at least 5 dBA CNEL and: (1) the existing noise levels already exceed the applicable land use compatibility standard for the affected sensitive receptors set forth in the Noise Element of the City's General Plan; or (2) the project increases noise levels by at least 5 dBA CNEL and raises the ambient noise level from below the applicable land use compatibility standard for the affected sensitive receptors to above the standard.

Table 7 shows that for the Without Green Tree Boulevard Extension scenario all modeled roadway segments are anticipated to change the noise a nominal amount (approximately 0.03 to 0.79 dBA CNEL). Table 8 shows that for the With Green Tree Boulevard Extension scenario all modeled roadway segments are anticipated to change the noise a nominal amount (approximately 0.02 to 2.38 dBA CNEL). Therefore, a change in noise level would not be audible and would be considered less than significant. No mitigation is required.

Future Operational Traffic Noise Impacts to On-Site Receptors

- HUD Criteria

  The Office of Environmental and Energy has developed an electronic assessment tool that calculates the Day/Night Noise Level (DNL) site exposure. This is a web-based application of the existing Noise Assessment Guidelines. The DNL Calculator calculates noise from road and railway activity levels. It then combines the noise with airport projections and incorporates the effects of loud, impulsive sound for a site exposure at any Noise Assessment Location. According to the HID Exchange Website, the DNL Calculator can be utilized to document compliance or aid in site planning. The DNL calculator was utilized to calculate on-site noise levels at proposed residential buildings due to transportation noise. The HUD Noise Guidebook and Worksheets were also referred to during the analysis. The assumptions and calculations are included in this report as Appendix F.

  HUD regulations establish noise levels of up to 65 dBA DNL as acceptable for housing; and noise levels that range between 65 and 75 dBA as "normally unacceptable" but may be approved as long as additional sound attenuation is designed into new housing. Sites where the DNL exceeds 75 dBA are classified by HUD as "unacceptable".

  Exterior noise levels at facades facing either and/or both of the transportation noise sources were calculated using the HUD methodology. Noise levels at the western and southern facades of the proposed assisted care building will reach up to 69 DNL/CNEL; and noise levels at the western and northern facades of the independent living building are expected to reach up to 70 DNL/CNEL. It should be noted that this methodology did not take into consideration the added attenuation provided by buildings that are proposed in-between the rail line and roadway that would shield the proposed residential buildings.

  Future transportation noise impacts to on-site receptors will exceed what is considered "acceptable" by HUD standards (65 DNL), but may be approved if additional sound attenuation is designed into the new housing per 24 Code of Federal Regulations Part 51, Section 103.

  Normal building construction typically provides at least 20 dB of exterior to interior noise reduction. Utilization of windows with a Sound Transmission Class (STC) rating of at least 27 can ensure that noise levels inside the proposed residential units at the assisted care building do not exceed 45 DNL; and utilization of windows with an STC rating of 28 can ensure that noise levels inside the proposed independent living building do not exceed 45 DNL. These recommendations to meet HUD requirements, based on HUD methodology, have been included in Section VIII of this report.

- County of San Bernardino Criteria

  As stated previously, the County of San Bernardino Development Code Table 83-3 (see Table 4) prescribes mobile noise level limits for different land uses. The County allows residential and institutional/public uses to be located in areas where exterior noise levels reach up to 65 dBA CNEL. Further, interior noise levels are not to exceed 45 dBA CNEL.

  The SoundPLAN noise model was utilized to calculate transportation noise impacts to the proposed project, including rail and noise (see Figures 6 and 7). Buildout exterior traffic noise levels are expected to range between 55 and 65 at proposed residential buildings. Interior noise

levels are not expected to exceed 45 dBA CNEL with the provision of air conditioning allowing a closed window condition. Future traffic noise impacts to proposed residential buildings are expected to be consistent with County exterior noise criteria of 65 dBA CNEL and interior noise criteria of 45 dBA CNEL.

Buildout exterior traffic noise levels are expected to range between 54 and 65 at proposed non-residential buildings. Future traffic noise impacts to the proposed non-residential (institutional) land uses are expected to be consistent with County exterior noise criteria of 65 dBA CNEL and interior noise criteria of 45 dBA CNEL.

Transportation noise impacts to the proposed project are less than significant in light of the County of San Bernardino General Plan and Development Code. No mitigation is required.

Operational Stationary Noise Impacts

Land uses surrounding the site include the Mojave Narrows Regional Park north of the site and single-family detached residential dwelling units south of the site. Land west of the site is dedicated for rail uses and is vacant further east. The land use east of the site is vacant.

Potential on-site operational noise impacts were modeled and evaluated in light of the County of San Bernardino Development Code Table 83-2 (see Table 3) which prescribes stationary noise level standards for noise generated on one property to another. Project operation is prohibited from generating sounds that exceed 55 dBA L_{eq} during the daytime or exceeding 45 dBA L_{eq} during the nighttime, at residential land uses.

As shown on Figures 8 and 9, exterior noise levels at the nearest sensitive receptors due to project operational noise are expected to range between 43.4 and 47.6 due to peak-hour project operation. Noise associated with parking lots include, but are not limited to idling cars/trucks, trucks, doors closing, and starting engine noise. Noise levels associated with parking lots typically range between 44-63 dBA L_{eq} at a distance of 100 feet. Parking lot noise was modeled assuming 252 parking movements during the peak-hour. The location of the rooftop HVAC equipment was estimated and modeled as point sources placed on-top of the structures' roofs. No rooftop parapets or shielding were included in the model. A representative sound power level of 86.1 dB (York RTU 150 ([12.5]) was utilized for modeling purposes.

Peak-hour operational noise will not exceed the County's daytime or nighttime noise standards (55 and 45 dBA L_{eq}, respectively) for stationary noise sources. The project is consistent with applicable noise standards and impacts should be less than significant. No mitigation measures are required.

Vibration Impacts

Vibration Impacts Caused by the Project

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Typically, particle velocity or acceleration (measured in gravities) is used to describe vibration in context of potential structural damage. Table 9 shows the peak particle velocities (PPV) of some common

construction equipment and Table 10 shows typical human reactions to various levels of PPV as well as the effect of PPV on buildings.

The nearest existing structure to the project site is located approximately 120 feet to the south of the project site. As shown in Table 10, the threshold at which there may be a risk of architectural damage to normal houses with plastered walls and ceilings is 0.20 PPV in/second. Primary sources of vibration during construction would be from vibratory rollers or bulldozers. As shown in Table 9, a vibratory roller could produce 0.21 PPV at 25 feet or a large bulldozer could produce up to 0.089 PPV at 25 feet. At a distance of 120 feet, a vibratory roller would yield a worst-case 0.020 PPV (in/sec) and a large bulldozer would yield a worst-case 0.008 PPV (in/sec), both of which are well below the threshold for any risk of architectural damage or annoyance to nearby sensitive receptors. Furthermore, project construction is exempt from Section 83.01.090(a) of the County of San Bernardino Development Code which prohibits the creation of ground vibration that can be felt without the aid of instruments at or beyond the lot-line, or any activity that produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot-line, as long as the activity occurs between 7:00 AM and 7:00 PM, and not on Sundays or Federal holidays.

Construction equipment is anticipated to be located at a distance of at least 120 feet or more from any receptor. Temporary vibration levels associated with project construction would be less than significant. Annoyance-related impacts would be short-term and would only occur during site grading and construction activities. Therefore, impacts associated with construction activities would be less than significant. No mitigation is required.

Vibration Impacts to the Project

Ground-borne vibration associated with train pass-bys can result in sleep disturbance, annoyance and/or interfere with sensitive medical equipment. The Federal Rail Authority has established thresholds to assess potential impacts related to rail pass-bys and potential ground-borne vibration at sensitive receptor locations. These criteria are presented in Table 11. A VdB level of 75 is the appropriate threshold for rail related ground-borne vibration impacts for the non-residential buildings and 72 VdB is the appropriate threshold for residential buildings. As stated previously, two BNSF rail tracks run relatively parallel to the project site, in a north/south direction, as close as 60 feet west of the project boundary line. The two rail tracks cross each other just southwest of the project site and are separated by approximately 220-336 feet. The nearest proposed non-residential structure is approximately 90 feet from the northbound rail track. The nearest proposed residential building is approximately 355 feet east of the nearest rail line.

The curves shown in the graph below are based on measurements of ground-borne vibration at representative North American transit systems from many samples and represent the upper range of the measurement data. The top curve applies to trains that are powered by diesel or electric locomotives.

Based on the above graph, groundborne vibration levels at the nearest proposed building, which is approximately 90 feet from the existing rail activity, may reach up to 79 VdB at speeds of 50 miles per hour and approximately 65 VdB at the nearest residential building, located at a distance of approximately 355 feet from rail activity. However, a speed of 35 miles per hour is typical in this location. Therefore, an adjustment of -4.4 dB is applied to represent a train speed of 30 miles per hour. This results in a groundborne vibration level of approximately 74.6 at the nearest non-residential building and a vibration level of 60.6 at the nearest residential building. Therefore, at a level of 74.6 VdB, the groundborne vibration level at the closest non-residential building will not exceed the 75 VdB threshold. Like-wise, at a level of 60.6 VdB, the groundborne vibration level at the closest residential building will not exceed the 72 VdB threshold, and rail-related groundborne vibration is expected to result in less than significant impacts. No mitigation is required.

VI. APPENDIX G CEQA CHECKLIST QUESTION RESPONSES

Would the proposed project expose persons to or generate of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Applicable noise related standards that apply to the proposed project include the County of San Bernardino General Plan Noise Element Goals and Policies and Sections 83.01.080 and 83.01.090 of the County Development Code.

Noise Standards for Stationary Noise Sources

Table 3, Noise Standards for Stationary Noise Sources, describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties. Stationary noise sources associated with the proposed project may impact nearby residential land uses. As shown in Table 3, the base exterior noise level standards for residential land uses are 55 dBA L_{eq} during daytime hours and 45 dBA during nighttime hours; and the base noise level criteria for park land uses is 65 dBA (anytime). As described under Table 3, other criteria apply depending on the duration of the noise event. For example, the maximum event noise level standard for impacts to the adjacent residential land uses is 75 dBA L_{eq} during daytime hours and 65 dBA during nighttime hours. Typically, if the 30-minute L_{eq} is not exceeded the other shorter criteria, with the exception of the L_{max} would be likely to be exceeded.

As shown on Figures 8 and 9, exterior noise levels at the nearest sensitive receptors due to project operational noise are expected to range between 43.4 and 47.6 due to peak-hour project operation. Noise associated with parking lots include, but are not limited to idling cars/trucks, trucks, doors closing, and starting engine noise. Noise levels associated with parking lots typically range between 44-63 dBA L_{eq} at a distance of 100 feet. Parking lot noise was modeled assuming 252 parking movements during the peak-hour. The location of the rooftop HVAC equipment was estimated and modeled as point sources placed on-top of the structures' roofs. No rooftop parapets or shielding were included in the model. A representative sound power level of 86.1 dB (York RTU 150 ([12.5]) was utilized for modeling purposes.

Peak-hour operational noise will not exceed the County's daytime or nighttime noise standards (55 and 45 dBA L_{eq}, respectively) for stationary noise sources. The project is consistent with applicable noise standards and impacts should be less than significant. No mitigation measures are required.

Noise Standards for Transportation Impacts to the Project

The County of San Bernardino Development Code also sets forth interior and exterior noise level standards for transportation noise impacts to the proposed project (see Table 4). The noise level criteria of 45 dBA CNEL for interior noise and the 65 dBA CNEL apply to the proposed residential buildings as well as to the proposed medical professional offices.

The SoundPLAN noise model was utilized to calculate transportation noise impacts to the proposed project, including rail and noise (see Figures 6 and 7). Buildout exterior traffic noise levels are expected to range between 55 and 65 at proposed residential buildings. Interior noise levels are not expected to exceed 45 dBA CNEL with the provision of air conditioning allowing a closed window condition. Future traffic noise impacts to proposed residential buildings are expected to be consistent with County exterior noise criteria of 65 dBA CNEL and interior noise criteria of 45 dBA CNEL.

Buildout exterior traffic noise levels are expected to range between 54 and 65 at proposed non-residential buildings. Future traffic noise impacts to the proposed non-residential (institutional) land uses are expected to be consistent with County exterior noise criteria of 65 dBA CNEL and interior noise criteria of 45 dBA CNEL.

Transportation noise impacts to the proposed project are less than significant in light of the County of San Bernardino General Plan and Development Code. No mitigation is required under County criteria and modeling methodology. However, the results from the HUD noise impact analysis, using HUD methodology are higher than those modeled for CEQA purposes, using the SoundPLAN noise model. This analysis is discussed below.

Exterior noise levels at facades facing either and/or both of the transportation noise sources were also calculated using the HUD methodology. Noise levels at the western and southern facades of the proposed assisted care building will reach up to 69 DNL/CNEL; and noise levels at the western and northern facades of the independent living building are expected to reach up to 70 DNL/CNEL. It should be noted that this methodology did not take into consideration the added attenuation provided by buildings that are proposed in-between the rail line and roadway that would shield the proposed residential buildings.

Future transportation noise impacts to on-site receptors will exceed what is considered "acceptable" by HUD standards (65 DNL), but may be approved if additional sound attenuation is designed into the new housing per 24 Code of Federal Regulations Part 51, Section 103.

Normal building construction typically provides at least 20 dB of exterior to interior noise reduction. Utilization of windows with a Sound Transmission Class (STC) rating of at least 27 can ensure that noise levels inside the proposed residential units at the assisted care building do not exceed 45 DNL; and utilization of windows with an STC rating of 28 can ensure that noise levels inside the proposed independent living building do not exceed 45 DNL. These recommendations to meet HUD requirements, based on HUD methodology, have been included in Section VIII of this report.

Noise Standards for Construction Noise

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels have the potential to reach 87.2 dBA L_{eq} and 91 dBA L_{max} at the property line during grading. Therefore, unmitigated noise levels have the potential to reach 74.2 dBA L_{eq} and 77 dBA L_{max} at the northern property lines of closes receptors, the single-family detached residential dwelling units located approximately 100 feet south of the project site. As shown in Table 1, ambient noise readings show that receptors in the project vicinity are already exposed to maximum (L_{max}) noise levels between 66.2 and 79.5 dBA.

Per the County of San Bernardino Development Code, temporary construction, maintenance, repair, and demolition activities between 7:00 AM and 7:00 PM, except Sundays and Federal holidays, are exempt from Section 83.01.080(g)(3) of the San Bernardino Development Code. Although construction noise will have a temporary or periodic increase in the ambient noise levels above the existing within the project vicinity, construction activities are anticipated to occur during the permissible hours stated above. Therefore, construction-related noise impacts are considered to be less than significant. However, to be conservative and to reduce construction noise levels at the nearest sensitive receptors, recommended construction noise reduction measures are presented in Section VIII of this report.

County of San Bernardino General Plan Goals and Policies

The project will be consistent with General Plan Noise Element goal to incorporate noise abatement into the design of the proposed project by not exceeding the noise standards for stationary standards outlined in Section 83.01.080 of the County of San Bernardino Development Code as discussed in this report on page 26, Project Operational Impacts to Sensitive Receptors. The project would not result in noise levels that exceed stationary noise standards at nearby sensitive receptors. Furthermore, the project is also required to meet state noise insulation standards which is enforced with project compliance with the Development Code 65 dBA CNEL exterior noise standard for impacts to the proposed project. Normal construction with air conditioning provided, allowing for a closed window condition, will achieve a 20 dB reduction.

Would the proposed project expose persons to or generate excessive ground borne vibration or ground borne noise levels?

The project has the potential to result in ground-borne vibration related to project construction and the proposed project itself may be affected by ground-borne vibration associated with the nearby existing BNSF rail lines.

Vibration Impacts Caused by the Project

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Typically, particle velocity or acceleration (measured in gravities) is used to describe vibration in context of potential structural damage. Table 9 shows the peak particle velocities (PPV) of some common construction equipment and Table 10 shows typical human reactions to various levels of PPV as well as the effect of PPV on buildings.

The nearest existing structure to the project site is located approximately 120 feet to the south of the project site. As shown in Table 10, the threshold at which there may be a risk of architectural damage to normal houses with plastered walls and ceilings is 0.20 PPV in/second. Primary sources of vibration during construction would be from vibratory rollers or bulldozers. As shown in Table 9, a vibratory roller could produce 0.21 PPV at 25 feet or a large bulldozer could produce up to 0.089 PPV at 25 feet. At a distance of 120 feet, a vibratory roller would yield a worst-case 0.020 PPV (in/sec) and a large bulldozer would yield a worst-case 0.008 PPV (in/sec), both of which are well below the threshold for any risk of architectural damage or annoyance to nearby sensitive receptors. Furthermore, project construction is exempt from Section 83.01.090(a) of the County of San Bernardino Development Code which prohibits the creation of ground vibration that can be felt without the aid of instruments at or beyond the lot-line, or any activity that produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot-line, as long as the activity occurs between 7:00 AM and 7:00 PM, and not on Sundays or Federal holidays.

Construction equipment is anticipated to be located at a distance of at least 120 feet or more from any receptor. Temporary vibration levels associated with project construction would be less than significant. Annoyance-related impacts would be short-term and would only occur during site grading and construction activities. Therefore, impacts associated with construction activities would be less than significant. No mitigation is required.

Vibration Impacts to the Proposed Project

Ground-borne vibration associated with train pass-bys can result in sleep disturbance, annoyance and/or interfere with sensitive medical equipment. The Federal Rail Authority has established thresholds to assess potential impacts related to rail pass-bys and potential ground-borne vibration at sensitive receptor locations. These criteria are presented in Table 11. A VdB level of 75 is the appropriate threshold for rail related ground-borne vibration impacts for the non-residential buildings and 72 VdB is the appropriate threshold for residential buildings. As stated previously, two BNSF rail tracks run relatively parallel to the project site, in a north/south direction, as close as 60 feet west of the project boundary line. The two rail tracks cross each other just southwest of the project site and are separated by approximately 220-336 feet. The nearest proposed non-residential structure is

approximately 90 feet from the northbound rail track. The nearest proposed residential building is approximately 355 feet east of the nearest rail line.

The curves shown in the graph below are based on measurements of ground-borne vibration at representative North American transit systems from many samples and represent the upper range of the measurement data. The top curve applies to trains that are powered by diesel or electric locomotives.

Source: Federal Transit Authority (2006)

Based on the above graph, groundborne vibration levels at the nearest proposed building, which is approximately 90 feet from the existing rail activity, may reach up to 79 VdB at speeds of 50 miles per hour and approximately 65 VdB at the nearest residential building, located at a distance of approximately 355 feet from rail activity. However, a speed of 35 miles per hour is typical in this location. Therefore, an adjustment of -4.4 dB is applied to represent a train speed of 30 miles per hour. This results in a groundborne vibration level of approximately 74.6 at the nearest non-residential building and a vibration level of 60.6 at the nearest residential building. Therefore, at a level of 74.6 VdB, the groundborne vibration level at the closest non-residential building will not exceed the 75 VdB threshold. Like-wise, at a level of 60.6 VdB, the groundborne vibration level at the closest residential building will not exceed the 72 VdB threshold, and rail-related groundborne vibration is expected to result in less than significant impacts. No mitigation is required.

Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Development of the proposed project would result in increases in the ambient noise level associated with on-site operations and off-site project-generated vehicle trips. As stated previously in this report, neither the County of San Bernardino nor the State of California have established criteria for the purposes of determining if a project would result in a long-term substantial increase in ambient noise levels. Because noise generated by transportation sources propagates differently than noise generated by point sources each source has its own criteria.

Mobile Noise

During operation, the proposed project is expected to generate approximately 2,927 average daily trips with 221 trips during the AM peak-hour and 253 trips during the PM peak-hour. These vehicle trips will result in increases in ambient noise levels. In order to quantify the increases, a worst-case project-generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated from the centerline of the roadway to the roadway right-of-way. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference in with and without project conditions. Roadway input parameters including average daily traffic volumes (ADTs), speeds, and vehicle distribution data are shown in Table 6.

Existing Year (without Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 7.

Existing Year (With Project without Green Tree Boulevard Extension): This scenario refers to existing year plus project without Green Tree Boulevard extension traffic noise conditions and is demonstrated in Table 7.

Existing Year (without Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 8.

Existing Year (With Project with Green Tree Boulevard Extension): This scenario refers to existing year plus project with Green Tree Boulevard extension traffic noise conditions and is demonstrated in Table 8.

As shown in Table 7, modeled Existing traffic noise levels range between 60.3-80.6 dBA CNEL at the right-of-way of each modeled roadway segment; and the modeled Existing Plus Project Without Green Tree Boulevard Extension traffic noise levels range between 60.6-80.6 dBA CNEL at the right-of-way of each modeled roadway segment.

As shown in Table 8, modeled Existing traffic noise levels range between 60.3-80.6 dBA CNEL at the right-of-way of each modeled roadway segment; and the modeled Existing Plus Project With Green Tree Boulevard Extension traffic noise levels range between 60.6-80.6 dBA CNEL at the right-of-way of each modeled roadway segment.
As stated previously, increases in noise levels associated with project-generated vehicle trips will be considered substantial if they result in an increase of at least 5 dBA CNEL and: (1) the existing noise levels already exceed the applicable land use compatibility standard for the affected sensitive receptors set forth in the Noise Element of the City's General Plan; or (2) the project increases noise levels by at

least 5 dBA CNEL and raises the ambient noise level from below the applicable land use compatibility standard for the affected sensitive receptors to above the standard.

Table 7 shows that for the Without Green Tree Boulevard Extension scenario all modeled roadway segments are anticipated to change the noise a nominal amount (approximately 0.03 to 0.79 dBA CNEL). Table 8 shows that for the With Green Tree Boulevard Extension scenario all modeled roadway segments are anticipated to change the noise a nominal amount (approximately 0.02 to 2.38 dBA CNEL). Therefore, a change in noise level would not be audible and would be considered less than significant. No mitigation is required.

Stationary Noise

Land uses surrounding the site include the Mojave Narrows Regional Park north of the site and single-family detached residential dwelling units south of the site. Land west of the site is dedicated for rail uses and is vacant further east. The land use east of the site is vacant.

Project operations, including noise from parking lot activities, loading and unloading of supplies and HVAC, may produce an increase in noise levels which disturbs the peace and quiet of adjacent residential areas or cause discomfort/annoyance to area residents. A 5 dBA increase is considered to be "readily audible", which seems to correlate most closely to "substantial increase." For the purposes of this report, a substantial permanent increase in ambient noise levels due to stationary noise sources shall be considered 5 dBA L_{eq}.

As shown in Table 1, existing measured ambient noise levels at nearby sensitive receptors vary between 45.9 and 64.5 dBA L_{eq}. The noise measurement locations are shown on Figure 5. Peak-hour project operational noise was modeled using the SoundPLAN noise model. As shown on Figures 8 and 9, exterior noise levels at the nearest sensitive receptors are expected to range between 43.4 and 47.6 dBA L_{eq} due to peak-hour project operation. The proposed project would not result in substantial long-term increases in the ambient noise level. This impact is less than significant and no mitigation is required.

Would the proposed project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As shown in Table 1, existing measured ambient noise levels at nearby sensitive receptors vary between 45.9 and 64.5 dBA L_{eq}. Construction noise levels have the potential to reach 74.2 dBA L_{eq} at nearby sensitive receptors. The County of San Bernardino has exempted temporary construction, maintenance, repair, and demolition activities that occur between 7:00 AM and 7:00 PM, except Sundays and Federal holidays from noise standards presented in Section 83.01.080(g)(3) the San Bernardino Development Code. Impacts would be less than significant. Although no mitigation is required, measures to reduce impacts are presented in Section VIII of this report.

Would the proposed project be located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?

A thorough survey of all airports within fifteen miles was conducted. Airport data can be found in Appendix F of this report. The proposed project is not located within an airport land use plan or within two miles of an airport. The project would not result in any impacts related to airports or aircraft noise. No mitigation is required.

Would the proposed project be located in the vicinity of a private airstrip, and expose people residing or working in the project area to excessive noise levels?

A thorough survey of all airports within fifteen miles was conducted. Airport data can be found in Appendix F of this report. The proposed project is not located within the vicinity of a private airstrip or expose people to excessive noise levels. The project would not result in any impacts related to private airstrips or exposing people to excessive noise levels. No mitigation is required.

VII. MEASURES TO REDUCE IMPACTS

Construction Noise Reduction Measures

In addition to adherence to the County of San Bernardino policies found in the Noise Element and Development Code limiting the construction hours of operation, the following measures are recommended to reduce construction noise and vibrations, emanating from the proposed project:

- During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.
- The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.
- Equipment shall be shut off and not left to idle when not in use.
- The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.
- The project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the project site during construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

Noise Reduction Measures for Proposed Residential Buildings

- In order to meet HUD requirements, windows proposed on the southern and western facades of the assisted care building should have an STC rating of at least 27 to ensure that noise levels inside the proposed residential units do not exceed 45 DNL; and windows proposed on the western and northern facades of the independent living building should have an STC rating of at least 28 to ensure that noise levels inside the proposed independent living building do not exceed 45 DNL.

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Table 1

Short-Term Noise Measurement Summary (dBA)[1, 2]

Daytime							
Site Location	Time Started	Leq	Lmax	L(2)	L(8)	L(25)	L(50)
STNM1	10:25 AM	58.7	71.4	67.3	62.6	59.8	55
STNM2	11:51 AM	53.7	66.9	61.3	58.4	54.7	49.7
STNM3	2:57 PM	45.9	66.2	52.5	47.6	45.1	42.3
STNM4	1:45 PM	64.5	79.5	73.0	69.6	64.8	58.7

[1] See Figure 4 for noise measurement locations. Each noise measurement was performed over a 10-minute duration.

[2] Noise measurements performed on April 13, 2018.

Table 2

Long-Term Noise Measurement Summary (dBA)[1, 2]

24-Hour Ambient Noise		
Hourly Measurements	Time Started	Leq
Overall Summary	5:00 PM	68.0
1	5:00 PM	68.6
2	6:00 PM	56.3
3	7:00 PM	65.2
4	8:00 PM	70.2
5	9:00 PM	61.6
6	10:00 PM	68.3
7	11:00 PM	67.4
8	12:00 AM	69.5
9	1:00 AM	71.4
10	2:00 AM	53.9
11	3:00 AM	56.2
12	4:00 AM	67.9
13	5:00 AM	68.2
14	6:00 AM	66.4
15	7:00 AM	70.6
16	8:00 AM	65.9
17	9:00 AM	61.2
18	10:00 AM	67.8
19	11:00 AM	70.4
20	12:00 PM	70.5
21	1:00 PM	68.1
22	2:00 PM	70.1
23	3:00 PM	67.7
24	4:00 PM	68.9

[1] See Figure 5 for noise measurement locations. Noise measurement was performed over a 24-hour duration.

[2] Noise measurement performed from April 13, 2018 to April 14, 2018.

Table 3

Noise Standards for Stationary Noise Sources (Development Code Table 83-2)[1]

Affected Land Uses (Receiving Noise)	7:00 AM to 10:00 PM dBA L_{eq}	10:00 PM to 7:00 AM dBA L_{eq}
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70

Noise limit categories. No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

(A) The noise standard for the receiving land use as specified in Subsection B (Noise-impacted areas), above, for a cumulative period of more than 30 minutes in any hour.

(B) The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.

(C) The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.

(D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.

(E) The noise standard plus 20 dB(A) for any period of time.

If the measured ambient level exceeds any of the first four noise limit categories, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

[1] Source: County of San Bernardino Development Code.

Table 4

Noise Standards for Mobile Noise Sources (Development Code Table 83-3)[1]

Land Use		L_{dn} (or CNEL) dB(A)	
Category	Type	Interior[2]	Exterior[3]
Residential	Single and multi-family, duplex, mobile homes	45	60[4]
Commercial	Hotel, motel, transient housing	45	60[4]
	Commercial retail, bank, restaurant	50	n/a
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	n/a
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	n/a	65

[1] Source: County of San Bernardino Development Code.

[2] The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.

[3] The outdoor environment shall be limited to:

Hospital/office building patios
Hotel and motel recreation areas
Mobile home parks
Multi-family private patios or balconies
Park picnic areas
Private yard of single-family dwellings
School playgrounds

[4] An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

Table 5

Typical Construction Equipment Noise Levels[1]

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrappers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

[1] Source: Bolt, Beranek & Newman; Noise Control for Buildings and Manufacturing Plants, 1987.

Table 6

Project Average Daily Traffic Volumes and Roadway Parameters

Roadway	Segment	Average Daily Traffic Volume			Posted Travel Speeds (MPH)
		Existing	Existing Plus Project (Without Green Tree Boulevard Extension)	Existing Plus Project (With Green Tree Boulevard Extension)	
Green Tree Boulevard	West of Hesperia Road	34500 [3]	-	34940	50
	Hesperia Road to Ridgecrest Road	20900 [3]	-	21780	50
Yates Road	East of Ridgecrest Road	9,600	11500	11500	55
	West of Park Road	9,600	10,620	10,620	55
	East of Park Road	9,400	10,420	10,420	55
Yucca Loma Road	West of Apple Valley Road	11,400	12,420	12,420	45
	East of Apple Valley Road	12,600	12,890	12,890	45
Pebble Beach Drive	East of Ridgecrest Road	2,500	2,650	2,650	25
Bear Valley Road	West of Hesperia Road	37,200	37,790	37,490	50
	Hesperia Road to Apatite Avenue	47,800	49,270	48,380	50
	Apatite Avenue to Industrial Boulevard	49,000	50,470	49,580	45
	Industrial Boulevard to Ridgecrest Road	72,100	73,570	72,680	45
	East of Ridgecrest Road	57,300	57,590	57,590	45
Hesperia Road	North of Green Tree Boulevard	36900 [3]	22,940	37,190	45
	South of Green Tree Boulevard	48200 [3]	24,340	48,350	45
	North of Bear Valley Road	22,500	-	22,650	40
	South of Bear Valley Road	23,900	-	24,050	40
Ridgecrest Road	Green Tree Boulevard to Chinquapin Drive	1400 [3]	-	2,420	55
	Chinquapin Drive to Vista Point Drive	10,900	12,800	11,920	55
	Vista Point Drive to Pebble Beach Drive	12,800	14,700	13,820	55
	Pebble Beach Drive to Pahute Avenue	14,800	16,560	15,680	55
	Pahute Avenue to Bear Valley Road	17,600	19,360	18,480	45
Apple Valley Road	North of Yucca Loma Road	22,300	22,740	22,740	55
	South of Yucca Loma Road	21,000	21,290	21,290	55

Vehicle Distribution (Heavy Mix)[2]			
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)
Automobiles	75.5	14.0	10.4
Medium Trucks	48.0	2.0	50.0
Heavy Trucks	48.0	2.0	50.0

Vehicle Distribution (Light Mix)[2]			
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)
Automobiles	75.6	14.0	10.5
Medium Trucks	48.9	2.2	48.9
Heavy Trucks	47.3	5.4	47.3

[1] Average daily traffic volumes obtained from the Chateau Senior Living Facility Traffic Impact Analysis prepared by Ganddini Group, Inc. (June 9, 2020).

[2] Vehicle percentages are based on the Riverside County Industrial Hygiene Letter for Traffic Noise.

[3] Existing average daily traffic volumes obtained from the Interim Year (2015) Average Daily Traffic With Bridge Connection given in the Yucca Loma Bridge/Yates Road/Greentree Boulevard Transportation Improvement Project Traffic Impact Analysis (Revised), Urban Crossroads, Inc. (August 6, 2008)

Table 7

Change in Existing Noise Levels Along Roadways as a Result of Project (Without Green Tree Boulevard Extension) (CNEL)[1]

Roadway	Segment	Distance from roadway centerline to roadway right-of-way (feet)[2]	Modeled Noise Levels (CNEL)				
			Existing Without Project	Existing Plus Project (Without Green Tree Boulevard Extension)	Change in Noise Level	Exceeds Standards	5 dB Increase
Green Tree Boulevard	West of Hesperia Road	62	-	-	-	-	-
	Hesperia Road to Ridgecrest Road	62	-	-	-	-	-
Yates Road	East of Ridgecrest Road	50	74.08	74.87	0.79	Yes	No
	West of Park Road	50	74.08	74.52	0.44	Yes	No
	East of Park Road	50	73.99	74.44	0.45	Yes	No
Yucca Loma Road	West of Apple Valley Road	50	73.48	73.85	0.37	Yes	No
	East of Apple Valley Road	50	73.91	74.01	0.10	Yes	No
Pebble Beach Drive	East of Ridgecrest Road	30	60.30	60.55	0.25	Yes	No
Bear Valley Road	West of Hesperia Road	62	78.37	78.44	0.07	Yes	No
	Hesperia Road to Apatite Avenue	62	79.46	79.59	0.13	Yes	No
	Apatite Avenue to Industrial Boulevard	62	78.88	79.00	0.12	Yes	No
	Industrial Boulevard to Ridgecrest Road	62	80.55	80.64	0.09	Yes	No
	East of Ridgecrest Road	62	79.55	79.58	0.03	Yes	No
Hesperia Road	North of Green Tree Boulevard	62	74.76	74.84	0.08	Yes	No
	South of Green Tree Boulevard	62	75.02	75.10	0.08	Yes	No
	North of Bear Valley Road	62	-	-	-	-	-
	South of Bear Valley Road	62	-	-	-	-	-
Ridgecrest Road	Green Tree Boulevard to Chinquapin Drive	62	-	-	-	-	-
	Chinquapin Drive to Vista Point Drive	42	75.39	76.09	0.70	Yes	No
	Vista Point Drive to Pebble Beach Drive	42	76.09	76.69	0.60	Yes	No
	Pebble Beach Drive to Pahute Avenue	42	76.72	77.21	0.49	Yes	No
	Pahute Avenue to Bear Valley Road	42	76.12	76.53	0.41	Yes	No
Apple Valley Road	North of Yucca Loma Road	52	77.57	77.66	0.09	Yes	No
	South of Yucca Loma Road	64	76.41	76.47	0.06	Yes	No

[1] Exterior noise levels calculated 5-feet above pad elevation, perpendicular to subject roadway.

[2] Distance from the roadway centerline to the roadway ROW. ROW distances were estimated based on the street classifications provided in the City of Victorville General Plan 2030 (September 2008).

Table 8

Change in Existing Noise Levels Along Roadways as a Result of Project (With Green Tree Boulevard Extension) (CNEL)[1]

Roadway	Segment	Distance from roadway centerline to roadway right-of-way (feet)[2]	Modeled Noise Levels (CNEL)				
			Existing Without Project	Existing Plus Project (With Green Tree Boulevard Extension)	Change in Noise Level	Exceeds Standards	5 dB Increase
Green Tree Boulevard	West of Hesperia Road	62	78.05	78.10	0.05	Yes	No
	Hesperia Road to Ridgecrest Road	62	75.87	76.05	0.18	Yes	No
Yates Road	East of Ridgecrest Road	50	74.08	74.87	0.79	Yes	No
	West of Park Road	50	74.08	74.52	0.44	Yes	No
	East of Park Road	50	73.99	74.44	0.45	Yes	No
Yucca Loma Road	West of Apple Valley Road	50	73.48	73.85	0.37	Yes	No
	East of Apple Valley Road	50	73.91	74.01	0.10	Yes	No
Pebble Beach Drive	East of Ridgecrest Road	30	60.30	60.55	0.25	Yes	No
Bear Valley Road	West of Hesperia Road	62	78.37	78.41	0.04	Yes	No
	Hesperia Road to Apatite Avenue	62	79.46	79.52	0.06	Yes	No
	Apatite Avenue to Industrial Boulevard	62	78.88	78.93	0.05	Yes	No
	Industrial Boulevard to Ridgecrest Road	62	80.55	80.59	0.04	Yes	No
	East of Ridgecrest Road	62	79.55	79.58	0.03	Yes	No
Hesperia Road	North of Green Tree Boulevard	62	77.64	77.68	0.04	Yes	No
	South of Green Tree Boulevard	62	78.80	78.82	0.02	Yes	No
	North of Bear Valley Road	62	74.76	74.79	0.03	Yes	No
	South of Bear Valley Road	62	75.02	75.05	0.03	Yes	No
Ridgecrest Road	Green Tree Boulevard to Chinquapin Drive	62	64.79	67.17	2.38	Yes	No
	Chinquapin Drive to Vista Point Drive	42	75.39	75.78	0.39	Yes	No
	Vista Point Drive to Pebble Beach Drive	42	76.09	76.42	0.33	Yes	No
	Pebble Beach Drive to Pahute Avenue	42	76.72	76.97	0.25	Yes	No
	Pahute Avenue to Bear Valley Road	42	76.12	76.33	0.21	Yes	No
Apple Valley Road	North of Yucca Loma Road	52	77.57	77.66	0.09	Yes	No
	South of Yucca Loma Road	64	76.41	76.47	0.06	Yes	No

[1] Exterior noise levels calculated 5-feet above pad elevation, perpendicular to subject roadway.

[2] Distance from the roadway centerline to the roadway ROW. ROW distances were estimated based on the street classifications provided in the City of Victorville General Plan 2030 (September 2008).

Table 9

Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(Slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

Table 10

Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration

Vibration Level Peak Particle Velocity (PPV)[1]	Human Reaction	Effect on Buildings
0.006–0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

[1] Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 6 Tables 5 and 12, September 2013.

Table 11

FTA Groundbourne Vibration and Noise Criteria [1]

Table 8-1. Ground-Borne Vibration (GBV) and Ground-Borne Noise (GBN) Impact Criteria for General Assessment						
	GBV Impact Levels (VdB re 1 micro-inch /second)			GBN Impact Levels (dB re 20 micro Pasacals)		
Land Use Category	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]	N/A[4]	N/A[4]	N/A[4]
Category 2: Residences and buildings where people normally sleep.	72VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime uses.	75VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Notes:

1. "Frequent Events" is defined as more than 70 vibration event of the same source per day. Most rapid transit projects fall into this category.

2. "Occasional Events" is defined between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

5. Vibration-sensitive equipment is generally not sensitive to ground-borne noise.

[1] Source: FTA Noise and Vibration Manual

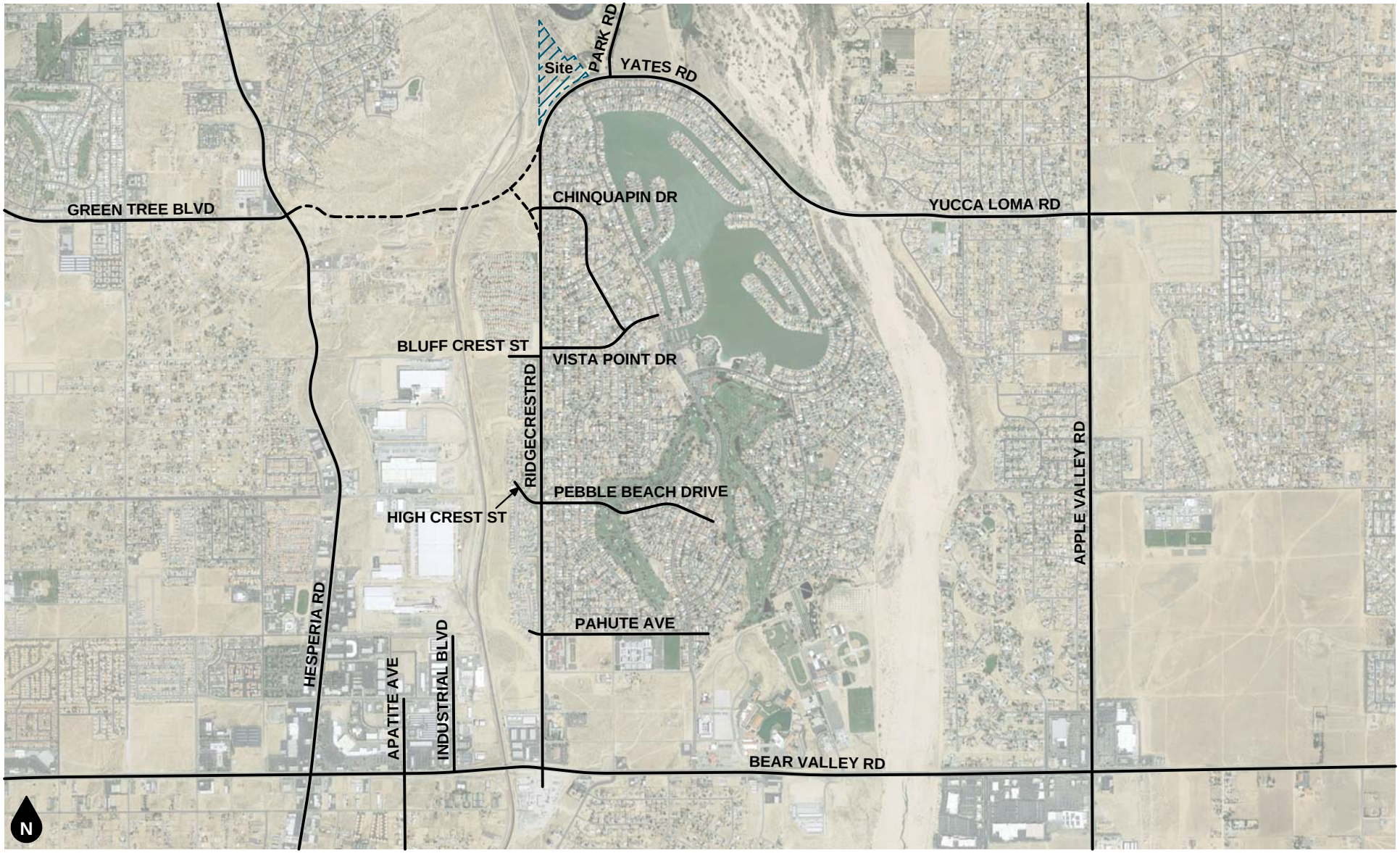


Figure 1
Project Location Map

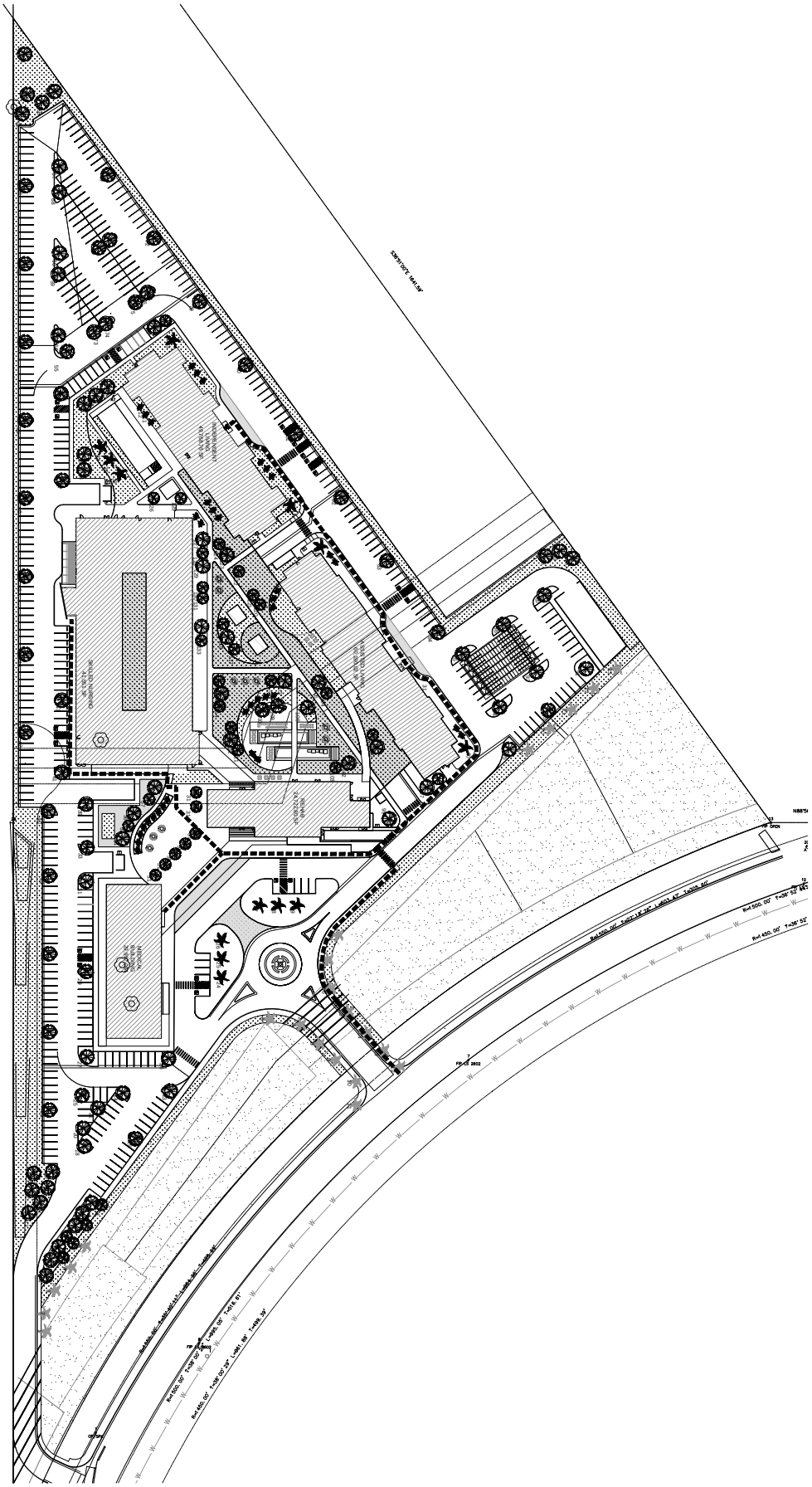


Figure 2
Site Plan

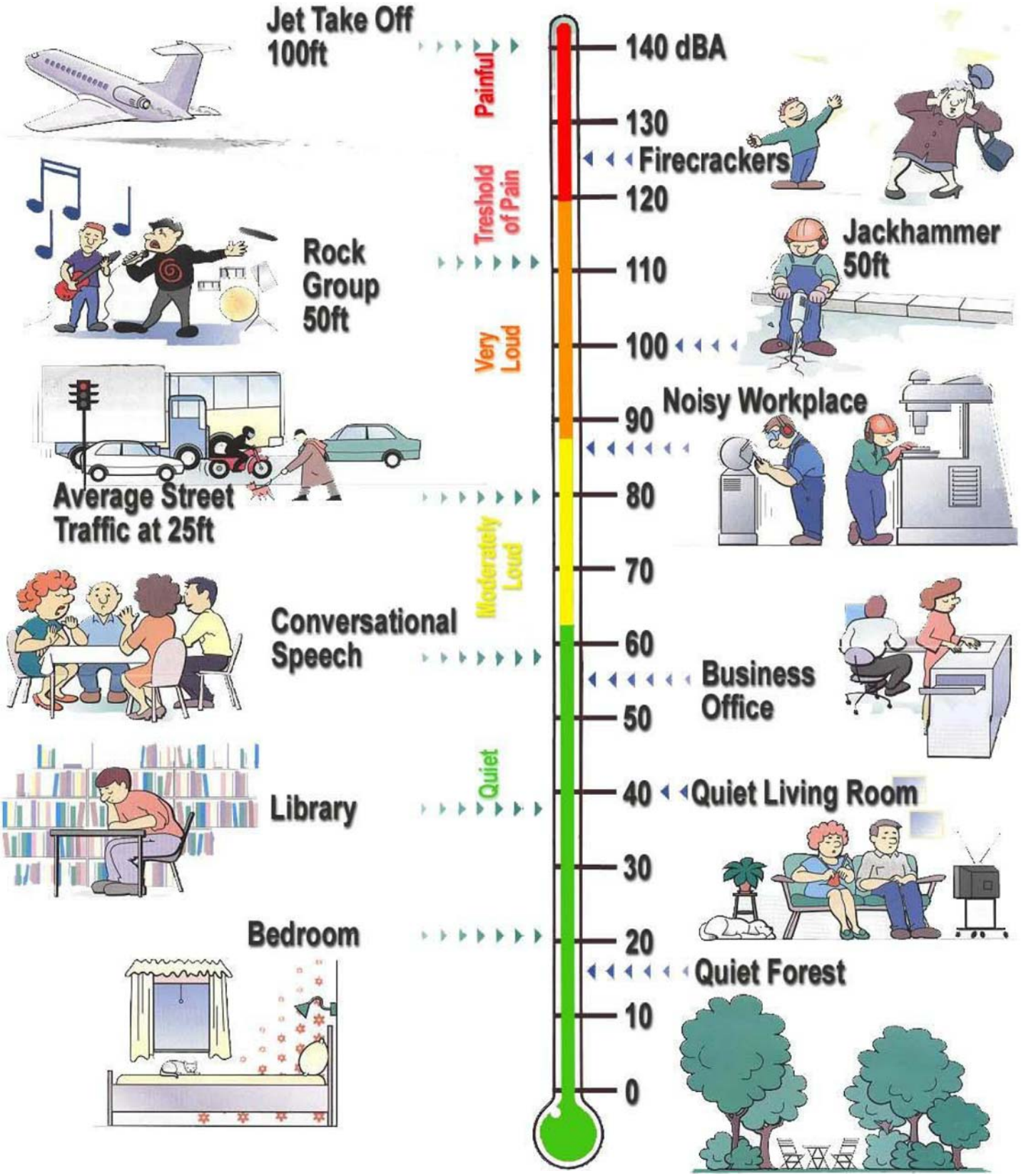
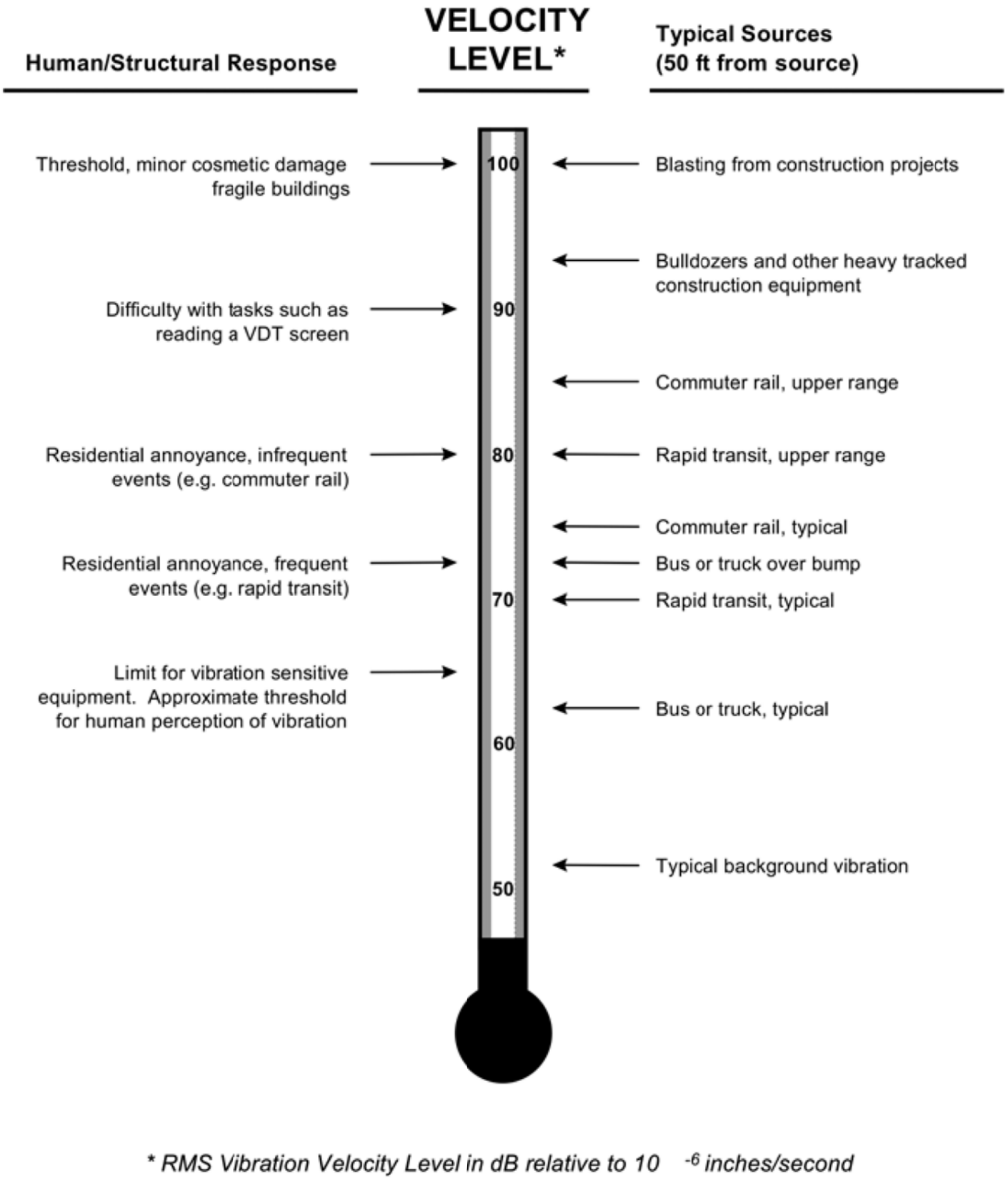


Figure 3
Weighted Sound Levels and Human Response



Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

Figure 4
Typical Levels of Groundborne Vibration

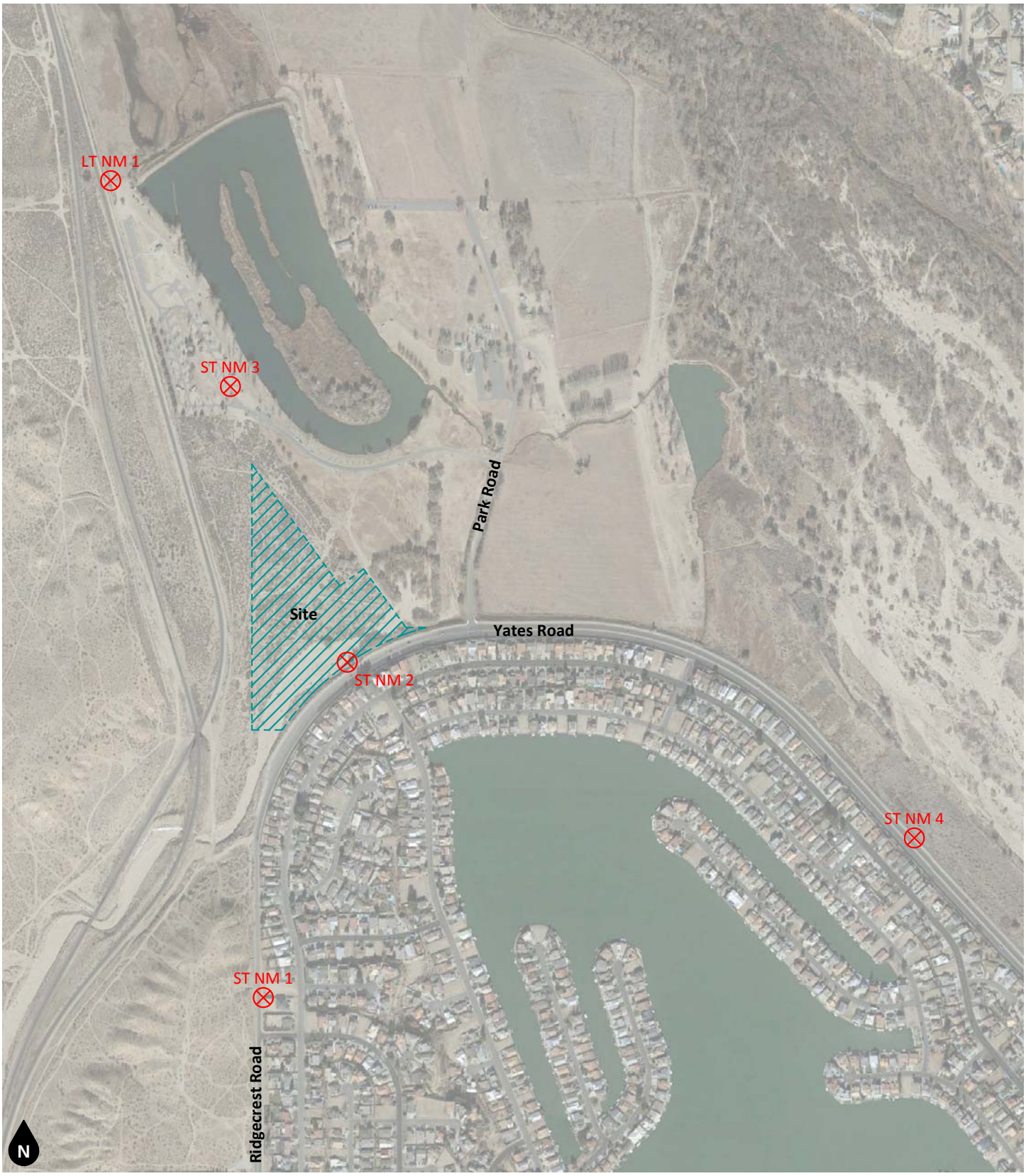


Figure 5
Noise Measurement Location Map

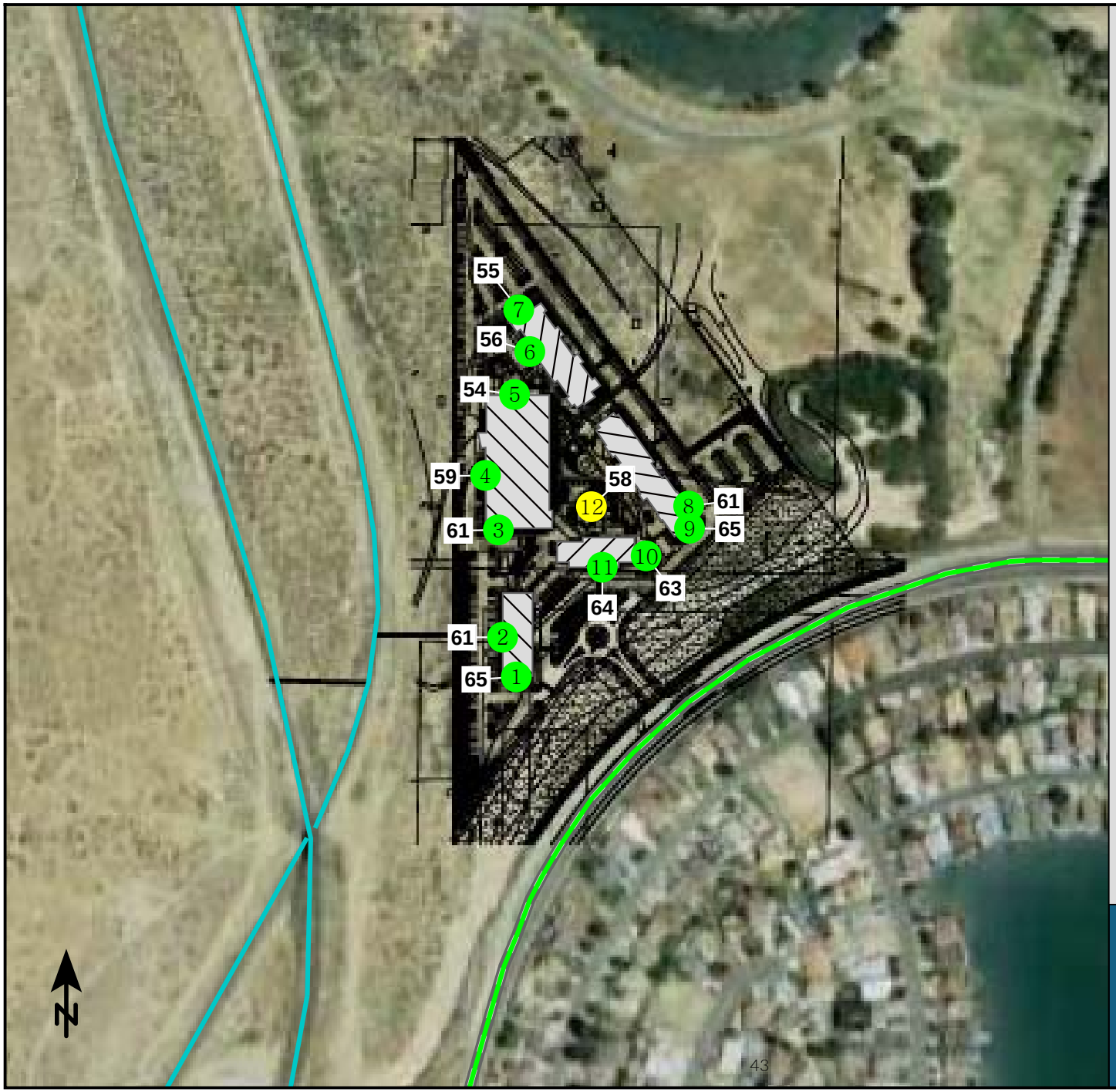


Figure 6

Transportation Noise Levels
Rail and Road
(CNEL/Ldn)

Signs and symbols

- Receiver
- Receiver at building
- Roadway
- Rail Line
- Noise Levels (CNEL/Ldn)

1 : 350

0 100 200 400 600 800 feet

Figure 7

Transportation Noise Contours
Rail and Road
(CNEL/Ldn)

Signs and symbols

Roadway

Rail Line

Levels in dB(A)

<= 50
50 - 55
55 - 60
60 - 65
65 - 70
> 70

1 : 350

0 100 200 400 600 800 feet

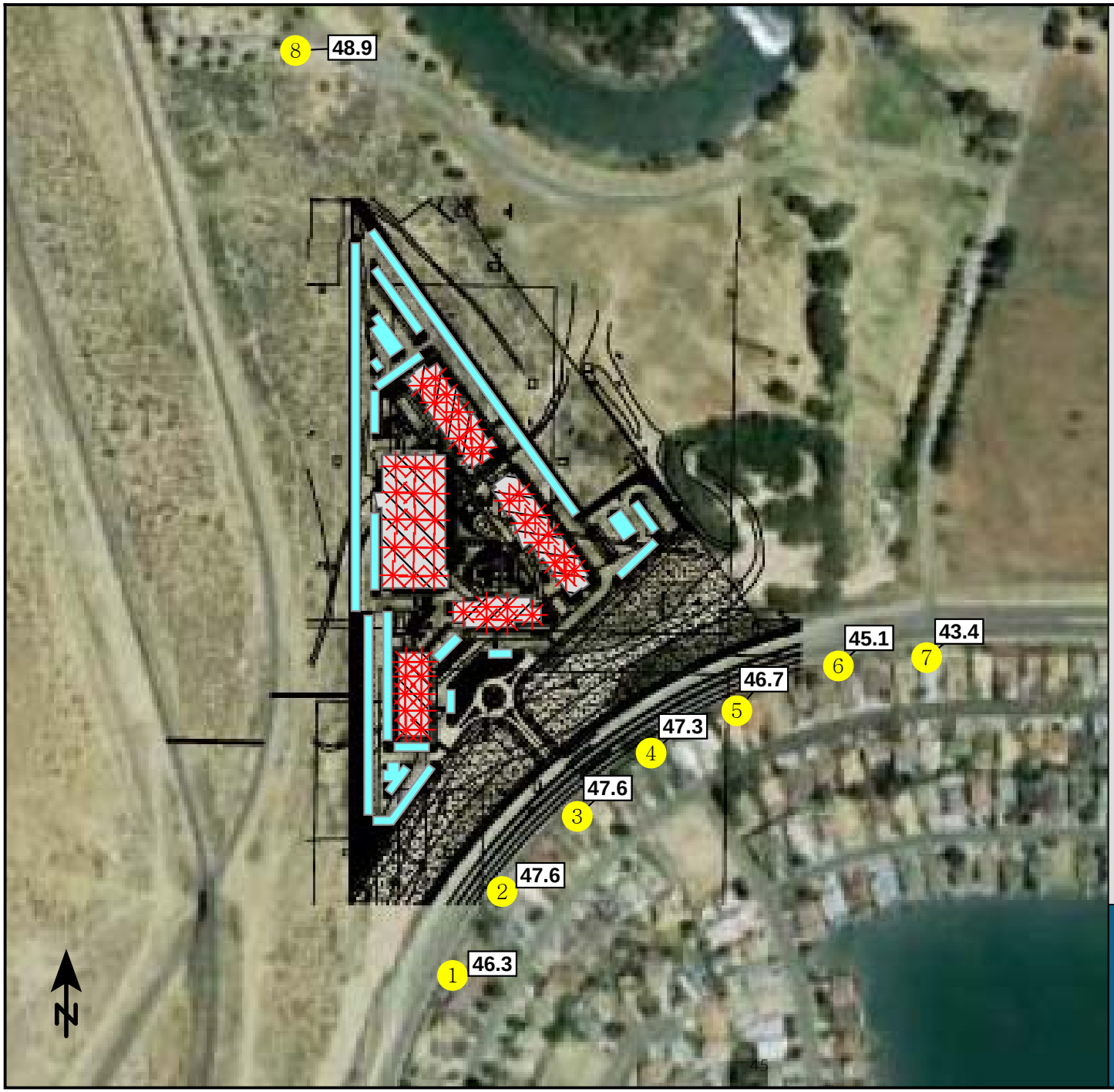


Figure 8

Project Operational Noise Levels
Peak Hour

Signs and symbols

- Receiver
- HVAC
- Parking lot
- Noise Levels

3	59.3	51.8
2	58.3	50.8
1	57.3	49.8

1 : 350

0 100 200 400 600 800 feet

gandini

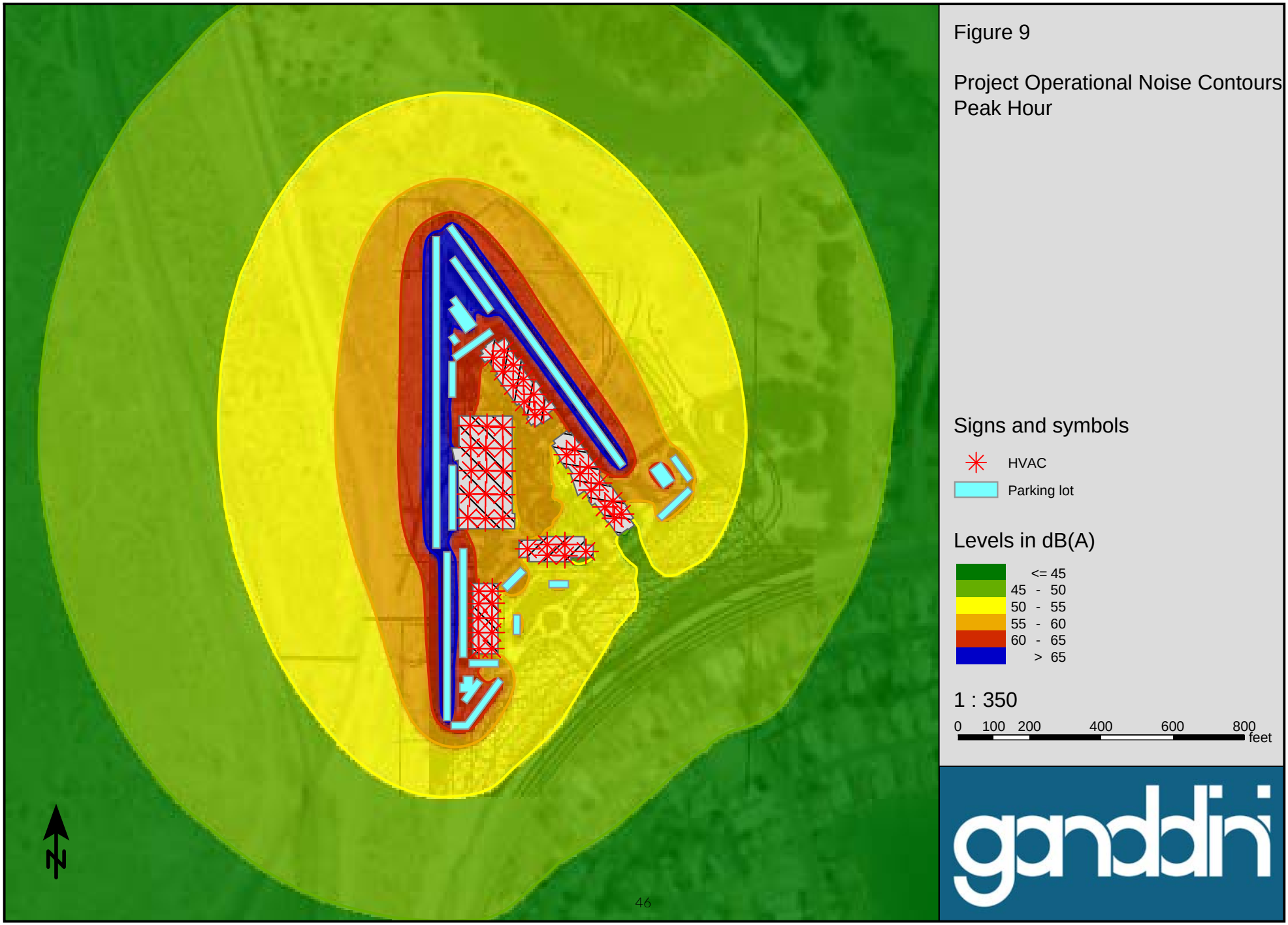

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Figure 9
Project Operational Noise Contours
Peak Hour
Signs and symbols
HVAC
Parking lot
Levels in dB(A)
<= 45
45 - 50
50 - 55
55 - 60
60 - 65
> 65
1 : 350
0 100 200 400 600 800
feet
gandini

Appendix A

List of Acronyms

Term	Definition
ADT	Average Daily Traffic
ANSI	American National Standard Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
D/E/N	Day / Evening / Night
dB	Decibel
dBA or dB(A)	Decibel "A-Weighted"
dBA/DD	Decibel per Double Distance
dBA L_{eq}	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L_{02},L_{08},L_{50},L_{90}	A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period
DNL	Day-Night Average Noise Level
$L_{eq(x)}$	Equivalent Noise Level for '"x" period of time
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Level of Noise (measured using a sound level meter)
L_{min}	Minimum Level of Noise (measured using a sound level meter)
LOS C	Level of Service C
OPR	California Governor's Office of Planning and Research
PPV	Peak Particle Velocities
RCNM	Road Construction Noise Model
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square

Appendix B

Definitions of Acoustical Terms

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
L_{02}, L_{08}, L_{50}, L_{90}	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
L_{max}, L_{min}	L_{max} is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. L_{min} is the minimum level.
Offensive/ Offending/ Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

Appendix C

Noise Monitoring Field Worksheets

Noise Measurement
Field Data

Project Name:	Horseshoe Lake Park Rail Noise Project	Date:	13 to 14 April 2018
Project #:	6602a		
Noise Measurement #:	LTNM1	3099 LxT_Data009.xlsx	Technician: Ian Edward Gallagher
Nearest Address or Cross Street:	Park Road & Horseshoe Lane		
Site Description (Type of Existing Land Use and any other notable features)	Residential, park and park like areas , lakes, two well-used rail road tracks, one north bound, the other south bound.		
Weather:	Clear blue sunny skies by day, clear skies at night. Sunset 7:19PM, Sunrise 6:18AM	Settings:	SLOW FAST (Circle one)
Temperature:	50 to 79 deg F	Wind: Calm to 10 mph	Humidity: 9 to 18%
			Flat
Start Time:	5:00 PM 13-Apr-18	End Time:	5:00PM 14-Apr-18
Run Time:	24 Hours (1440 x 1 minute)		

24 Leq:	68.0 dB	Primary Noise Source:	Trains passing along two rail tracks just West of LTNM1
Lmax	95.3 dB		
L2	78.1 dB	Secondary Noise Sources:	Overhead aircraft, propellor planes and higher altitude commercial jet aircraft
L8	67.9 dB		Small waterfall 50 yards East of LTNM1, overflow from Lake Horseshoe.
L25	48.6 dB		Bird song by day, wild life at night, crickets, coyotes.
L50	41.7 dB		Campers and people relaxing in the park, more people in the park on the weekend.

NOISE METER:	SoundTrack LxT Class 1 ;	CALIBRATOR:	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	MAKE:	Larson Davis
MODEL:	LxT1	MODEL:	Cal250
SERIAL NUMBER:	3099	SERIAL NUMBER:	2723
FACTORY CALIBRATION DATE:	6/23/2017	FACTORY CALIBRATION DATE:	6/9/2017
FIELD CALIBRATION DATE:	4/13/2018		

Additional Notes/Sketch

JN 6602a LTNM1 looking West from park across North bound rail.

JN 6602a LTNM1 looking South alomg Western edge of park. NB rail behind fence.

The engines where all diesel locomotive. The engines were in pairs, back to back facing in opposite directions. Each train usually was approximately one-hundred cars in length. Two engine pairs pulling in front and one engine pair pushing from behind, the engines 99% of the time being the orange colored BNSF stock. The frequency of passing freight trains was about 1 every 10 minutes. A wheel flat on any of these trains would be indicated by a " blap - blap- blap- blap- blap" sound as the faulty wheel rotated on the track, non where observed. The tracks were all smooth, no fish plates joining the rails, no clickity- clack of the wheels rolling over the joins in the rail because there were no joins, all one long smooth rail. The only observed sound was the deep base of the front four diesel locomotive engines as they passed, the sound of steel wheels rolling on steel rails, followed once more by the deep base sound of the rear two diesel locomotives pushing from behind. The cars were a combination of box cars for solids and stackables, tank cars for bulk liquids and gases, and hopper cars for international and national freight containers, non were observed empty but statistically it is possible. The sleepers would be mostly concrete. There are 2 tracks, the closest track to the meter is for all North bound trains, the other track is for all South bound. According to the residents that actually live in the park here, the rail line is freakishly busy with trains 24 7, one day pretty much like the other. Average observed rail cars per train was 182.

Summary

File Name on Meter	LxT_Data.009
File Name on PC	SLM_0003099_LxT_Data_009.02.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Location	JN6602a LTNM1
Job Description	24 hour noise measurement
Note	(1440 x 1 minute)

Measurement

Description	
Start	2018-04-13 17:00:00
Stop	2018-04-14 17:00:00
Duration	24:00:00.0
Run Time	24:00:00.0
Pause	00:00:00.0
Pre Calibration	2018-04-13 16:03:10
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	122.4 dB

	A	C	Z	
Under Range Peak	**78.7**	75.7	80.7	dB
Under Range Limit	**26.3**	25.4	32.3	dB
Noise Floor	16.4	16.3	22.2	dB

Results

L_{Aeq}	68.0	dB		
LAE	117.3	dB		
EA	60.180	mPa^2h		
EA8	20.060	mPa^2h		
EA40	100.300	mPa^2h		
$L_{Apeak\ (max)}$	2018-04-14 11:42:51		109.6	dB
L_{ASmax}	2018-04-14 11:42:51		95.3	dB
L_{ASmin}	2018-04-14 16:56:38		34.9	dB
SEA	-99.9	dB		

LAS > 65.0 dB (Exceedance Counts / Duration)	187	9263.3 s
LAS > 85.0 dB (Exceedance Counts / Duration)	51	314.7 s
L_{Apeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
L_{Apeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

L_{Ceq}	78.1	dB
L_{Aeq}	68.0	dB
L_{Ceq} - L_{Aeq}	10.1	dB
L_{AIeq}	69.4	dB
L_{Aeq}	68.0	dB
L_{AIeq} - L_{Aeq}	1.4	dB

	A		C	
	dB	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	68.0		78.1	
$L_{S(max)}$	95.3	2018/04/14 11:42:51		
$L_{S(min)}$	34.9	2018/04/14 16:56:38		
$L_{Peak(max)}$	109.6	2018/04/14 11:42:51		

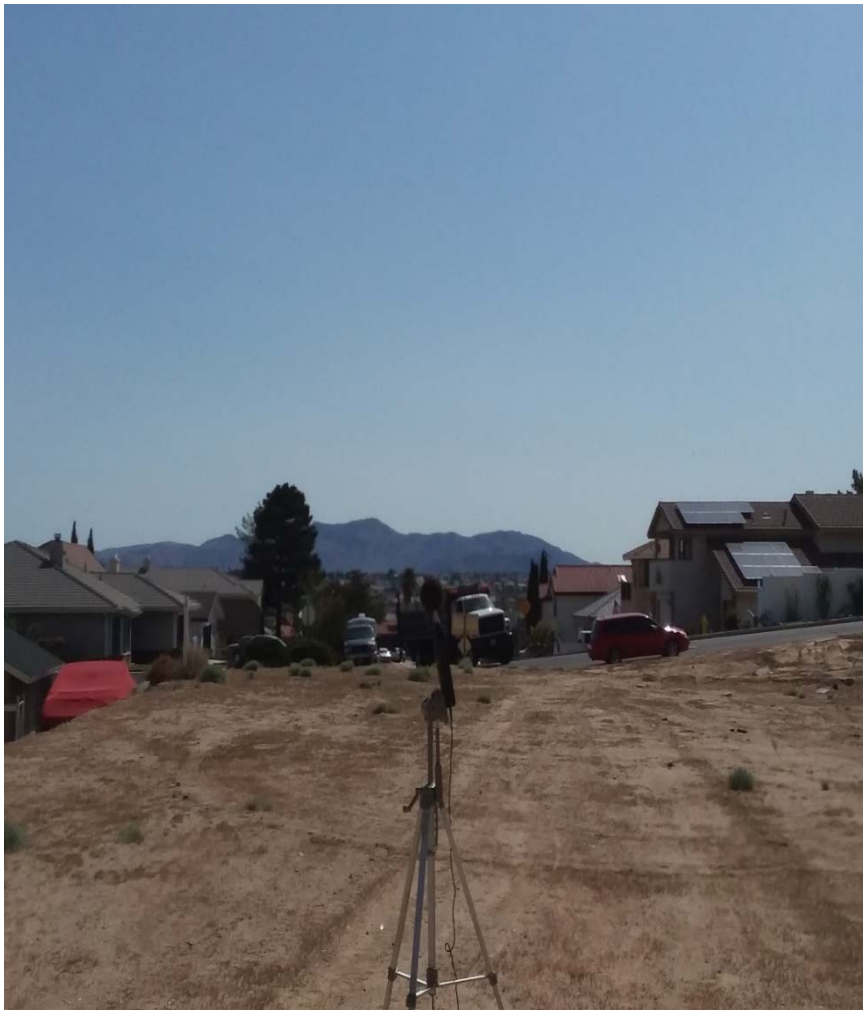
Noise Measurement
Field Data

Project Name:	Horseshoe Lake Park Rail Noise Project	Date:	13-Apr-18
Project #:	6602a		
Noise Measurement #:	STNM1	3099 LxT_Data001.xlsx	Technician: Ian Edward Gallagher
Nearest Address or Cross Street:	Ridgecrest Road & Chinquapin Drive		
Site Description (Type of Existing Land Use and any other notable features)	Residential, park and park like areas , lakes, two well used rail road tracks, one North Bound, the other South bound.		
Weather:	Clear blue sunny skies	Settings:	SLOW FAST (Circle one)
Temperature: 56 deg F	Wind: 5 to 10 mph	Humidity: 18%	Flat
Start Time: 10:25 AM	End Time: 10:35 AM	Run Time:	10 minutes (1 x 10 minutes)

Leq:	58.7 dB	Primary Noise Source:	Traffic noise from vehicles running along Ridgecrest Road
Lmax	71.4 dB		
L2	67.3 dB	Secondary Noise Sources:	Overhead aircraft, propellor planes and higher altitude commercial jet aircraft
L8	62.6 dB		Low altitude chopper passes at T +6.5 . Bird song
L25	59.8 dB		Residential ambiance, lawnmower, leaf blower and hedge trimmer being operated
L50	55.0 dB		about 100 yards down Cresta Blanca Lane

NOISE METER:	SoundTrack LxT Class 1 ;	CALIBRATOR:	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	MAKE:	Larson Davis
MODEL:	LxT1	MODEL:	Cal250
SERIAL NUMBER:	3099	SERIAL NUMBER:	2723
FACTORY CALIBRATION DATE:	6/23/2017	FACTORY CALIBRATION DATE:	6/9/2017
FIELD CALIBRATION DATE:	4/13/2018		

Additional Notes/Sketch



JN 6602a STNM1 looking East across Hidden Valley Road and down Cresta Blanca Lane.

JN 6602a STNM1 looking North, Ridgecrest Road on the left up embankment.

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	0.24	1.57	%
Projected Dose	0.08	0.52	%
TWA (Projected)	38.4	52.1	dB
TWA (t)	46.4	60.0	dB
Lep (t)	72.7	72.7	dB

Statistics		
LAS2.00	78.1	dB
LAS8.00	67.9	dB
LAS25.00	48.6	dB
LAS50.00	41.7	dB
LAS90.00	37.6	dB
LAS99.00	36.3	dB

Summary

File Name on Meter	LxT_Data.001
File Name on PC	SLM_0003099_LxT_Data_001.01.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Location	JN6602a STNM1
Job Description	10 minute noise measurement
Note	(1 x 10 minute)

Measurement

Description	
Start	2018-04-13 10:25:55
Stop	2018-04-13 10:35:55
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2018-04-13 10:25:36
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.5 dB

	A	C	Z	
Under Range Peak	78.8	75.8	**80.8**	dB
Under Range Limit	**25.4**	25.4	30.4	dB
Noise Floor	16.1	16.3	21.3	dB

Results

LA_{eq}		58.7	dB	
LAE		86.5	dB	
EA		49.115	µPa²h	
EA8		2.358	mPa²h	
EA40		11.788	mPa²h	
$LZ_{peak\ (max)}$	2018-04-13 10:33:06		97.1	dB
LAS_{max}	2018-04-13 10:35:08		71.4	dB
LAS_{min}	2018-04-13 10:31:39		38.0	dB
SEA		-99.9	dB	
LAS > 65.0 dB (Exceedance Counts / Duration)		4	23.9	s
LAS > 85.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 135.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 137.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 140.0 dB (Exceedance Counts / Duration)		0	0.0	s
LC_{eq}		69.0	dB	
LA_{eq}		58.7	dB	
LCe_q - LAe_q		10.3	dB	
LAI_{eq}		60.8	dB	
LA_{eq}		58.7	dB	
LAI_{eq} - LA_{eq}		2.1	dB	

	A		
	dB	**Time Stamp**	
L_{eq}	58.7		
$L_{S(max)}$	71.4	2018/04/13	10:35:08
$L_{S(min)}$	38.0	2018/04/13	10:31:39
$L_{Peak(max)}$			

Noise Measurement
Field Data

Project Name:	Horseshoe Lake Park Rail Noise Project	Date:	13-Apr-18
Project #:	6602a		
Noise Measurement #:	STNM2	3099 LxT_Data003.xlsx	
Technician:	Ian Edward Gallagher		
Nearest Address or Cross Street:	Park Road & Yates Road		
Site Description (Type of Existing Land Use and any other notable features)	Residential, park and park like areas , lakes, two well used rail road tracks, one North Bound, the other South bound.		
Weather:	Clear blue sunny skies	Settings:	SLOW FAST (Circle one)
Temperature:	59 deg F	Wind: 10 to 15 mph	Humidity: 14%
			Flat
Start Time:	11:51 AM	End Time: 12:01 PM	Run Time: 10 minutes (1 x 10 minutes)

Leq:	53.7 dB	Primary Noise Source:	Traffic noise from vehicles on Yates Road
Lmax	66.9 dB		
L2	61.3 dB	Secondary Noise Sources:	Overhead aircraft, propellor planes and higher altitude commercial jet aircraft
L8	58.4 dB		Bird song
L25	54.7 dB		
L50	49.7 dB		

NOISE METER:	SoundTrack LxT Class 1	CALIBRATOR:	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	MAKE:	Larson Davis
MODEL:	LxT1	MODEL:	Cal250
SERIAL NUMBER:	3099	SERIAL NUMBER:	2723
FACTORY CALIBRATION DATE:	6/23/2017	FACTORY CALIBRATION DATE:	6/9/2017
FIELD CALIBRATION DATE:	4/13/2018		

Additional Notes/Sketch

JN 6602a STNM2 looking West towards rail bridge, SB passes over NB rail.

JN 6602a STNM2 looking South East. Yates Road passes along top of embankment.

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	41.9	41.9	dB

Statistics		
LAS2.00	67.3	dB
LAS8.00	62.6	dB
LAS25.00	59.8	dB
LAS50.00	55.0	dB
LAS66.60	50.9	dB
LAS90.00	44.8	dB

Summary

File Name on Meter	LxT_Data.003
File Name on PC	SLM_0003099_LxT_Data_003.01.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Location	JN6602a STNM2
Job Description	10 minute noise measurement
Note	(1 x 10 minute)

Measurement

Description	
Start	2018-04-13 11:51:45
Stop	2018-04-13 12:01:45
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2018-04-13 11:40:22
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.7 dB

	A	C	Z	
Under Range Peak	79.0	76.0	**81.0**	dB
Under Range Limit	**25.5**	25.5	30.5	dB
Noise Floor	16.2	16.4	21.4	dB

Results

LA_{eq}	53.7	dB		
LAE	81.5	dB		
EA	15.544	µPa²h		
EA8	746.089	µPa²h		
EA40	3.730	mPa²h		
$LZ_{peak\ (max)}$	2018-04-13 11:58:28		96.1	dB
LAS_{max}	2018-04-13 11:56:21		66.9	dB
LAS_{min}	2018-04-13 11:58:58		34.7	dB
SEA	-99.9	dB		

LAS > 65.0 dB (Exceedance Counts / Duration)	1	3.0	s
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s

LC_{eq}	66.8	dB
LA_{eq}	53.7	dB
LC_{eq} - LA_{eq}	13.1	dB
LAI_{eq}	55.6	dB
LA_{eq}	53.7	dB
LAI_{eq} - LA_{eq}	1.9	dB

	A		
	dB	**Time Stamp**	
L_{eq}	53.7		
$L_{S(max)}$	66.9	2018/04/13	11:56:21
$L_{S(min)}$	34.7	2018/04/13	11:58:58
$L_{Peak(max)}$			

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	36.9	36.9	dB

Statistics		
LAS2.00	61.3	dB
LAS8.00	58.4	dB
LAS25.00	54.7	dB
LAS50.00	49.7	dB
LAS66.60	44.9	dB
LAS90.00	38.2	dB

Noise Measurement
Field Data

Project Name:	Horseshoe Lake Park Rail Noise Project	Date:	13-Apr-18
Project #:	6602a		
Noise Measurement #:	STNM3	3099 LxT_Data007.xlsx	Technician: Ian Edward Gallagher
Nearest Address or Cross Street:	Park Road & Horseshoe Lane		
Site Description (Type of Existing Land Use and any other notable features)	Residential, park and park like areas , lakes, two well used rail road tracks, one North Bound, the other South bound.		
Weather:	Clear blue sunny skies	Settings:	SLOW FAST (Circle one)
Temperature: 67 deg F	Wind: 5 to 10 mph	Humidity: 10%	Flat
Start Time: 2:57 PM	End Time: 3:07 PM	Run Time:	10 minutes (1 x 10 minutes)

Leq:	45.9 dB	Primary Noise Source:	Residential ambiance from people residing in park.
Lmax	66.2 dB		
L2	52.5 dB	Secondary Noise Sources:	Overhead aircraft, propeller planes and higher altitude commercial jet aircraft
L8	47.6 dB		Bird song
L25	45.1 dB		
L50	42.3 dB		

NOISE METER:	SoundTrack LxT Class 1 ;	CALIBRATOR:	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	MAKE:	Larson Davis
MODEL:	LxT1	MODEL:	Cal250
SERIAL NUMBER:	3099	SERIAL NUMBER:	2723
FACTORY CALIBRATION DATE:	6/23/2017	FACTORY CALIBRATION DATE:	6/9/2017
FIELD CALIBRATION DATE:	4/13/2018		

Additional Notes/Sketch

JN 6602a STNM3 looking East across park towards Horseshoe Lake.

JN 6602a STNM3 looking West across park towards rail lines just outside park.

Summary

File Name on Meter	LxT_Data.007
File Name on PC	SLM_0003099_LxT_Data_007.02.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Location	JN6602a STNM3
Job Description	10 minute noise measurement
Note	(1 x 10 minute)

Measurement

Description	
Start	2018-04-13 14:57:12
Stop	2018-04-13 15:07:12
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2018-04-13 14:55:21
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.5 dB

	A	C	Z	
Under Range Peak	78.8	75.8	**80.8**	dB
Under Range Limit	**25.4**	25.4	30.4	dB
Noise Floor	16.1	16.3	21.3	dB

Results

LA_{eq}		45.9	dB	
LAE		73.7	dB	
EA		2.591	µPa²h	
EA8		124.362	µPa²h	
EA40		621.810	µPa²h	
$LZ_{peak\ (max)}$	2018-04-13 14:57:52		102.2	dB
LAS_{max}	2018-04-13 15:03:48		66.2	dB
LAS_{min}	2018-04-13 15:04:30		35.8	dB
SEA		-99.9	dB	
LAS > 65.0 dB (Exceedance Counts / Duration)		1	1.0	s
LAS > 85.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 135.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 137.0 dB (Exceedance Counts / Duration)		0	0.0	s
LZ_{peak} > 140.0 dB (Exceedance Counts / Duration)		0	0.0	s
LC_{eq}		64.4	dB	
LA_{eq}		45.9	dB	
LC_{eq} - LA_{eq}		18.5	dB	
LAI_{eq}		54.0	dB	
LA_{eq}		45.9	dB	
LAI_{eq} - LA_{eq}		8.1	dB	

	A		
	dB	**Time Stamp**	
L_{eq}	45.9		
$L_{S(max)}$	66.2	2018/04/13	15:03:48
$L_{S(min)}$	35.8	2018/04/13	15:04:30
$L_{Peak(max)}$			

Noise Measurement
Field Data

Project Name:	Horseshoe Lake Park Rail Noise Project	Date:	13-Apr-18
Project #:	6602a		
Noise Measurement #:	STNM4	3099 LxT_Data005.xlsx	Technician: Ian Edward Gallagher
Nearest Address or Cross Street:	Tahoe Lane & Yates Road		
Site Description (Type of Existing Land Use and any other notable features)	Residential, park and park like areas , lakes, two well used rail road tracks, one North Bound, the other South bound.		
Weather:	Clear blue sunny skies	Settings:	SLOW FAST (Circle one)
Temperature: 59 deg F	Wind: 10 to 15 mph	Humidity: 14%	Flat
Start Time: 1:45 PM	End Time: 1:55 PM	Run Time:	10 minutes (1 x 10 minute)

Leq:	64.5 dB	Primary Noise Source:	Traffic along Yates Road
Lmax	79.5 dB		
L2	73.0 dB	Secondary Noise Sources:	Overhead aircraft, propellor planes and higher altitude commercial jet aircraft
L8	69.6 dB		Bird song
L25	64.8 dB		
L50	58.7 dB		

NOISE METER:	SoundTrack LxT Class 1	CALIBRATOR:	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	MAKE:	Larson Davis
MODEL:	LxT1	MODEL:	Cal250
SERIAL NUMBER:	3099	SERIAL NUMBER:	2723
FACTORY CALIBRATION DATE:	6/23/2017	FACTORY CALIBRATION DATE:	6/9/2017
FIELD CALIBRATION DATE:	4/13/2018		

Additional Notes/Sketch

JN 6602a STNM4 looking North West up Yates Road.

JN 6602a STNM4 looking South West across Yates Road towards residences.

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	29.1	29.1	dB

Statistics		
LAS2.00	52.5	dB
LAS8.00	47.6	dB
LAS25.00	45.1	dB
LAS50.00	42.3	dB
LAS66.60	40.3	dB
LAS90.00	37.9	dB

Summary

File Name on Meter	LxT_Data.005
File Name on PC	SLM_0003099_LxT_Data_005.02.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Location	JN6602a STNM4
Job Description	10 minute noise measurement
Note	(1 x 10 minute)

Measurement

Description	
Start	2018-04-13 13:45:11
Stop	2018-04-13 13:55:11
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2018-04-13 13:44:39
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.6 dB

	A	C	Z	
Under Range Peak	78.9	75.9	**80.9**	dB
Under Range Limit	**25.4**	25.5	30.5	dB
Noise Floor	16.1	16.3	21.3	dB

Results

LA_{eq}	64.5	dB		
LAE	92.3	dB		
EA	189.739	µPa²h		
EA8	9.107	mPa²h		
EA40	45.537	mPa²h		
$LZ_{peak\ (max)}$	2018-04-13 13:53:11		103.9	dB
LAS_{max}	2018-04-13 13:55:05		79.5	dB
LAS_{min}	2018-04-13 13:45:52		34.7	dB
SEA	-99.9	dB		

LAS > 65.0 dB (Exceedance Counts / Duration)	31	178.7	s
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s
LZ_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s

LC_{eq}	71.8	dB
LA_{eq}	64.5	dB
LC_{eq} - LA_{eq}	7.2	dB
LAI_{eq}	67.5	dB
LA_{eq}	64.5	dB
LAI_{eq} - LA_{eq}	3.0	dB

	A			C	
	dB	**Time Stamp**		**dB**	**Time Stamp**
L_{eq}	64.5			71.8	
$L_{S(max)}$	79.5	2018/04/13	13:55:05		
$L_{S(min)}$	34.7	2018/04/13	13:45:52		
$L_{Peak(max)}$					

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	47.7	47.7	dB

Statistics		
LAS2.00	73.0	dB
LAS8.00	69.6	dB
LAS25.00	64.8	dB
LAS50.00	58.7	dB
LAS66.60	54.1	dB
LAS90.00	44.3	dB

Appendix D

RCNM Noise Modeling Output

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/24/2018
Case Description: 6602a Mojave Narrows Chateau Senior Living Facility- property line

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	65	65	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		25	0
Dozer	No	40		81.7	100	0
Dump Truck	No	40		76.5	150	0
Backhoe	No	40		77.6	200	0
Excavator	No	40		80.7	250	0

Results

	Calculated (dBA)		
Equipment	*Lmax	Leq	Day Lmax
Grader	91	87	N/A
Dozer	75.6	71.7	N/A
Dump Truck	66.9	62.9	N/A
Backhoe	65.5	61.5	N/A
Excavator	66.7	62.8	N/A
Total	91	87.2	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/24/2018
Case Description: 6602a Mojave Narrows Chateau Senior Living Facility - at SFD units to the south

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residential	Residential	65	65	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		125	0
Dozer	No	40		81.7	200	0
Dump Truck	No	40		76.5	250	0
Backhoe	No	40		77.6	300	0
Excavator	No	40		80.7	350	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq	Day Lmax
Grader	77	73.1	N/A
Dozer	69.6	65.6	N/A
Dump Truck	62.5	58.5	N/A
Backhoe	62	58	N/A
Excavator	63.8	59.8	N/A
Total	77	74.2	N/A

*Calculated Lmax is the Loudest value.

Appendix E

Project-generated Traffic FHWA Worksheets

Existing Traffic Noise (Without Green Tree Boulevard Extension)

1	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	9600
Yates Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
North of Ridgecrest Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	555.97	11.52	19.20	412.75	1.92	3.20	102.35	16.00	26.67
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.74	2.91	5.12	18.45	-4.88	-2.66	12.39	4.33	6.55
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.40	57.69	63.87	66.10	49.91	56.09	60.05	59.11	65.30
	DAY LEQ	69.30		EVENING LEQ	66.61		NIGHT LEQ	67.17	

F		CNEL	74.08	Day hour	89.00
		DAY LEQ	69.30	Absorptive?	no
				Use hour?	no
				GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

1	:Id
Yates Road	:Road
North of Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	11500
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	666.01	13.80	23.00	494.44	2.30	3.83	122.61	19.17	31.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.53	3.69	5.91	19.23	-4.09	-1.87	13.18	5.12	7.33
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.18	58.47	64.65	66.89	50.69	56.87	60.83	59.90	66.08
	DAY LEQ	70.09		EVENING LEQ	67.39		NIGHT LEQ	67.95	

CNEL	74.87
DAY LEQ	70.09

Day hour	89.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

2	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	9600
Yates Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
West of Park Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	555.97	11.52	19.20	412.75	1.92	3.20	102.35	16.00	26.67
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.74	2.91	5.12	18.45	-4.88	-2.66	12.39	4.33	6.55
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.40	57.69	63.87	66.10	49.91	56.09	60.05	59.11	65.30
	DAY LEQ	69.30		EVENING LEQ	66.61		NIGHT LEQ	67.17	

CNEL	74.08	Day hour	90.00
DAY LEQ	69.30	Absorptive?	no
		Use hour?	no
		GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

2	:Id
Yates Road	:Road
West of Park Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10620
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	615.05	12.74	21.24	456.60	2.12	3.54	113.23	17.70	29.50
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.18	3.34	5.56	18.89	-4.44	-2.22	12.83	4.77	6.99
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.84	58.13	64.31	66.54	50.35	56.53	60.49	59.55	65.73
	DAY LEQ	69.74		EVENING LEQ	67.05		NIGHT LEQ	67.61	

CNEL	74.52
DAY LEQ	69.74

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

3	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	9400
Yates Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
East of Park Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	544.39	11.28	18.80	404.15	1.88	3.13	100.22	15.67	26.11
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.65	2.81	5.03	18.36	-4.97	-2.75	12.30	4.24	6.46
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.31	57.60	63.78	66.01	49.82	56.00	59.96	59.02	65.20
	DAY LEQ	69.21		EVENING LEQ	66.52		NIGHT LEQ	67.08	

CNEL	73.99	Day hour	91.00
DAY LEQ	69.21	Absorptive?	no
		Use hour?	no
		GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

3	:Id
Yates Road	:Road
East of Park Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10420
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	603.46	12.50	20.84	448.00	2.08	3.47	111.10	17.37	28.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.10	3.26	5.48	18.80	-4.52	-2.30	12.75	4.69	6.91
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.75	58.04	64.22	66.46	50.26	56.44	60.40	59.47	65.65
	DAY LEQ	69.66		EVENING LEQ	66.97		NIGHT LEQ	67.53	

CNEL	74.44
DAY LEQ	69.66

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

4	:Id
Yucca Loma Road	:Road
West of Apple Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	11400
Speed	45
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	660.22	13.68	22.80	490.14	2.28	3.80	121.54	19.00	31.67
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.36	4.52	6.74	20.07	-3.26	-1.04	14.01	5.95	8.17
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	65.63	57.08	63.81	64.34	49.29	56.03	58.28	58.50	65.24
	DAY LEQ	68.18		EVENING LEQ	65.05		NIGHT LEQ	66.74	

CNEL	73.48
DAY LEQ	68.18

Day hour	92.00
Absorptive?	no
Use hour?	no
GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

4	:Id
Yucca Loma Road	:Road
West of Apple Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	12420
Speed	45
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	719.29	14.90	24.84	533.99	2.48	4.14	132.42	20.70	34.50
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.73	4.90	7.11	20.44	-2.89	-0.67	14.38	6.32	8.54
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.01	57.45	64.19	64.71	49.67	56.40	58.66	58.87	65.61
	DAY LEQ	68.55		EVENING LEQ	65.43		NIGHT LEQ	67.11	

CNEL	73.85
DAY LEQ	68.55

Day hour	92.00
Absorptive?	no
Use hour?	no
GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

5	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	12600
Yucca Loma Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
East of Apple Valley Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	729.72	15.12	25.20	541.73	2.52	4.20	134.34	21.00	35.00
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.79	4.96	7.18	20.50	-2.82	-0.61	14.44	6.38	8.60
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.07	57.51	64.25	64.77	49.73	56.47	58.72	58.94	65.67
	DAY LEQ	68.61		EVENING LEQ	65.49		NIGHT LEQ	67.18	

CNEL	73.91	Day hour	93.00
DAY LEQ	68.61	Absorptive?	no
		Use hour?	no
		GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

5	:Id	ADT	12890
Yucca Loma Road	:Road	Speed	45
East of Apple Valley Road	:Segment	Distance	50
		Left Angle	-90
		Right Angle	90

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	746.51	15.47	25.78	554.20	2.58	4.30	137.43	21.48	35.81
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.89	5.06	7.27	20.60	-2.73	-0.51	14.54	6.48	8.70
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.17	57.61	64.35	64.87	49.83	56.56	58.82	59.04	65.77
	DAY LEQ	68.71		EVENING LEQ	65.59		NIGHT LEQ	67.28	

CNEL	74.01	Day hour	93.00
DAY LEQ	68.71	Absorptive?	no
		Use hour?	no
		GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

6	:Id	Vehicle Distribution (Light Truck Mix)				ADT	2500
Pebble Beach Drive	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
East of Ridgecrest Road	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	153.32	1.87	0.73	113.31	0.33	0.33	28.38	2.50	0.97
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	17.57	-1.56	-5.66	16.26	-9.06	-9.05	10.25	-0.31	-4.41
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	54.16	46.68	48.73	52.85	39.17	45.34	46.83	47.93	49.98
	DAY LEQ	55.82		EVENING LEQ	53.71		NIGHT LEQ	53.22	

CNEL	60.30	Day hour	94.00
DAY LEQ	55.82	Absorptive?	no
		Use hour?	no
		GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

6	:Id
Pebble Beach Drive	:Road
East of Ridgecrest Road	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	2650
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	162.52	1.99	0.77	120.11	0.35	0.35	30.08	2.65	1.03
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	17.82	-1.30	-5.40	16.51	-8.81	-8.80	10.50	-0.05	-4.15
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	54.41	46.93	48.99	53.10	39.42	45.59	47.09	48.18	50.23
	DAY LEQ	56.07		EVENING LEQ	53.96		NIGHT LEQ	53.47	

CNEL	60.55
DAY LEQ	56.07

Day hour	94.00
Absorptive?	no
Use hour?	no
GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

7	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	37200
Bear Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	50
West of Hesperia Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2154.40	44.64	74.40	1599.40	7.44	12.40	396.62	62.00	103.33
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	26.04	9.20	11.42	24.74	1.42	3.64	18.69	10.63	12.85
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.15	61.99	68.44	69.86	54.21	60.65	63.80	63.42	69.86
	DAY LEQ	73.34		EVENING LEQ	70.46		NIGHT LEQ	71.55	

CNEL	78.37	Day hour	95.00
DAY LEQ	73.34	Absorptive?	no
		Use hour?	no
		GRADE dB	6.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

7	:Id
Bear Valley Road	:Road
West of Hesperia Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	37790
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2188.57	45.35	75.58	1624.77	7.56	12.60	402.91	62.98	104.97
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	26.11	9.27	11.49	24.81	1.49	3.71	18.76	10.70	12.92
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.22	62.06	68.50	69.93	54.28	60.72	63.87	63.49	69.93
	DAY LEQ	73.41		EVENING LEQ	70.52		NIGHT LEQ	71.62	

CNEL	78.44
DAY LEQ	73.41

Day hour	95.00
Absorptive?	no
Use hour?	no
GRADE dB	6.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

8	:Id
Bear Valley Road	:Road
Hesperia Road to Apatite Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	47800
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2768.29	57.36	95.60	2055.15	9.56	15.93	509.63	79.67	132.78
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	27.13	10.29	12.51	25.83	2.51	4.73	19.78	11.72	13.94
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.24	63.08	69.52	70.95	55.30	61.74	64.89	64.51	70.95
	DAY LEQ	74.43		EVENING LEQ	71.55		NIGHT LEQ	72.64	

CNEL	79.46
DAY LEQ	74.43

Day hour	96.00
Absorptive?	no
Use hour?	no
GRADE dB	7.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

8	:Id
Bear Valley Road	:Road
Hesperia Road to Apatite Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	49270
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2853.42	59.12	98.54	2118.35	9.85	16.42	525.31	82.12	136.86
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	27.26	10.42	12.64	25.96	2.64	4.86	19.91	11.85	14.07
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.37	63.21	69.66	71.08	55.43	61.88	65.02	64.64	71.08
	DAY LEQ	74.56		EVENING LEQ	71.68		NIGHT LEQ	72.77	

CNEL	79.59
DAY LEQ	74.56

Day hour	96.00
Absorptive?	no
Use hour?	no
GRADE dB	7.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

9	:Id
Bear Valley Road	:Road
Apatite Avenue to Industrial Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	49000
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2837.79	58.80	98.00	2106.74	9.80	16.33	522.43	81.67	136.11
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.69	10.86	13.07	26.40	3.07	5.29	20.34	12.28	14.50
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.03	62.47	69.21	69.74	54.69	61.43	63.68	63.90	70.64
	DAY LEQ	73.58		EVENING LEQ	70.45		NIGHT LEQ	72.14	

CNEL	78.88
DAY LEQ	73.58

Day hour	97.00
Absorptive?	no
Use hour?	no
GRADE dB	8.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

9	:Id
Bear Valley Road	:Road
Apatite Avenue to Industrial Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	50470
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2922.92	60.56	100.94	2169.94	10.09	16.82	538.10	84.12	140.19
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.82	10.98	13.20	26.53	3.20	5.42	20.47	12.41	14.63
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.16	62.60	69.34	69.87	54.82	61.56	63.81	64.03	70.77
	DAY LEQ	73.71		EVENING LEQ	70.58		NIGHT LEQ	72.27	

F		CNEL	79.00	Day hour	97.00
		DAY LEQ	73.71	Absorptive?	no
				Use hour?	no
				GRADE dB	8.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

10	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	72100
Bear Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
Industrial Boulevard to Ridgecrest Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	4175.60	86.52	144.20	3099.92	14.42	24.03	768.71	120.17	200.28
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	29.37	12.53	14.75	28.08	4.75	6.97	22.02	13.96	16.18
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.71	64.15	70.89	71.42	56.37	63.11	65.36	65.58	72.32
	DAY LEQ	75.25		EVENING LEQ	72.13		NIGHT LEQ	73.82	

CNEL	80.55	Day hour	98.00
DAY LEQ	75.25	Absorptive?	no
		Use hour?	no
		GRADE dB	9.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

10	:Id
Bear Valley Road	:Road
Industrial Boulevard to Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	73570
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	4260.73	88.28	147.14	3163.12	14.71	24.52	784.39	122.62	204.36
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	29.46	12.62	14.84	28.16	4.84	7.06	22.11	14.05	16.27
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.80	64.24	70.98	71.50	56.46	63.20	65.45	65.67	72.40
	DAY LEQ	75.34		EVENING LEQ	72.22		NIGHT LEQ	73.91	

CNEL	80.64
DAY LEQ	75.34

Day hour	98.00
Absorptive?	no
Use hour?	no
GRADE dB	9.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

11	:Id
Bear Valley Road	:Road
East of Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	57300
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	3318.47	68.76	114.60	2463.59	11.46	19.10	610.92	95.50	159.17
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	28.37	11.54	13.75	27.08	3.75	5.97	21.02	12.96	15.18
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.71	63.15	69.89	70.42	55.37	62.11	64.36	64.58	71.32
	DAY LEQ	74.26		EVENING LEQ	71.13		NIGHT LEQ	72.82	

CNEL	79.55
DAY LEQ	74.26

Day hour	99.00
Absorptive?	no
Use hour?	no
GRADE dB	10.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

11	:Id	
Bear Valley Road	:Road	
East of Ridgecrest Road	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	57590
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	3335.27	69.11	115.18	2476.06	11.52	19.20	614.01	95.98	159.97
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	28.39	11.56	13.78	27.10	3.78	5.99	21.04	12.98	15.20
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.73	63.18	69.91	70.44	55.39	62.13	64.38	64.60	71.34
	DAY LEQ	74.28		EVENING LEQ	71.15		NIGHT LEQ	72.84	

CNEL	79.58
DAY LEQ	74.28

Day hour	99.00
Absorptive?	no
Use hour?	no
GRADE dB	10.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

12	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	22500
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	40
North of Bear Valley Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1303.07	27.00	45.00	967.38	4.50	7.50	239.89	37.50	62.50
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	24.82	7.99	10.21	23.53	0.21	2.42	17.47	9.41	11.63
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.18	58.30	65.36	64.89	50.51	57.58	58.83	59.72	66.79
	DAY LEQ	69.17		EVENING LEQ	65.76		NIGHT LEQ	68.11	

CNEL	74.76	Day hour	0.00
DAY LEQ	69.17	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

12	:Id	ADT	22940
Hesperia Road	:Road	Speed	40
North of Bear Valley Road	:Segment	Distance	62
		Left Angle	-90
		Right Angle	90

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1328.55	27.53	45.88	986.30	4.59	7.65	244.58	38.23	63.72
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	24.91	8.07	10.29	23.61	0.29	2.51	17.56	9.50	11.72
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.26	58.38	65.45	64.97	50.60	57.66	58.91	59.81	66.87
	DAY LEQ	69.25		EVENING LEQ	65.84		NIGHT LEQ	68.20	

CNEL	74.84	Day hour	0.00
DAY LEQ	69.25	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

13	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	23900
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	40
South of Bear Valley Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1384.14	28.68	47.80	1027.57	4.78	7.97	254.82	39.83	66.39
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	25.09	8.25	10.47	23.79	0.47	2.69	17.74	9.68	11.89
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.44	58.56	65.62	65.15	50.78	57.84	59.09	59.98	67.05
	DAY LEQ	69.43		EVENING LEQ	66.02		NIGHT LEQ	68.37	

CNEL	75.02	Day hour	0.00
DAY LEQ	69.43	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

13	:Id	ADT	24340
Hesperia Road	:Road	Speed	40
South of Bear Valley Road	:Segment	Distance	62
		Left Angle	-90
		Right Angle	90

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1409.63	29.21	48.68	1046.49	4.87	8.11	259.51	40.57	67.61
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	25.16	8.33	10.55	23.87	0.55	2.77	17.82	9.76	11.97
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.52	58.64	65.70	65.23	50.86	57.92	59.17	60.06	67.13
	DAY LEQ	69.51		EVENING LEQ	66.10		NIGHT LEQ	68.45	

CNEL	75.10	Day hour	0.00
DAY LEQ	69.51	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

14	:Id
Ridgecrest Road	:Road
Chinquapin Drive to Vista Point Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10900
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	631.26	13.08	21.80	468.64	2.18	3.63	116.21	18.17	30.28
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.29	3.46	5.68	19.00	-4.32	-2.11	12.94	4.88	7.10
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.71	59.00	65.18	67.41	51.22	57.40	61.36	60.42	66.60
	DAY LEQ	70.61		EVENING LEQ	67.92		NIGHT LEQ	68.48	

CNEL	75.39
DAY LEQ	70.61

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

14	:Id
Ridgecrest Road	:Road
Chinquapin Drive to Vista Point Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	12800
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	741.30	15.36	25.60	550.33	2.56	4.27	136.47	21.33	35.56
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.99	4.15	6.37	19.70	-3.63	-1.41	13.64	5.58	7.80
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.40	59.69	65.88	68.11	51.91	58.09	62.05	61.12	67.30
	DAY LEQ	71.31		EVENING LEQ	68.62		NIGHT LEQ	69.18	

CNEL	76.09
DAY LEQ	71.31

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

15	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	12800
Ridgecrest Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
Vista Point Drive to Pebble Beach Drive	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	42
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	741.30	15.36	25.60	550.33	2.56	4.27	136.47	21.33	35.56
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.99	4.15	6.37	19.70	-3.63	-1.41	13.64	5.58	7.80
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.40	59.69	65.88	68.11	51.91	58.09	62.05	61.12	67.30
	DAY LEQ	71.31		EVENING LEQ	68.62		NIGHT LEQ	69.18	

CNEL	76.09	Day hour	0.00
DAY LEQ	71.31	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

15	:Id
Ridgecrest Road	:Road
Vista Point Drive to Pebble Beach Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	14700
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	851.34	17.64	29.40	632.02	2.94	4.90	156.73	24.50	40.83
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	21.59	4.76	6.97	20.30	-3.03	-0.81	14.24	6.18	8.40
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.00	60.30	66.48	68.71	52.51	58.69	62.66	61.72	67.90
	DAY LEQ	71.91		EVENING LEQ	69.22		NIGHT LEQ	69.78	

CNEL	76.69
DAY LEQ	71.91

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

16 :Id

Ridgecrest Road :Road

Pebble Beach Drive to Pahute Avenue :Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	14800
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	857.13	17.76	29.60	636.32	2.96	4.93	157.79	24.67	41.11
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	21.62	4.78	7.00	20.33	-3.00	-0.78	14.27	6.21	8.43
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.03	60.33	66.51	68.74	52.54	58.72	62.68	61.75	67.93
	DAY LEQ	71.94		EVENING LEQ	69.25		NIGHT LEQ	69.81	

CNEL	76.72
DAY LEQ	71.94

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

16	:Id
Ridgecrest Road	:Road
Pebble Beach Drive to Pahute Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	16560
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	959.06	19.87	33.12	711.99	3.31	5.52	176.56	27.60	46.00
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	22.11	5.27	7.49	20.82	-2.51	-0.29	14.76	6.70	8.92
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.52	60.81	66.99	69.23	53.03	59.21	63.17	62.24	68.42
	DAY LEQ	72.43		EVENING LEQ	69.73		NIGHT LEQ	70.29	

CNEL	77.21
DAY LEQ	72.43

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

17	:Id
Ridgecrest Road	:Road
Pahute Avenue to Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	17600
Speed	45
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1019.29	21.12	35.20	756.71	3.52	5.87	187.65	29.33	48.89
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	23.24	6.41	8.63	21.95	-1.37	0.85	15.90	7.84	10.05
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.28	59.72	66.46	66.98	51.94	58.67	60.93	61.15	67.88
	DAY LEQ	70.82		EVENING LEQ	67.70		NIGHT LEQ	69.39	

CNEL	76.12
DAY LEQ	70.82

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

17	:Id
Ridgecrest Road	:Road
Pahute Avenue to Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	19360
Speed	45
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1121.22	23.23	38.72	832.38	3.87	6.45	206.41	32.27	53.78
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	23.66	6.82	9.04	22.37	-0.96	1.26	16.31	8.25	10.47
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.69	60.13	66.87	67.40	52.35	59.09	61.34	61.56	68.30
	DAY LEQ	71.24		EVENING LEQ	68.11		NIGHT LEQ	69.80	

CNEL	76.53
DAY LEQ	71.24

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

18	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	22300
Apple Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
North of Yucca Loma Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	52
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1291.48	26.76	44.60	958.78	4.46	7.43	237.76	37.17	61.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.40	6.57	8.78	22.11	-1.22	1.00	16.05	7.99	10.21
Distance	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.89	61.18	67.36	69.59	53.40	59.58	63.54	62.60	68.79
	DAY LEQ	72.79		EVENING LEQ	70.10		NIGHT LEQ	70.66	

CNEL	77.57	Day hour	0.00
DAY LEQ	72.79	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

18	:Id	
Apple Valley Road	:Road	
North of Yucca Loma Road	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	22740
Speed	55
Distance	52
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1316.96	27.29	45.48	977.70	4.55	7.58	242.45	37.90	63.17
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.49	6.65	8.87	22.19	-1.13	1.09	16.14	8.08	10.30
Distance	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.97	61.26	67.44	69.68	53.48	59.66	63.62	62.69	68.87
	DAY LEQ	72.88		EVENING LEQ	70.18		NIGHT LEQ	70.74	

CNEL	77.66
DAY LEQ	72.88

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (Without Green Tree Boulevard Extension)

19	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	21000
Apple Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
South of Yucca Loma Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	64
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1216.19	25.20	42.00	902.89	4.20	7.00	223.90	35.00	58.33
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.14	6.30	8.52	21.85	-1.48	0.74	15.79	7.73	9.95
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.72	60.02	66.20	68.43	52.23	58.41	62.37	61.44	67.62
	DAY LEQ	71.63		EVENING LEQ	68.94		NIGHT LEQ	69.50	

CNEL	76.41	Day hour	0.00
DAY LEQ	71.63	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (Without Green Tree Boulevard Extension)

19	:Id	ADT	21290
Apple Valley Road	:Road	Speed	55
South of Yucca Loma Road	:Segment	Distance	64
		Left Angle	-90
		Right Angle	90

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1232.99	25.55	42.58	915.36	4.26	7.10	226.99	35.48	59.14
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.20	6.36	8.58	21.91	-1.42	0.80	15.85	7.79	10.01
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.78	60.08	66.26	68.49	52.29	58.47	62.43	61.50	67.68
	DAY LEQ	71.69		EVENING LEQ	69.00		NIGHT LEQ	69.56	

CNEL	76.47	Day hour	0.00
DAY LEQ	71.69	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

1	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	34500
Green Tree Boulevard	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	50
West of Hesperia Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1998.03	41.40	69.00	1483.32	6.90	11.50	367.83	57.50	95.83
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	25.71	8.87	11.09	24.42	1.09	3.31	18.36	10.30	12.52
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.83	61.66	68.11	69.53	53.88	60.33	63.48	63.09	69.54
	DAY LEQ	73.02		EVENING LEQ	70.13		NIGHT LEQ	71.22	

F	CNEL	78.05		Day hour	89.00
	DAY LEQ	73.02		Absorptive?	no
				Use hour?	no
				GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

1	:Id
Green Tree Boulevard	:Road
West of Hesperia Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	34940
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2023.52	41.93	69.88	1502.23	6.99	11.65	372.52	58.23	97.06
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	25.77	8.93	11.15	24.47	1.15	3.37	18.42	10.36	12.57
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.88	61.72	68.16	69.59	53.94	60.38	63.53	63.15	69.59
	DAY LEQ	73.07		EVENING LEQ	70.18		NIGHT LEQ	71.28	

CNEL	78.10
DAY LEQ	73.07

Day hour	89.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

2	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	20900
Green Tree Boulevard	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	50
Hesperia Road to Ridgecrest Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1210.40	25.08	41.80	898.59	4.18	6.97	222.83	34.83	58.06
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	23.53	6.70	8.92	22.24	-1.08	1.13	16.18	8.12	10.34
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.65	59.49	65.93	67.36	51.71	58.15	61.30	60.91	67.36
	DAY LEQ	70.84		EVENING LEQ	67.95		NIGHT LEQ	69.05	

CNEL	75.87	Day hour	90.00
DAY LEQ	70.84	Absorptive?	no
		Use hour?	no
		GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

2	:Id
Green Tree Boulevard	:Road
Hesperia Road to Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	21780
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1261.37	26.14	43.56	936.42	4.36	7.26	232.21	36.30	60.50
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	23.71	6.88	9.10	22.42	-0.90	1.31	16.36	8.30	10.52
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.83	59.67	66.11	67.53	51.88	58.33	61.48	61.09	67.54
	DAY LEQ	71.02		EVENING LEQ	68.13		NIGHT LEQ	69.22	

CNEL	76.05
DAY LEQ	71.02

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

3	:Id	
Yates Road	:Road	
East of Ridgecrest Road	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	9600
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	555.97	11.52	19.20	412.75	1.92	3.20	102.35	16.00	26.67
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.74	2.91	5.12	18.45	-4.88	-2.66	12.39	4.33	6.55
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.40	57.69	63.87	66.10	49.91	56.09	60.05	59.11	65.30
	DAY LEQ	69.30		EVENING LEQ	66.61		NIGHT LEQ	67.17	

CNEL	74.08
DAY LEQ	69.30

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

3	:Id
Yates Road	:Road
East of Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	11500
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	666.01	13.80	23.00	494.44	2.30	3.83	122.61	19.17	31.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.53	3.69	5.91	19.23	-4.09	-1.87	13.18	5.12	7.33
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.18	58.47	64.65	66.89	50.69	56.87	60.83	59.90	66.08
	DAY LEQ	70.09		EVENING LEQ	67.39		NIGHT LEQ	67.95	

CNEL	74.87
DAY LEQ	70.09

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

4	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	9600
Yates Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
West of Park Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	555.97	11.52	19.20	412.75	1.92	3.20	102.35	16.00	26.67
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.74	2.91	5.12	18.45	-4.88	-2.66	12.39	4.33	6.55
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.40	57.69	63.87	66.10	49.91	56.09	60.05	59.11	65.30
	DAY LEQ	69.30		EVENING LEQ	66.61		NIGHT LEQ	67.17	

CNEL	74.08	Day hour	92.00
DAY LEQ	69.30	Absorptive?	no
		Use hour?	no
		GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

4	:Id
Yates Road	:Road
West of Park Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10620
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	615.05	12.74	21.24	456.60	2.12	3.54	113.23	17.70	29.50
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.18	3.34	5.56	18.89	-4.44	-2.22	12.83	4.77	6.99
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.84	58.13	64.31	66.54	50.35	56.53	60.49	59.55	65.73
	DAY LEQ	69.74		EVENING LEQ	67.05		NIGHT LEQ	67.61	

CNEL	74.52
DAY LEQ	69.74

Day hour	92.00
Absorptive?	no
Use hour?	no
GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

5	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	9400
Yates Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
East of Park Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	50
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	544.39	11.28	18.80	404.15	1.88	3.13	100.22	15.67	26.11
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	19.65	2.81	5.03	18.36	-4.97	-2.75	12.30	4.24	6.46
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.31	57.60	63.78	66.01	49.82	56.00	59.96	59.02	65.20
	DAY LEQ	69.21		EVENING LEQ	66.52		NIGHT LEQ	67.08	

CNEL	73.99	Day hour	93.00
DAY LEQ	69.21	Absorptive?	no
		Use hour?	no
		GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

5	:Id
Yates Road	:Road
East of Park Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10420
Speed	55
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	603.46	12.50	20.84	448.00	2.08	3.47	111.10	17.37	28.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.10	3.26	5.48	18.80	-4.52	-2.30	12.75	4.69	6.91
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	67.75	58.04	64.22	66.46	50.26	56.44	60.40	59.47	65.65
	DAY LEQ	69.66		EVENING LEQ	66.97		NIGHT LEQ	67.53	

CNEL	74.44
DAY LEQ	69.66

Day hour	93.00
Absorptive?	no
Use hour?	no
GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

6	:Id
Yucca Loma Road	:Road
West of Apple Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	11400
Speed	45
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	660.22	13.68	22.80	490.14	2.28	3.80	121.54	19.00	31.67
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.36	4.52	6.74	20.07	-3.26	-1.04	14.01	5.95	8.17
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	65.63	57.08	63.81	64.34	49.29	56.03	58.28	58.50	65.24
	DAY LEQ	68.18		EVENING LEQ	65.05		NIGHT LEQ	66.74	

CNEL	73.48
DAY LEQ	68.18

Day hour	94.00
Absorptive?	no
Use hour?	no
GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

6	:Id
Yucca Loma Road	:Road
West of Apple Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	12420
Speed	45
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	719.29	14.90	24.84	533.99	2.48	4.14	132.42	20.70	34.50
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.73	4.90	7.11	20.44	-2.89	-0.67	14.38	6.32	8.54
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.01	57.45	64.19	64.71	49.67	56.40	58.66	58.87	65.61
	DAY LEQ	68.55		EVENING LEQ	65.43		NIGHT LEQ	67.11	

CNEL	73.85
DAY LEQ	68.55

Day hour	94.00
Absorptive?	no
Use hour?	no
GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

7	:Id					ADT	12600
Yucca Loma Road	:Road					Speed	45
East of Apple Valley Road	:Segment					Distance	50
						Left Angle	-90
						Right Angle	90

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	729.72	15.12	25.20	541.73	2.52	4.20	134.34	21.00	35.00
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.79	4.96	7.18	20.50	-2.82	-0.61	14.44	6.38	8.60
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.07	57.51	64.25	64.77	49.73	56.47	58.72	58.94	65.67
	DAY LEQ	68.61		EVENING LEQ	65.49		NIGHT LEQ	67.18	

CNEL	73.91	Day hour	95.00
DAY LEQ	68.61	Absorptive?	no
		Use hour?	no
		GRADE dB	6.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

7	:Id
Yucca Loma Road	:Road
East of Apple Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	12890
Speed	45
Distance	50
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	746.51	15.47	25.78	554.20	2.58	4.30	137.43	21.48	35.81
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	21.89	5.06	7.27	20.60	-2.73	-0.51	14.54	6.48	8.70
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.17	57.61	64.35	64.87	49.83	56.56	58.82	59.04	65.77
	DAY LEQ	68.71		EVENING LEQ	65.59		NIGHT LEQ	67.28	

CNEL	74.01
DAY LEQ	68.71

Day hour	95.00
Absorptive?	no
Use hour?	no
GRADE dB	6.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

8	:Id	Vehicle Distribution (Light Truck Mix)				ADT	2500
Pebble Beach Drive	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
East of Ridgecrest Road	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	153.32	1.87	0.73	113.31	0.33	0.33	28.38	2.50	0.97
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	17.57	-1.56	-5.66	16.26	-9.06	-9.05	10.25	-0.31	-4.41
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	54.16	46.68	48.73	52.85	39.17	45.34	46.83	47.93	49.98
	DAY LEQ	55.82		EVENING LEQ	53.71		NIGHT LEQ	53.22	

CNEL	60.30	Day hour	96.00
DAY LEQ	55.82	Absorptive?	no
		Use hour?	no
		GRADE dB	7.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

8	:Id
Pebble Beach Drive	:Road
East of Ridgecrest Road	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	2650
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	162.52	1.99	0.77	120.11	0.35	0.35	30.08	2.65	1.03
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	17.82	-1.30	-5.40	16.51	-8.81	-8.80	10.50	-0.05	-4.15
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	54.41	46.93	48.99	53.10	39.42	45.59	47.09	48.18	50.23
	DAY LEQ	56.07		EVENING LEQ	53.96		NIGHT LEQ	53.47	

CNEL	60.55
DAY LEQ	56.07

Day hour	96.00
Absorptive?	no
Use hour?	no
GRADE dB	7.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

9	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	37200
Bear Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	50
West of Hesperia Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2154.40	44.64	74.40	1599.40	7.44	12.40	396.62	62.00	103.33
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	26.04	9.20	11.42	24.74	1.42	3.64	18.69	10.63	12.85
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.15	61.99	68.44	69.86	54.21	60.65	63.80	63.42	69.86
	DAY LEQ	73.34		EVENING LEQ	70.46		NIGHT LEQ	71.55	

CNEL	78.37	Day hour	97.00
DAY LEQ	73.34	Absorptive?	no
		Use hour?	no
		GRADE dB	8.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

9	:Id
Bear Valley Road	:Road
West of Hesperia Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	37490
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2171.20	44.99	74.98	1611.87	7.50	12.50	399.71	62.48	104.14
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	26.07	9.24	11.45	24.78	1.45	3.67	18.72	10.66	12.88
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.19	62.02	68.47	69.89	54.24	60.69	63.84	63.45	69.90
	DAY LEQ	73.38		EVENING LEQ	70.49		NIGHT LEQ	71.58	

F	CNEL	78.41	
	DAY LEQ	73.38	

Day hour	97.00
Absorptive?	no
Use hour?	no
GRADE dB	8.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

10	:Id
Bear Valley Road	:Road
Hesperia Road to Apatite Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	47800
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2768.29	57.36	95.60	2055.15	9.56	15.93	509.63	79.67	132.78
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	27.13	10.29	12.51	25.83	2.51	4.73	19.78	11.72	13.94
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.24	63.08	69.52	70.95	55.30	61.74	64.89	64.51	70.95
	DAY LEQ	74.43		EVENING LEQ	71.55		NIGHT LEQ	72.64	

CNEL	79.46
DAY LEQ	74.43

Day hour	98.00
Absorptive?	no
Use hour?	no
GRADE dB	9.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

10	:Id
Bear Valley Road	:Road
Hesperia Road to Apatite Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	48380
Speed	50
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2801.88	58.06	96.76	2080.08	9.68	16.13	515.82	80.63	134.39
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02
ADJUSTMENTS									
Flow	27.18	10.34	12.56	25.89	2.56	4.78	19.83	11.77	13.99
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.29	63.13	69.58	71.00	55.35	61.80	64.95	64.56	71.00
	DAY LEQ	74.49		EVENING LEQ	71.60		NIGHT LEQ	72.69	

CNEL	79.52
DAY LEQ	74.49

Day hour	98.00
Absorptive?	no
Use hour?	no
GRADE dB	9.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

11	:Id
Bear Valley Road	:Road
Apatite Avenue to Industrial Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	49000
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2837.79	58.80	98.00	2106.74	9.80	16.33	522.43	81.67	136.11
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.69	10.86	13.07	26.40	3.07	5.29	20.34	12.28	14.50
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.03	62.47	69.21	69.74	54.69	61.43	63.68	63.90	70.64
	DAY LEQ	73.58		EVENING LEQ	70.45		NIGHT LEQ	72.14	

CNEL	78.88
DAY LEQ	73.58

Day hour	99.00
Absorptive?	no
Use hour?	no
GRADE dB	10.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

11	:Id
Bear Valley Road	:Road
Apatite Avenue to Industrial Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	49580
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2871.38	59.50	99.16	2131.68	9.92	16.53	528.61	82.63	137.72
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.74	10.91	13.13	26.45	3.13	5.34	20.39	12.33	14.55
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.08	62.52	69.26	69.79	54.74	61.48	63.73	63.95	70.69
	DAY LEQ	73.63		EVENING LEQ	70.50		NIGHT LEQ	72.19	

CNEL	78.93
DAY LEQ	73.63

Day hour	99.00
Absorptive?	no
Use hour?	no
GRADE dB	10.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

12	:Id
Bear Valley Road	:Road
Industrial Boulevard to Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	72100
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	4175.60	86.52	144.20	3099.92	14.42	24.03	768.71	120.17	200.28
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	29.37	12.53	14.75	28.08	4.75	6.97	22.02	13.96	16.18
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.71	64.15	70.89	71.42	56.37	63.11	65.36	65.58	72.32
	DAY LEQ	75.25		EVENING LEQ	72.13		NIGHT LEQ	73.82	

CNEL	80.55
DAY LEQ	75.25

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

12	:Id
Bear Valley Road	:Road
Industrial Boulevard to Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	72680
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	4209.19	87.22	145.36	3124.85	14.54	24.23	774.90	121.13	201.89
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	29.40	12.57	14.79	28.11	4.79	7.00	22.05	13.99	16.21
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	72.74	64.19	70.92	71.45	56.40	63.14	65.39	65.61	72.35
	DAY LEQ	75.29		EVENING LEQ	72.17		NIGHT LEQ	73.85	

CNEL	80.59
DAY LEQ	75.29

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

13	:Id	
Bear Valley Road	:Road	
East of Ridgecrest Road	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	57300
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	3318.47	68.76	114.60	2463.59	11.46	19.10	610.92	95.50	159.17
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	28.37	11.54	13.75	27.08	3.75	5.97	21.02	12.96	15.18
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.71	63.15	69.89	70.42	55.37	62.11	64.36	64.58	71.32
	DAY LEQ	74.26		EVENING LEQ	71.13		NIGHT LEQ	72.82	

CNEL	79.55
DAY LEQ	74.26

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

13	:Id
Bear Valley Road	:Road
East of Ridgecrest Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	57590
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	3335.27	69.11	115.18	2476.06	11.52	19.20	614.01	95.98	159.97
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	28.39	11.56	13.78	27.10	3.78	5.99	21.04	12.98	15.20
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	71.73	63.18	69.91	70.44	55.39	62.13	64.38	64.60	71.34
	DAY LEQ	74.28		EVENING LEQ	71.15		NIGHT LEQ	72.84	

CNEL	79.58
DAY LEQ	74.28

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

14	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	36900
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
North of Green Tree Boulevard	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2137.03	44.28	73.80	1586.50	7.38	12.30	393.42	61.50	102.50
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	26.46	9.62	11.84	25.17	1.84	4.06	19.11	11.05	13.27
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.80	61.24	67.98	68.51	53.46	60.20	62.45	62.67	69.41
	DAY LEQ	72.35		EVENING LEQ	69.22		NIGHT LEQ	70.91	

CNEL	77.64	Day hour	0.00
DAY LEQ	72.35	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

14	:Id
Hesperia Road	:Road
North of Green Tree Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	37190
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2153.82	44.63	74.38	1598.97	7.44	12.40	396.51	61.98	103.31
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	26.49	9.66	11.88	25.20	1.88	4.10	19.14	11.08	13.30
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.83	61.28	68.01	68.54	53.49	60.23	62.48	62.70	69.44
	DAY LEQ	72.38		EVENING LEQ	69.26		NIGHT LEQ	70.94	

CNEL	77.68
DAY LEQ	72.38

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

15	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	48200
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
South of Green Tree Boulevard	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2791.45	57.84	96.40	2072.34	9.64	16.07	513.90	80.33	133.89
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.62	10.78	13.00	26.33	3.00	5.22	20.27	12.21	14.43
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.96	62.40	69.14	69.67	54.62	61.36	63.61	63.83	70.57
	DAY LEQ	73.51		EVENING LEQ	70.38		NIGHT LEQ	72.07	

CNEL	78.80	Day hour	0.00
DAY LEQ	73.51	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

15	:Id
Hesperia Road	:Road
South of Green Tree Boulevard	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	48350
Speed	45
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	2800.14	58.02	96.70	2078.79	9.67	16.12	515.50	80.58	134.31
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	27.63	10.80	13.02	26.34	3.02	5.23	20.28	12.22	14.44
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.97	62.42	69.15	69.68	54.63	61.37	63.62	63.84	70.58
	DAY LEQ	73.52		EVENING LEQ	70.40		NIGHT LEQ	72.08	

CNEL	78.82
DAY LEQ	73.52

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

16	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	22500
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	40
North of Bear Valley Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1303.07	27.00	45.00	967.38	4.50	7.50	239.89	37.50	62.50
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	24.82	7.99	10.21	23.53	0.21	2.42	17.47	9.41	11.63
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.18	58.30	65.36	64.89	50.51	57.58	58.83	59.72	66.79
	DAY LEQ	69.17		EVENING LEQ	65.76		NIGHT LEQ	68.11	

CNEL	74.76	Day hour	0.00
DAY LEQ	69.17	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

16	:Id
Hesperia Road	:Road
North of Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	22650
Speed	40
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1311.75	27.18	45.30	973.83	4.53	7.55	241.49	37.75	62.92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	24.85	8.02	10.23	23.56	0.23	2.45	17.50	9.44	11.66
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.21	58.32	65.39	64.91	50.54	57.61	58.86	59.75	66.82
	DAY LEQ	69.20		EVENING LEQ	65.79		NIGHT LEQ	68.14	

CNEL	74.79
DAY LEQ	69.20

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

17	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	23900
Hesperia Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	40
South of Bear Valley Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	62
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1384.14	28.68	47.80	1027.57	4.78	7.97	254.82	39.83	66.39
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	25.09	8.25	10.47	23.79	0.47	2.69	17.74	9.68	11.89
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.44	58.56	65.62	65.15	50.78	57.84	59.09	59.98	67.05
	DAY LEQ	69.43		EVENING LEQ	66.02		NIGHT LEQ	68.37	

CNEL	75.02	Day hour	0.00
DAY LEQ	69.43	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

17	:Id
Hesperia Road	:Road
South of Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	24050
Speed	40
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1392.83	28.86	48.10	1034.02	4.81	8.02	256.42	40.08	66.81
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16
ADJUSTMENTS									
Flow	25.11	8.28	10.50	23.82	0.50	2.71	17.76	9.70	11.92
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	66.47	58.58	65.65	65.17	50.80	57.87	59.12	60.01	67.08
	DAY LEQ	69.46		EVENING LEQ	66.05		NIGHT LEQ	68.40	

CNEL	75.05
DAY LEQ	69.46

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

18	:Id
Ridgecrest Road	:Road
Green Tree Boulevard to Chinquapin Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	1400
Speed	55
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	81.08	1.68	2.80	60.19	0.28	0.47	14.93	2.33	3.89
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	11.38	-5.46	-3.24	10.09	-13.24	-11.02	4.03	-4.03	-1.81
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.10	48.39	54.57	56.81	40.61	46.79	50.75	49.82	56.00
	DAY LEQ	60.01		EVENING LEQ	57.31		NIGHT LEQ	57.87	

CNEL	**64.79**
DAY LEQ	60.01

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

18	:Id
Ridgecrest Road	:Road
Green Tree Boulevard to Chinquapin Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	2420
Speed	55
Distance	62
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	140.15	2.90	4.84	104.05	0.48	0.81	25.80	4.03	6.72
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	13.76	-3.08	-0.86	12.46	-10.86	-8.64	6.41	-1.65	0.57
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	60.48	50.77	56.95	59.18	42.99	49.17	53.13	52.20	58.38
	DAY LEQ	62.38		EVENING LEQ	59.69		NIGHT LEQ	60.25	

CNEL	67.17
DAY LEQ	62.38

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

19	:Id
Ridgecrest Road	:Road
Chinquapin Drive to Vista Point Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	10900
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	631.26	13.08	21.80	468.64	2.18	3.63	116.21	18.17	30.28
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.29	3.46	5.68	19.00	-4.32	-2.11	12.94	4.88	7.10
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.71	59.00	65.18	67.41	51.22	57.40	61.36	60.42	66.60
	DAY LEQ	70.61		EVENING LEQ	67.92		NIGHT LEQ	68.48	

CNEL	75.39
DAY LEQ	70.61

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

19	:Id
Ridgecrest Road	:Road
Chinquapin Drive to Vista Point Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	11920
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	690.33	14.30	23.84	512.50	2.38	3.97	127.09	19.87	33.11
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.68	3.85	6.06	19.39	-3.94	-1.72	13.33	5.27	7.49
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.09	59.39	65.57	67.80	51.60	57.78	61.74	60.81	66.99
	DAY LEQ	71.00		EVENING LEQ	68.31		NIGHT LEQ	68.87	

CNEL	75.78
DAY LEQ	71.00

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

20	:Id
Ridgecrest Road	:Road
Vista Point Drive to Pebble Beach Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	12800
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	741.30	15.36	25.60	550.33	2.56	4.27	136.47	21.33	35.56
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	20.99	4.15	6.37	19.70	-3.63	-1.41	13.64	5.58	7.80
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.40	59.69	65.88	68.11	51.91	58.09	62.05	61.12	67.30
	DAY LEQ	71.31		EVENING LEQ	68.62		NIGHT LEQ	69.18	

CNEL	76.09
DAY LEQ	71.31

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

20	:Id
Ridgecrest Road	:Road
Vista Point Drive to Pebble Beach Drive	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	13820
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	800.37	16.58	27.64	594.19	2.76	4.61	147.35	23.03	38.39
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	21.32	4.49	6.71	20.03	-3.29	-1.08	13.97	5.91	8.13
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.74	60.03	66.21	68.44	52.25	58.43	62.39	61.45	67.63
	DAY LEQ	71.64		EVENING LEQ	68.95		NIGHT LEQ	69.51	

CNEL	76.42
DAY LEQ	71.64

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

21 :Id

Ridgecrest Road :Road

Pebble Beach Drive to Pahute Avenue :Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	14800
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	857.13	17.76	29.60	636.32	2.96	4.93	157.79	24.67	41.11
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	21.62	4.78	7.00	20.33	-3.00	-0.78	14.27	6.21	8.43
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.03	60.33	66.51	68.74	52.54	58.72	62.68	61.75	67.93
	DAY LEQ	71.94		EVENING LEQ	69.25		NIGHT LEQ	69.81	

CNEL	**76.72**
DAY LEQ	71.94

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

21	:Id
Ridgecrest Road	:Road
Pebble Beach Drive to Pahute Avenue	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	15680
Speed	55
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	908.09	18.82	31.36	674.16	3.14	5.23	167.18	26.13	43.56
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	21.87	5.04	7.25	20.58	-2.75	-0.53	14.52	6.46	8.68
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.29	60.58	66.76	68.99	52.79	58.97	62.94	62.00	68.18
	DAY LEQ	72.19		EVENING LEQ	69.50		NIGHT LEQ	70.06	

CNEL	**76.97**
DAY LEQ	72.19

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

22	:Id
Ridgecrest Road	:Road
Pahute Avenue to Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	17600
Speed	45
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1019.29	21.12	35.20	756.71	3.52	5.87	187.65	29.33	48.89
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	23.24	6.41	8.63	21.95	-1.37	0.85	15.90	7.84	10.05
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.28	59.72	66.46	66.98	51.94	58.67	60.93	61.15	67.88
	DAY LEQ	70.82		EVENING LEQ	67.70		NIGHT LEQ	69.39	

CNEL	76.12
DAY LEQ	70.82

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

22	:Id
Ridgecrest Road	:Road
Pahute Avenue to Bear Valley Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	18480
Speed	45
Distance	42
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1070.25	22.18	36.96	794.54	3.70	6.16	197.03	30.80	51.33
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	23.46	6.62	8.84	22.16	-1.16	1.06	16.11	8.05	10.27
Distance	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	68.49	59.93	66.67	67.20	52.15	58.89	61.14	61.36	68.09
	DAY LEQ	71.03		EVENING LEQ	67.91		NIGHT LEQ	69.60	

CNEL	76.33
DAY LEQ	71.03

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

23	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	22300
Apple Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
North of Yucca Loma Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	52
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1291.48	26.76	44.60	958.78	4.46	7.43	237.76	37.17	61.94
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.40	6.57	8.78	22.11	-1.22	1.00	16.05	7.99	10.21
Distance	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.89	61.18	67.36	69.59	53.40	59.58	63.54	62.60	68.79
	DAY LEQ	72.79		EVENING LEQ	70.10		NIGHT LEQ	70.66	

CNEL	77.57	Day hour	0.00
DAY LEQ	72.79	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

23	:Id
Apple Valley Road	:Road
North of Yucca Loma Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	22740
Speed	55
Distance	52
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1316.96	27.29	45.48	977.70	4.55	7.58	242.45	37.90	63.17
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.49	6.65	8.87	22.19	-1.13	1.09	16.14	8.08	10.30
Distance	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	70.97	61.26	67.44	69.68	53.48	59.66	63.62	62.69	68.87
	DAY LEQ	72.88		EVENING LEQ	70.18		NIGHT LEQ	70.74	

CNEL	77.66
DAY LEQ	72.88

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise (With Green Tree Boulevard Extension)

24	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	21000
Apple Valley Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	55
South of Yucca Loma Road	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	64
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1216.19	25.20	42.00	902.89	4.20	7.00	223.90	35.00	58.33
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.14	6.30	8.52	21.85	-1.48	0.74	15.79	7.73	9.95
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.72	60.02	66.20	68.43	52.23	58.41	62.37	61.44	67.62
	DAY LEQ	71.63		EVENING LEQ	68.94		NIGHT LEQ	69.50	

CNEL	76.41	Day hour	0.00
DAY LEQ	71.63	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise (With Green Tree Boulevard Extension)

24	:Id
Apple Valley Road	:Road
South of Yucca Loma Road	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	21290
Speed	55
Distance	64
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	1232.99	25.55	42.58	915.36	4.26	7.10	226.99	35.48	59.14
Speed in MPH	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	72.73	79.85	83.81	72.73	79.85	83.81	72.73	79.85	83.81
ADJUSTMENTS									
Flow	23.20	6.36	8.58	21.91	-1.42	0.80	15.85	7.79	10.01
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	69.78	60.08	66.26	68.49	52.29	58.47	62.43	61.50	67.68
	DAY LEQ	71.69		EVENING LEQ	69.00		NIGHT LEQ	69.56	

CNEL	76.47
DAY LEQ	71.69

Day hour	0.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

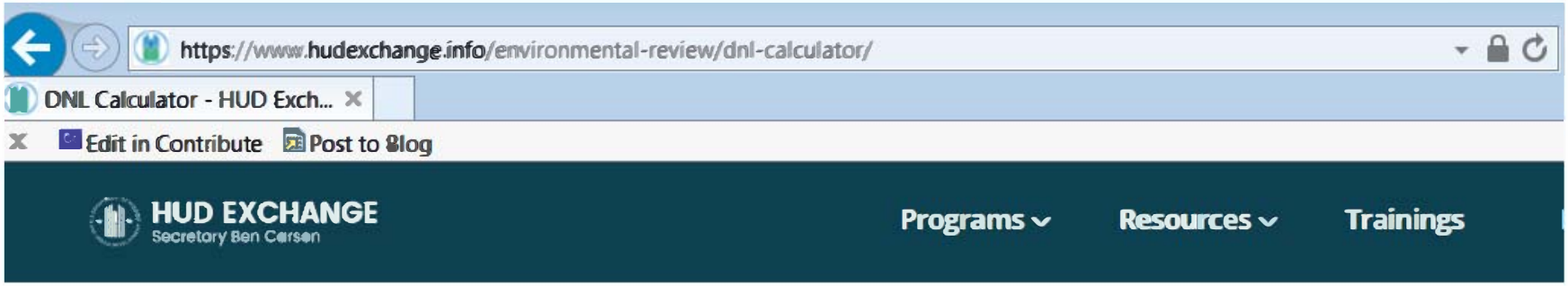
Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Appendix F

HUD Worksheets

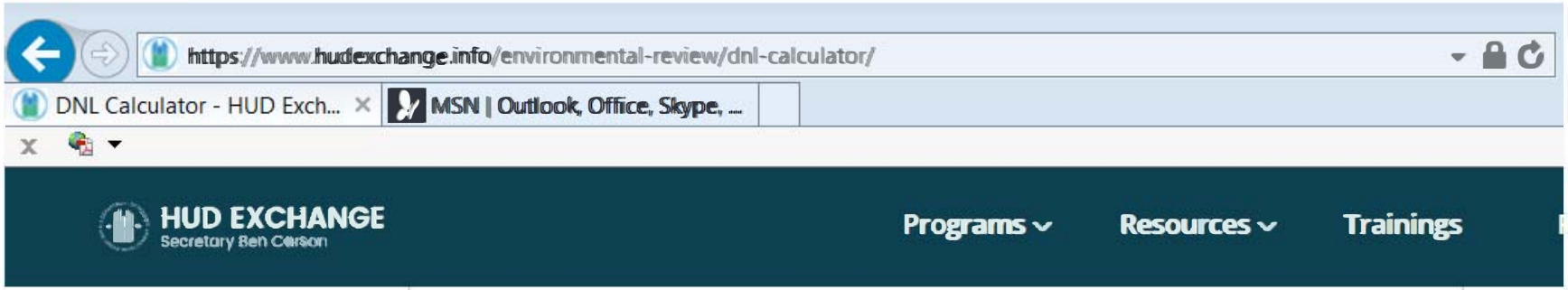


Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button (s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

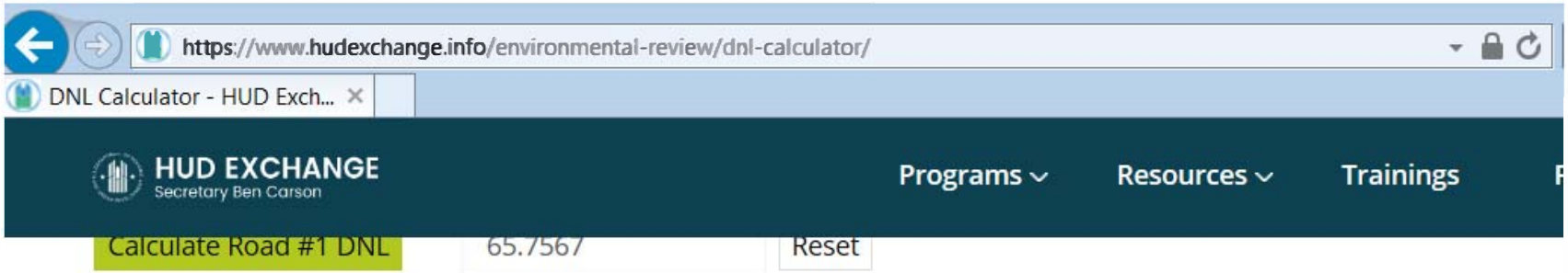
Site ID	Mojave Narrows Chateau Senior Living Facility - NAL 1 ✕
Record Date	8/29/2018
User's Name	Roma Stromberg



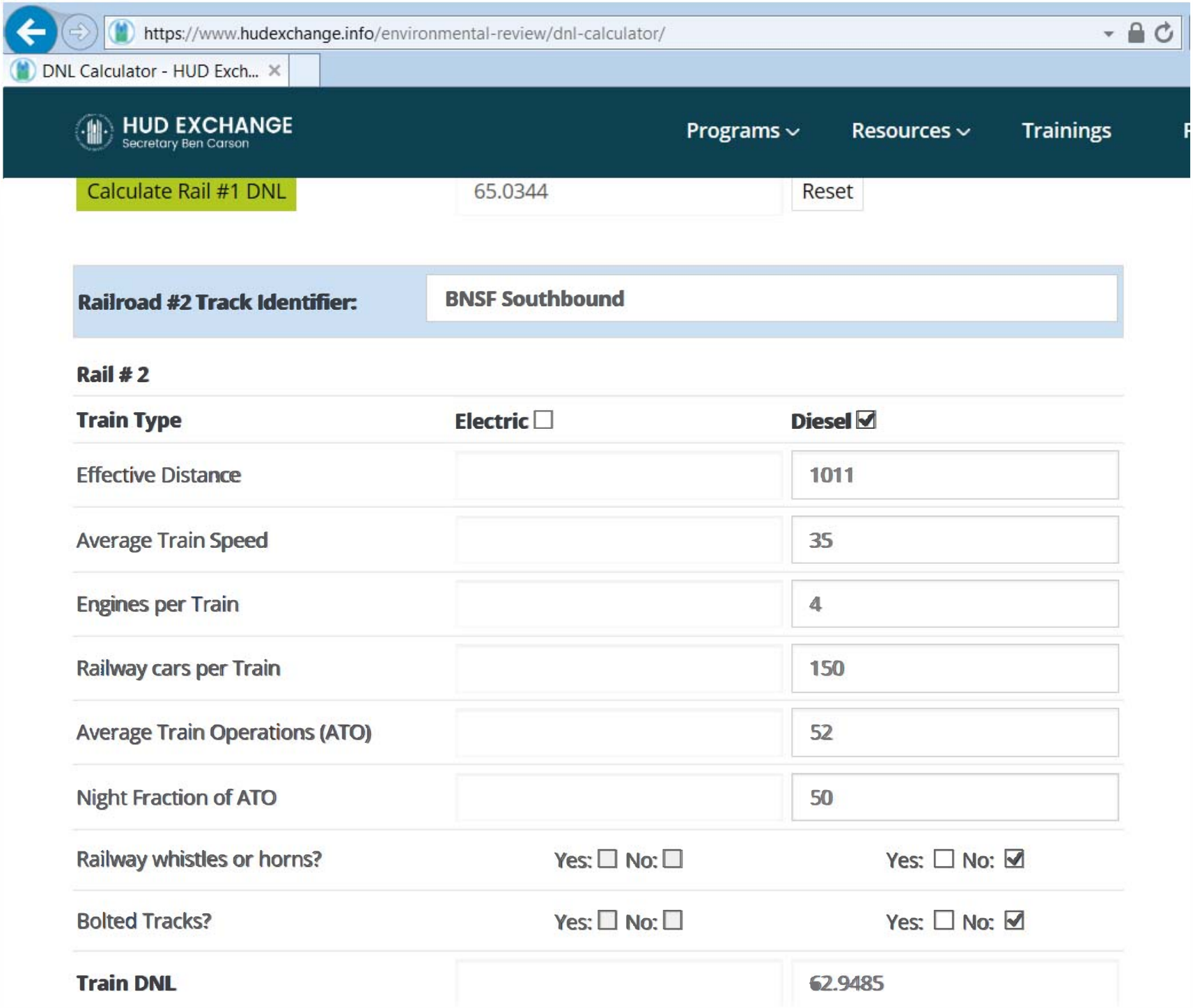
Road # 1 Name:	Yates Road

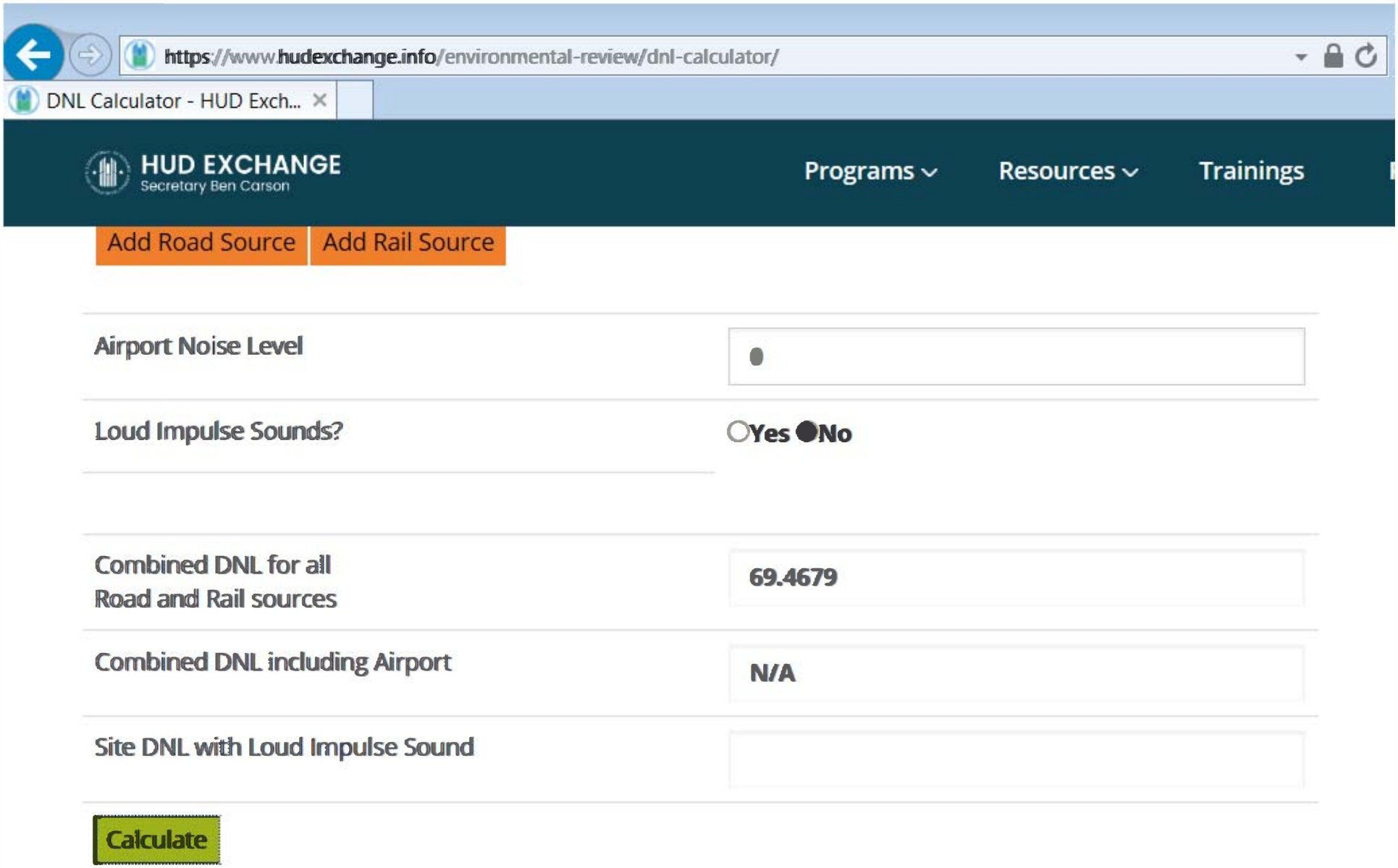
Road #1

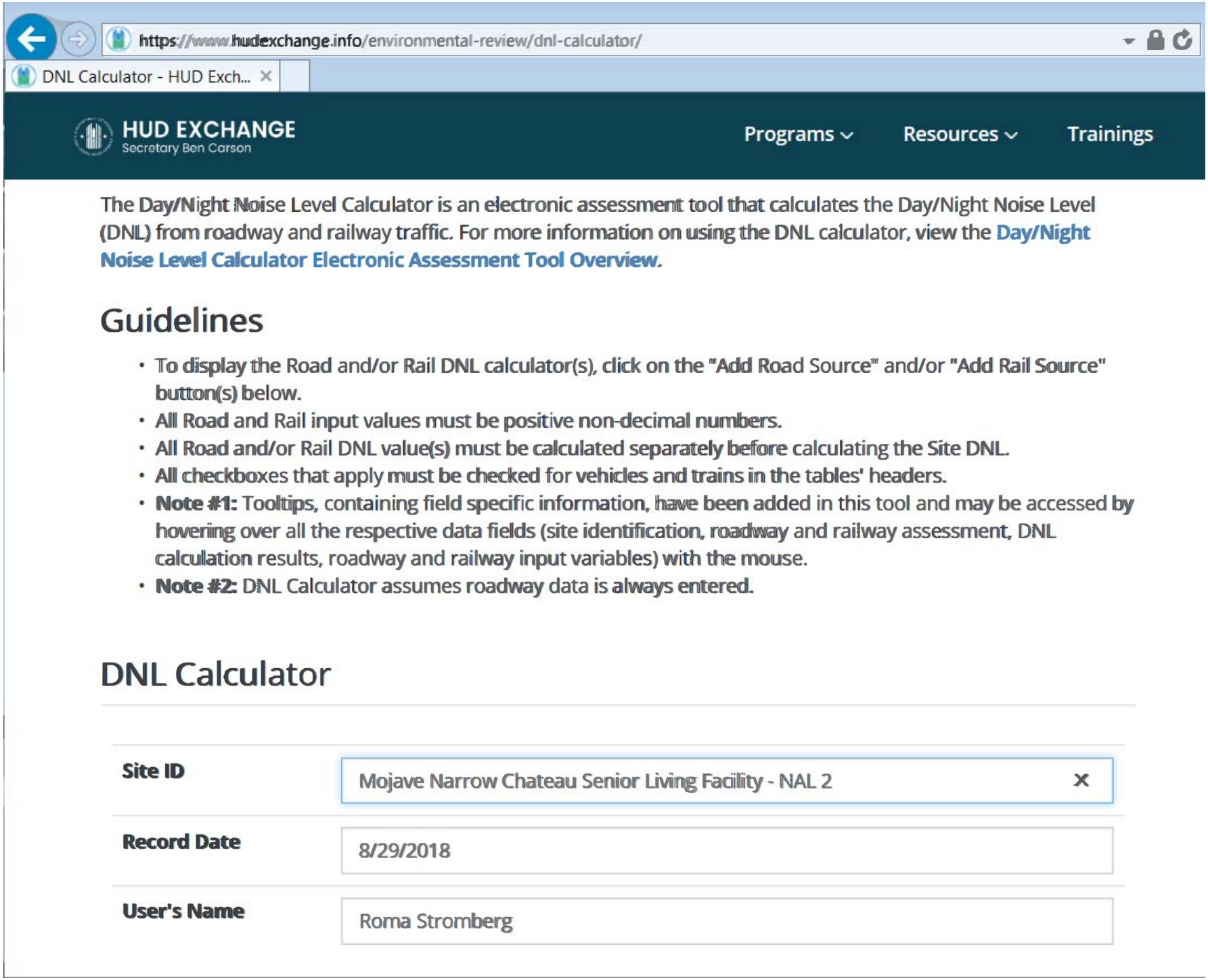
Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	329	329	329
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	34500	1125	1875
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	57.4123	52.5456	64.7828
Calculate Road #1 DNL	65.7567	Reset	

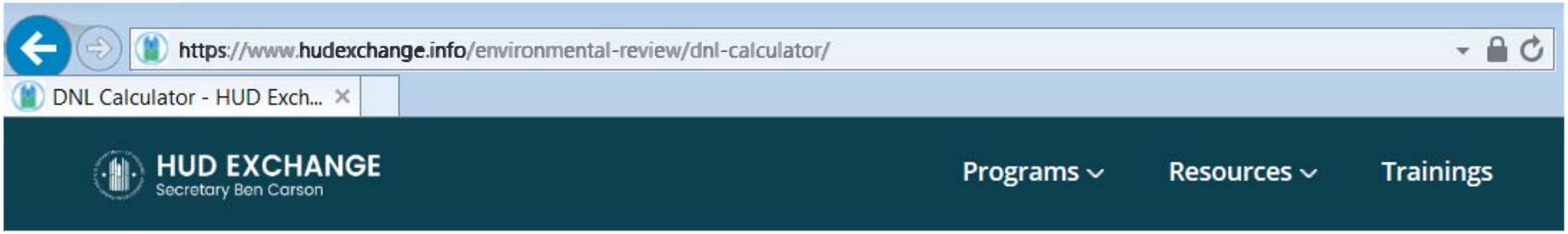


Railroad #1 Track Identifier:	**BNSF Northbound**	
Rail # 1		
Train Type	**Electric** ☐	**Diesel** ☑
Effective Distance		734
Average Train Speed		35
Engines per Train		4
Railway cars per Train		150
Average Train Operations (ATO)		52
Night Fraction of ATO		50
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL		65.0344


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Calculate Rail #1 DNL
65.0344
Reset
Railroad #2 Track Identifier:
BNSF Southbound
Rail # 2
Train Type
Electric
Diesel
Effective Distance
1011
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: No:
Yes: No:
Bolted Tracks?
Yes: No:
Yes: No:
Train DNL
62.9485


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Add Road Source
Add Rail Source
Airport Noise Level
Loud Impulse Sounds?
Yes
No
Combined DNL for all Road and Rail sources
69.4679
Combined DNL including Airport
N/A
Site DNL with Loud Impulse Sound
Calculate

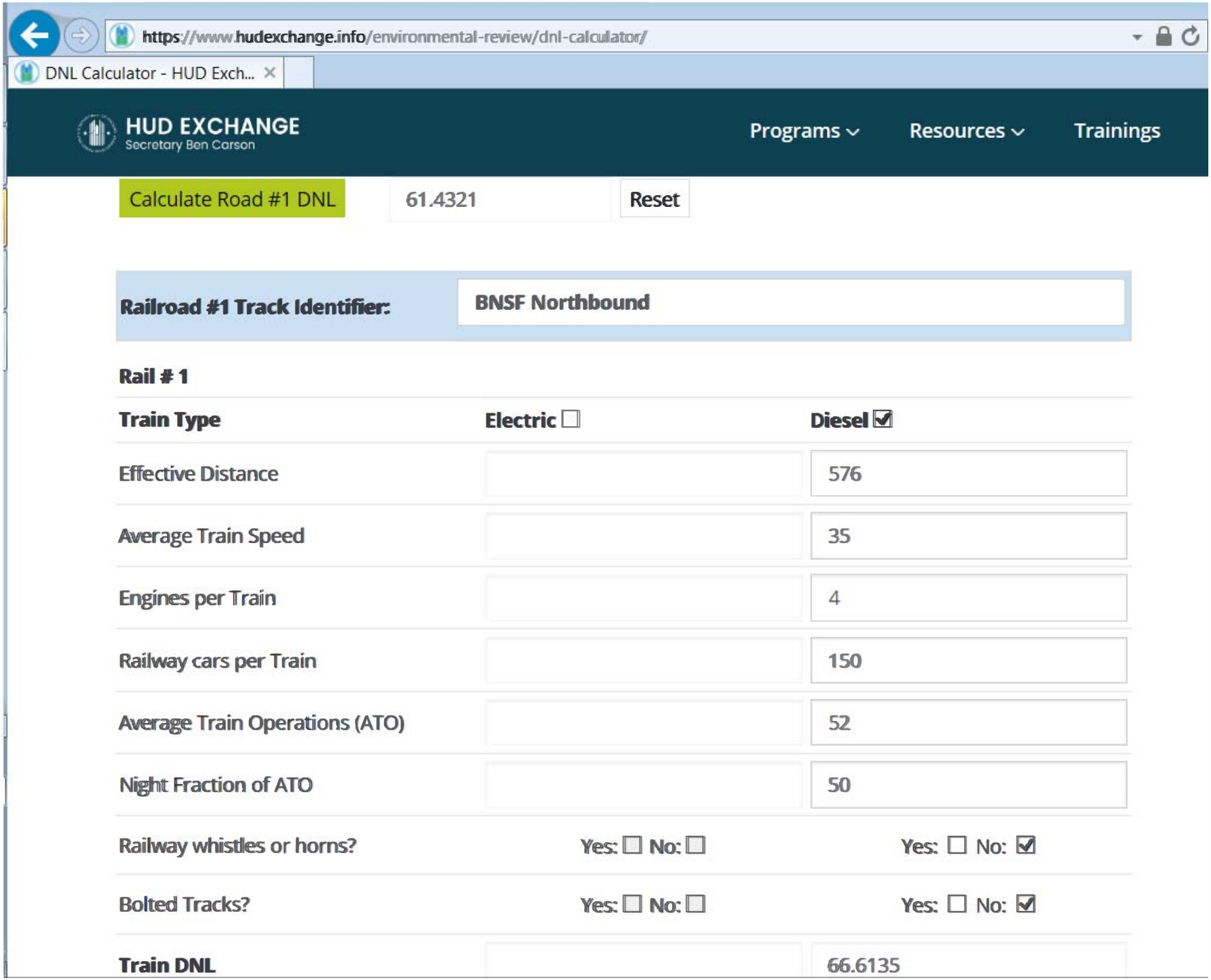

https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the Day/Night Noise Level Calculator Electronic Assessment Tool Overview.
Guidelines
To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
All Road and Rail input values must be positive non-decimal numbers.
All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
Note #1: Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
Note #2: DNL Calculator assumes roadway data is always entered.
DNL Calculator
Site ID
Mojave Narrow Chateau Senior Living Facility - NAL 2
Record Date
8/29/2018
User's Name
Roma Stromberg

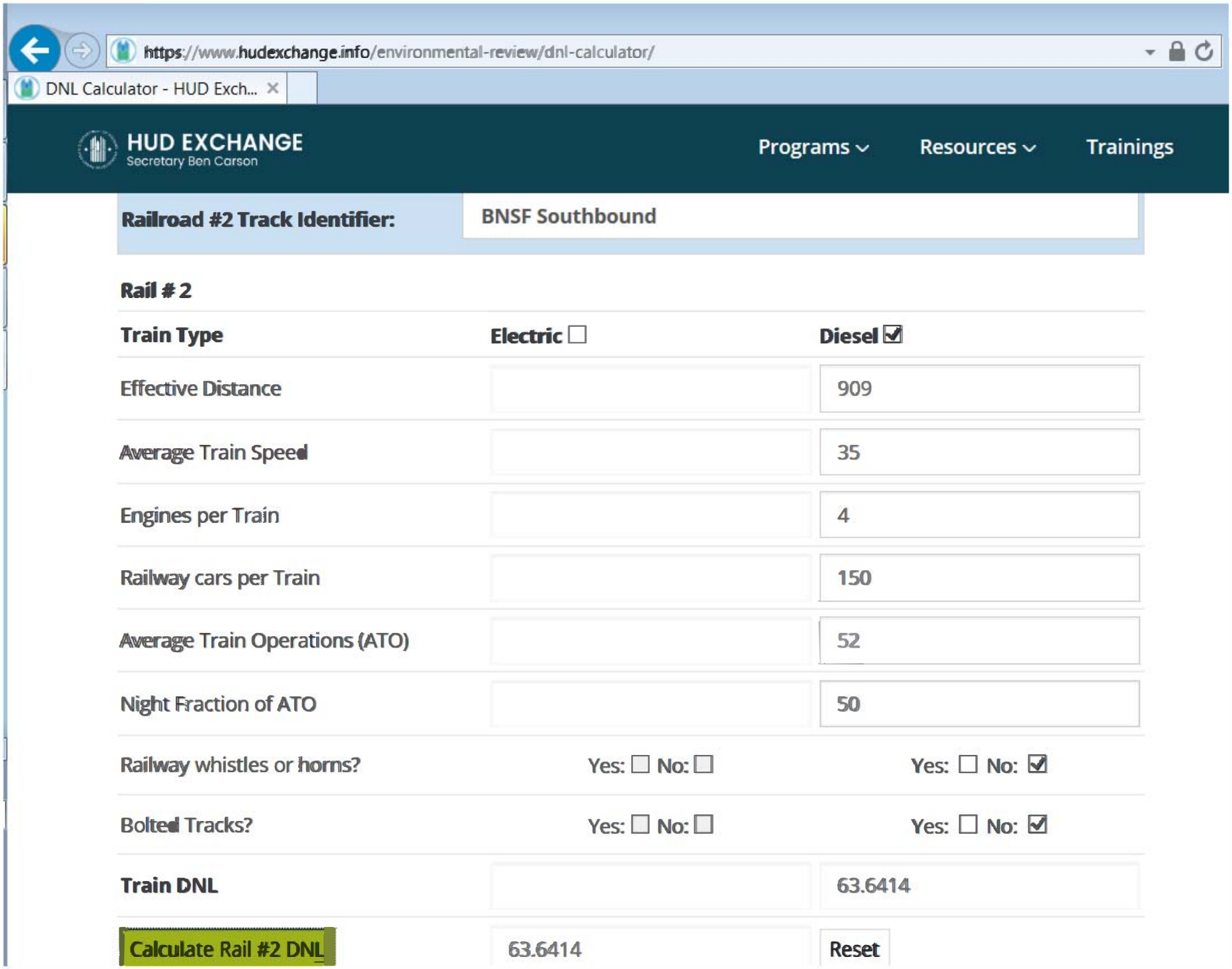


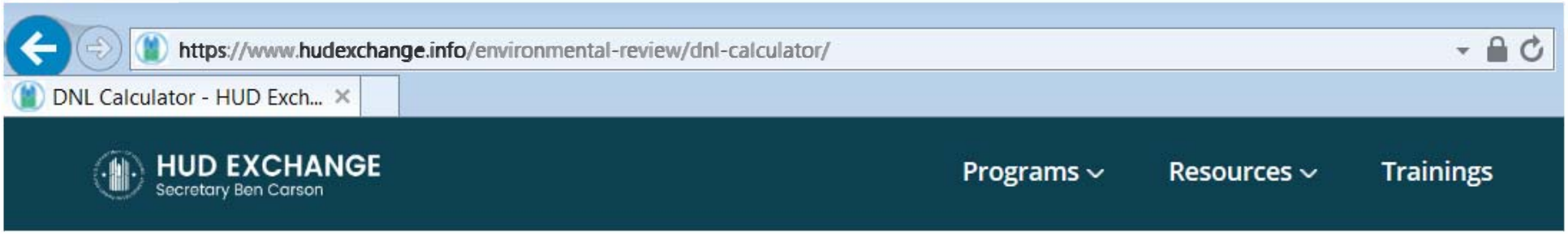
Road # 1 Name:	Yates Road

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	639	639	639
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	34500	1125	1875
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	57.4123	52.5456	64.7828
Calculate Road #1 DNL	65.7567	Reset	


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Calculate Road #1 DNL
61.4321
Reset
Railroad #1 Track Identifier:
BNSF Northbound
Rail # 1
Train Type
Electric
Diesel
Effective Distance
576
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: No:
Yes: No:
Bolted Tracks?
Yes: No:
Yes: No:
Train DNL
66.6135

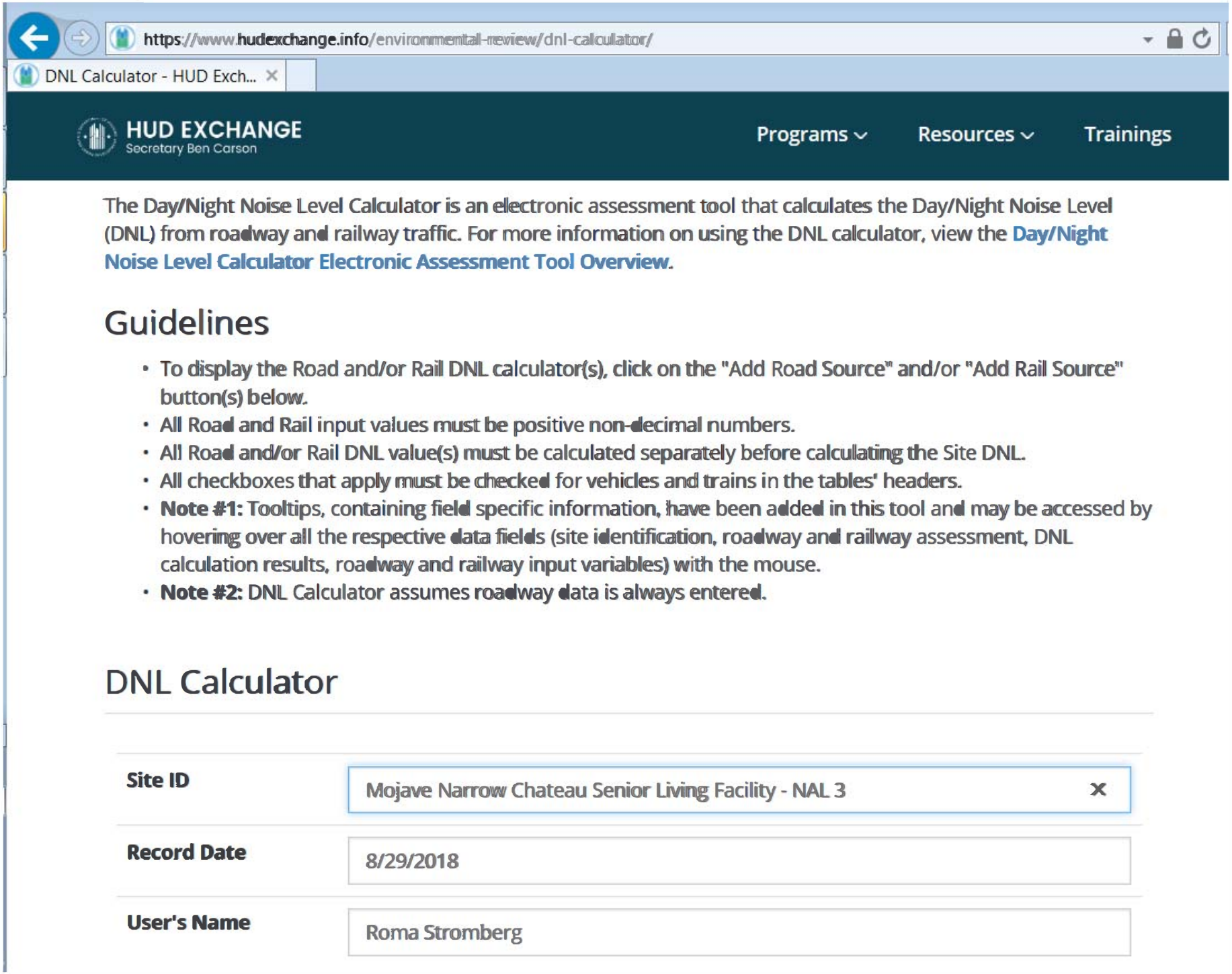

https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Railroad #2 Track Identifier:
BNSF Southbound
Rail # 2
Train Type
Electric
Diesel
Effective Distance
909
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: No:
Yes: No:
Bolted Tracks?
Yes: No:
Yes: No:
Train DNL
63.6414
Calculate Rail #2 DNL
63.6414
Reset



Add Road Source | Add Rail Source

Airport Noise Level	0
Loud Impulse Sounds?	Yes ◉No
Combined DNL for all Road and Rail sources	69.2239
Combined DNL including Airport	N/A
Site DNL with Loud Impulse Sound	

Calculate


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
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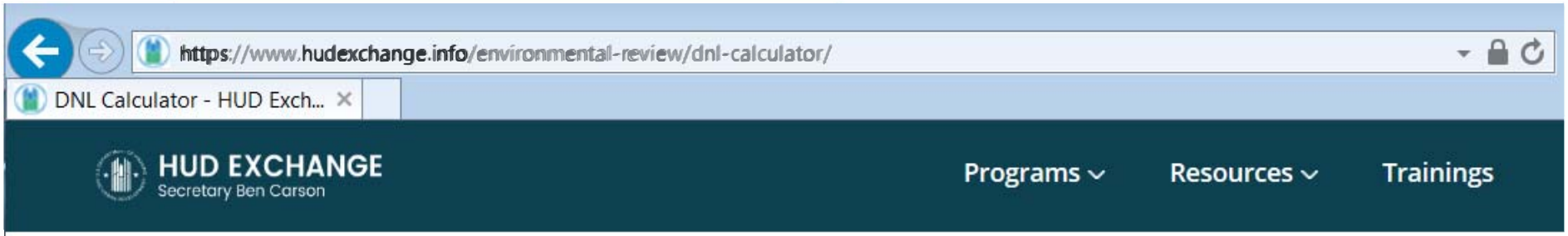
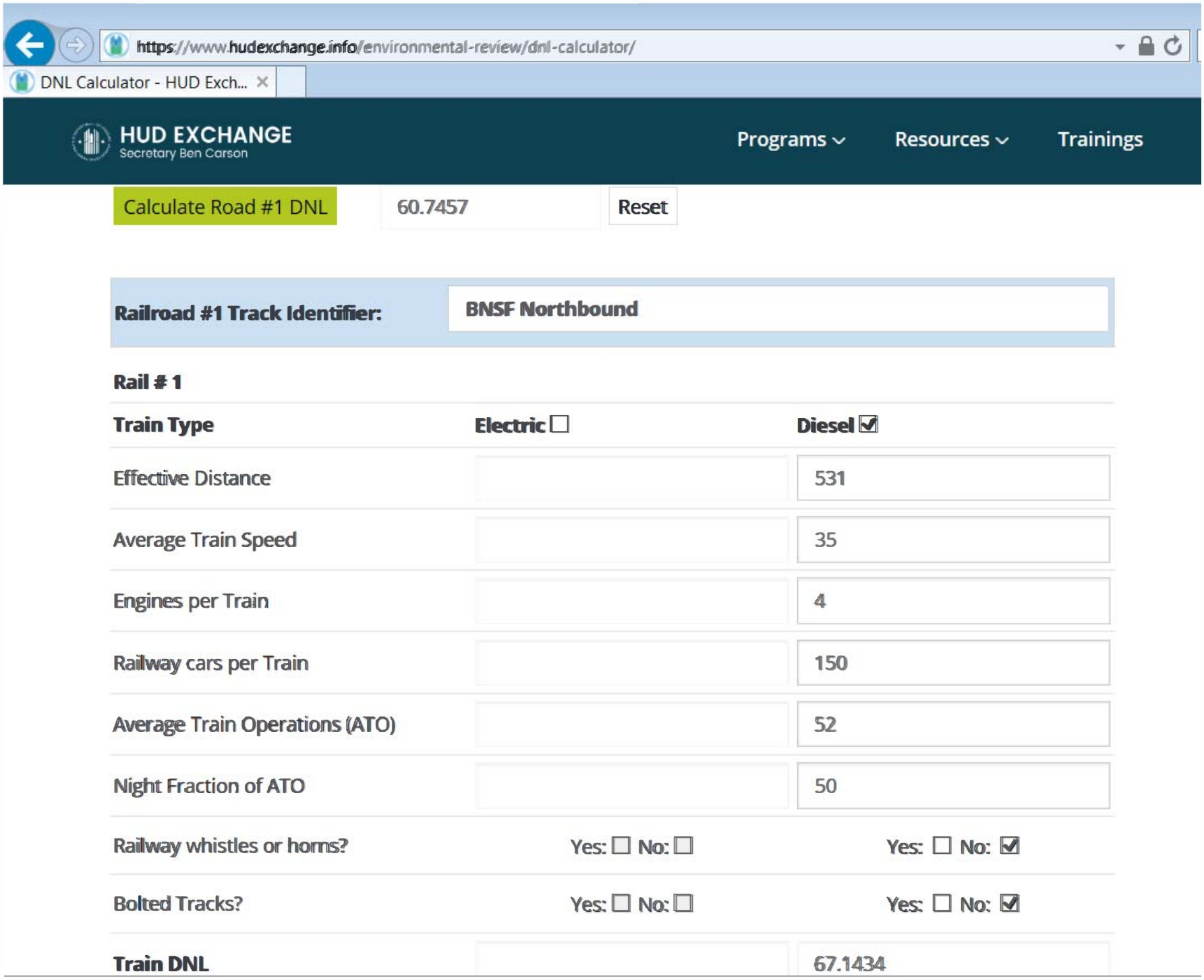
Guidelines
To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
All Road and Rail input values must be positive non-decimal numbers.
All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
Note #1: Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
Note #2: DNL Calculator assumes roadway data is always entered.
DNL Calculator
Site ID
Mojave Narrow Chateau Senior Living Facility - NAL 3
Record Date
8/29/2018
User's Name
Roma Stromberg

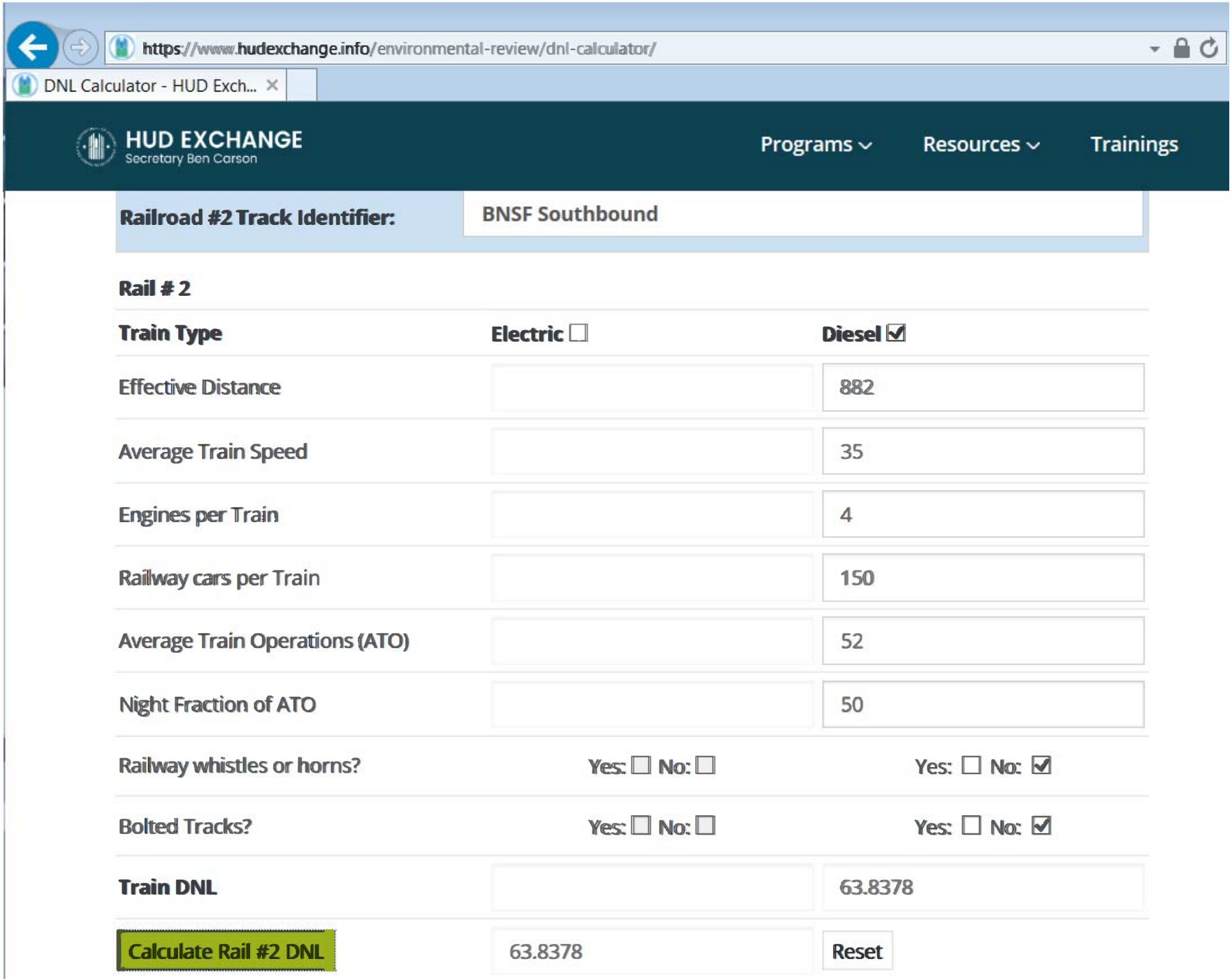


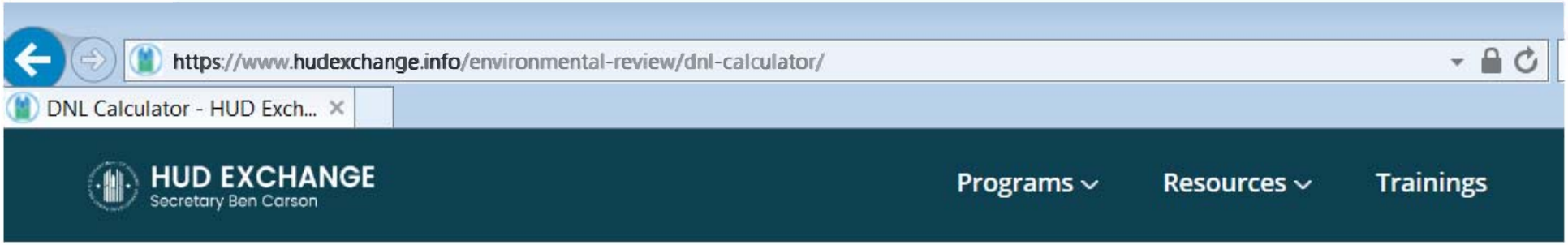
Road # 1 Name:	Yates Road

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	710	710	710
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	34500	1125	1875
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	52.4014	47.5347	59.7718
Calculate Road #1 DNL	60.7457	Reset	


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Calculate Road #1 DNL
60.7457
Reset
Railroad #1 Track Identifier:
BNSF Northbound
Rail # 1
Train Type
Electric ☐
Diesel ☑
Effective Distance
531
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: ☐ No: ☐
Yes: ☐ No: ☑
Bolted Tracks?
Yes: ☐ No: ☐
Yes: ☐ No: ☑
Train DNL
67.1434

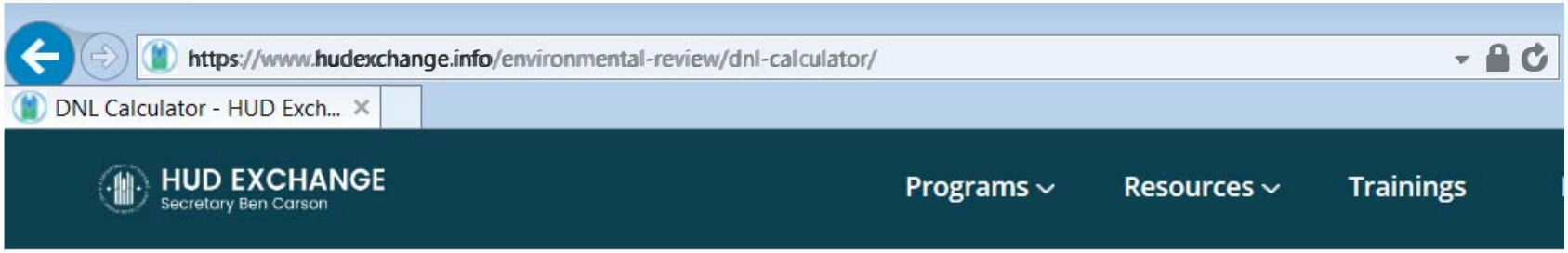

https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Railroad #2 Track Identifier:
BNSF Southbound
Rail # 2
Train Type
Electric ☐
Diesel ☑
Effective Distance
882
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: ☐ No: ☐
Yes: ☐ No: ☑
Bolted Tracks?
Yes: ☐ No: ☐
Yes: ☐ No: ☑
Train DNL
63.8378
Calculate Rail #2 DNL
63.8378
Reset



Add Road Source | Add Rail Source

Airport Noise Level	0
Loud Impulse Sounds?	○Yes ◉No
Combined DNL for all Road and Rail sources	**69.4411**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate



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Guidelines

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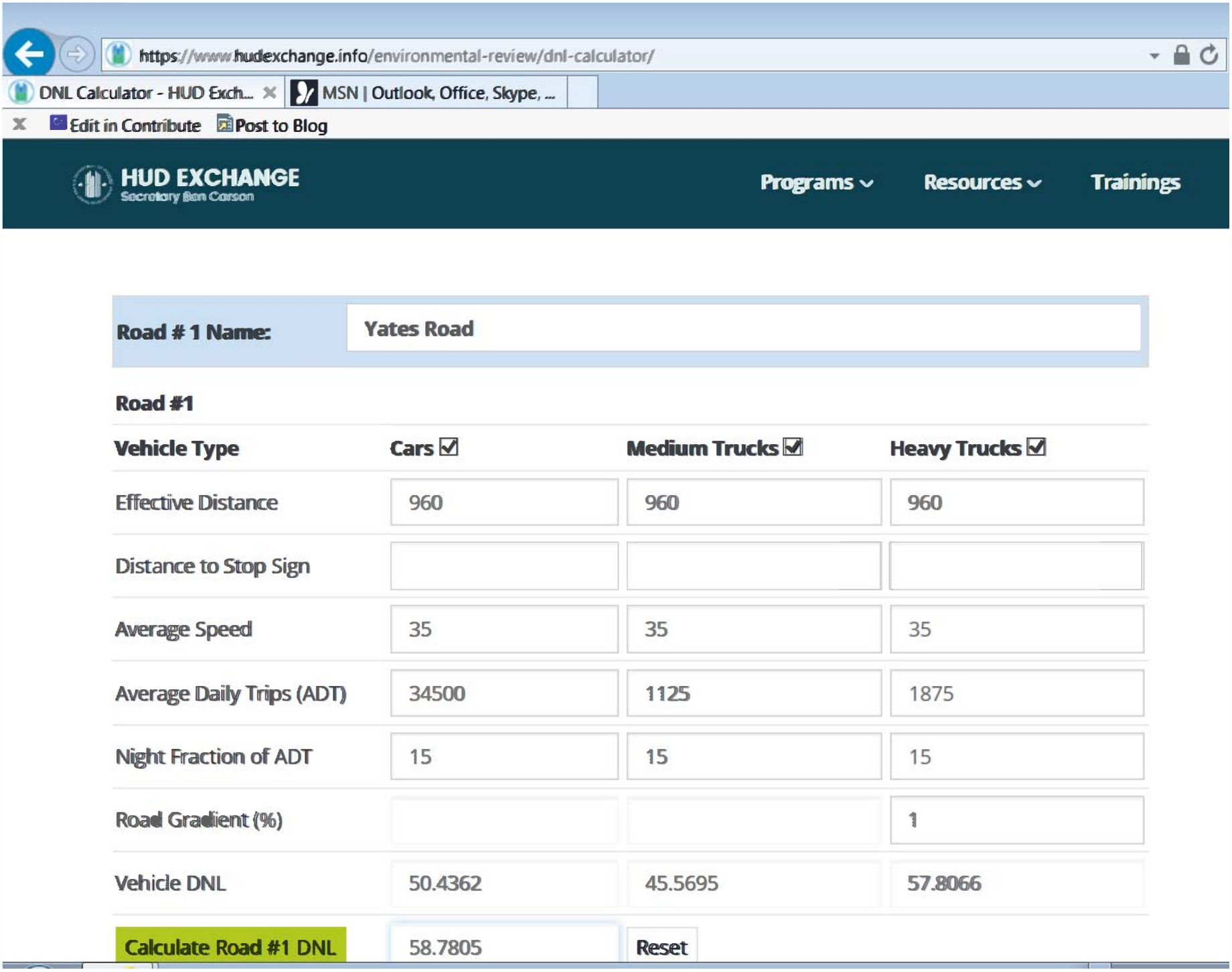
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Mojave Narrow Chateau Senior Living Facility - NAL 4
Record Date	8/29/2018
User's Name	Roma Stromberg


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
MSN | Outlook, Office, Skype, ...
Edit in Contribute
Post to Blog
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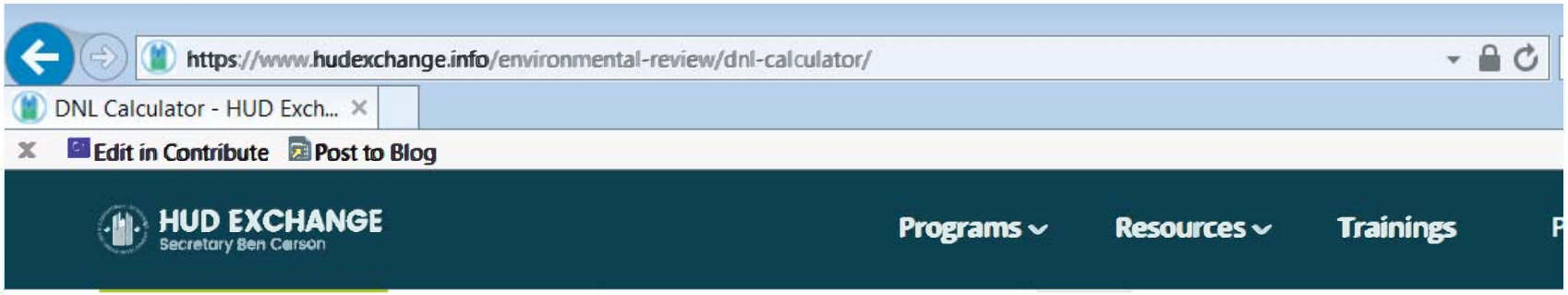
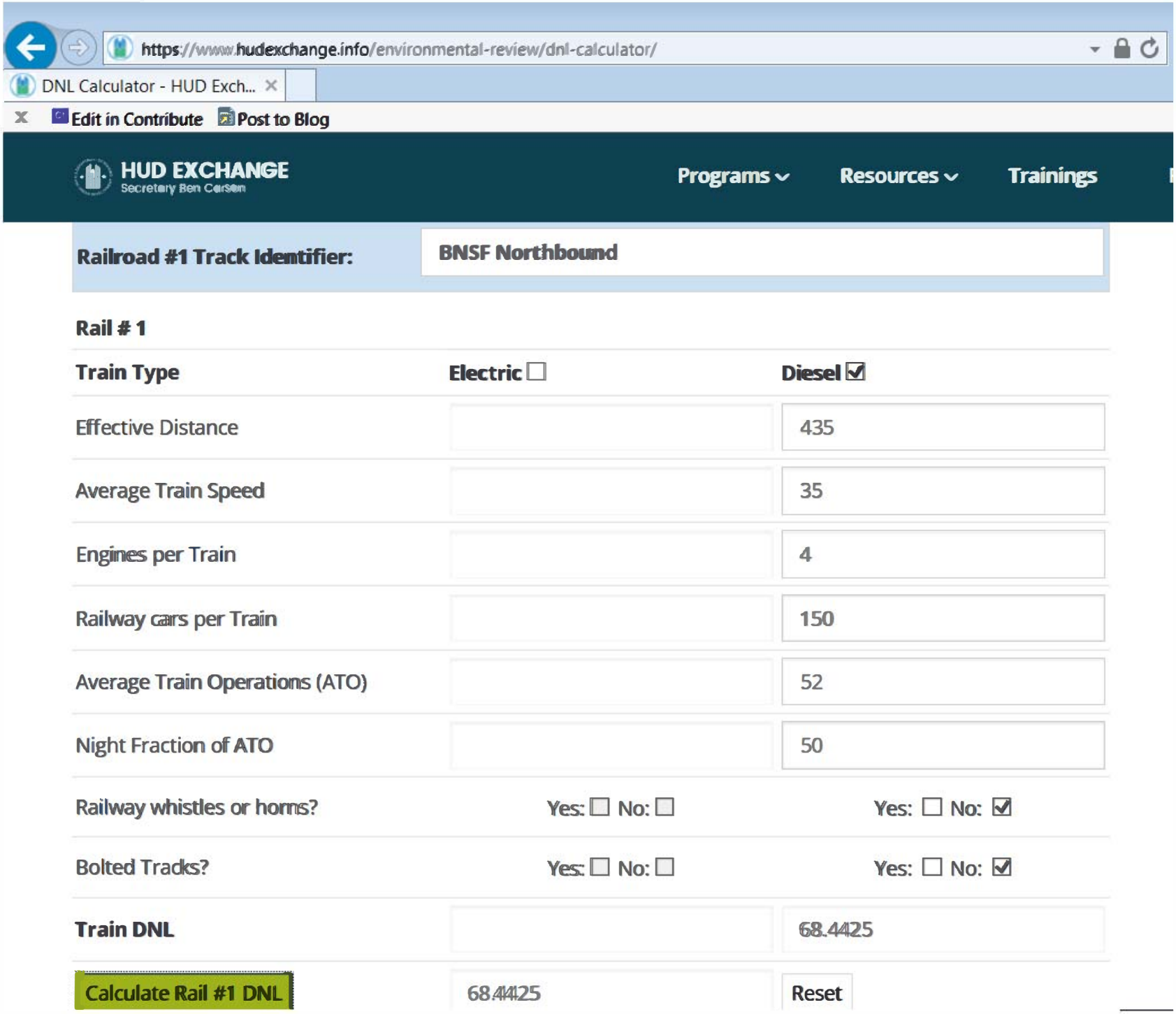
Programs
Resources
Trainings
Road # 1 Name:
Yates Road
Road #1
Vehicle Type
Cars
Medium Trucks
Heavy Trucks
Effective Distance
960
960
960
Distance to Stop Sign
Average Speed
35
35
35
Average Daily Trips (ADT)
34500
1125
1875
Night Fraction of ADT
15
15
15
Road Gradient (%)
1
Vehicle DNL
50.4362
45.5695
57.8066
Calculate Road #1 DNL
58.7805
Reset



Railroad #2 Track Identifier:	BNSF Southbound	
Rail # 2		
Train Type	**Electric** ☐	**Diesel** ☑
Effective Distance		786
Average Train Speed		35
Engines per Train		4
Railway cars per Train		150
Average Train Operations (ATO)		52
Night Fraction of ATO		50
Railway whistles or horns?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Bolted Tracks?	Yes: ☐ No: ☐	Yes: ☐ No: ☑
Train DNL		64.5885


https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
Edit in Contribute
Post to Blog
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Secretary Ben Carson
Programs
Resources
Trainings
Railroad #1 Track Identifier:
BNSF Northbound
Rail # 1
Train Type
Electric
Diesel
Effective Distance
435
Average Train Speed
35
Engines per Train
4
Railway cars per Train
150
Average Train Operations (ATO)
52
Night Fraction of ATO
50
Railway whistles or horns?
Yes: No:
Yes: No:
Bolted Tracks?
Yes: No:
Yes: No:
Train DNL
68.4425
Calculate Rail #1 DNL
68.44425
Reset

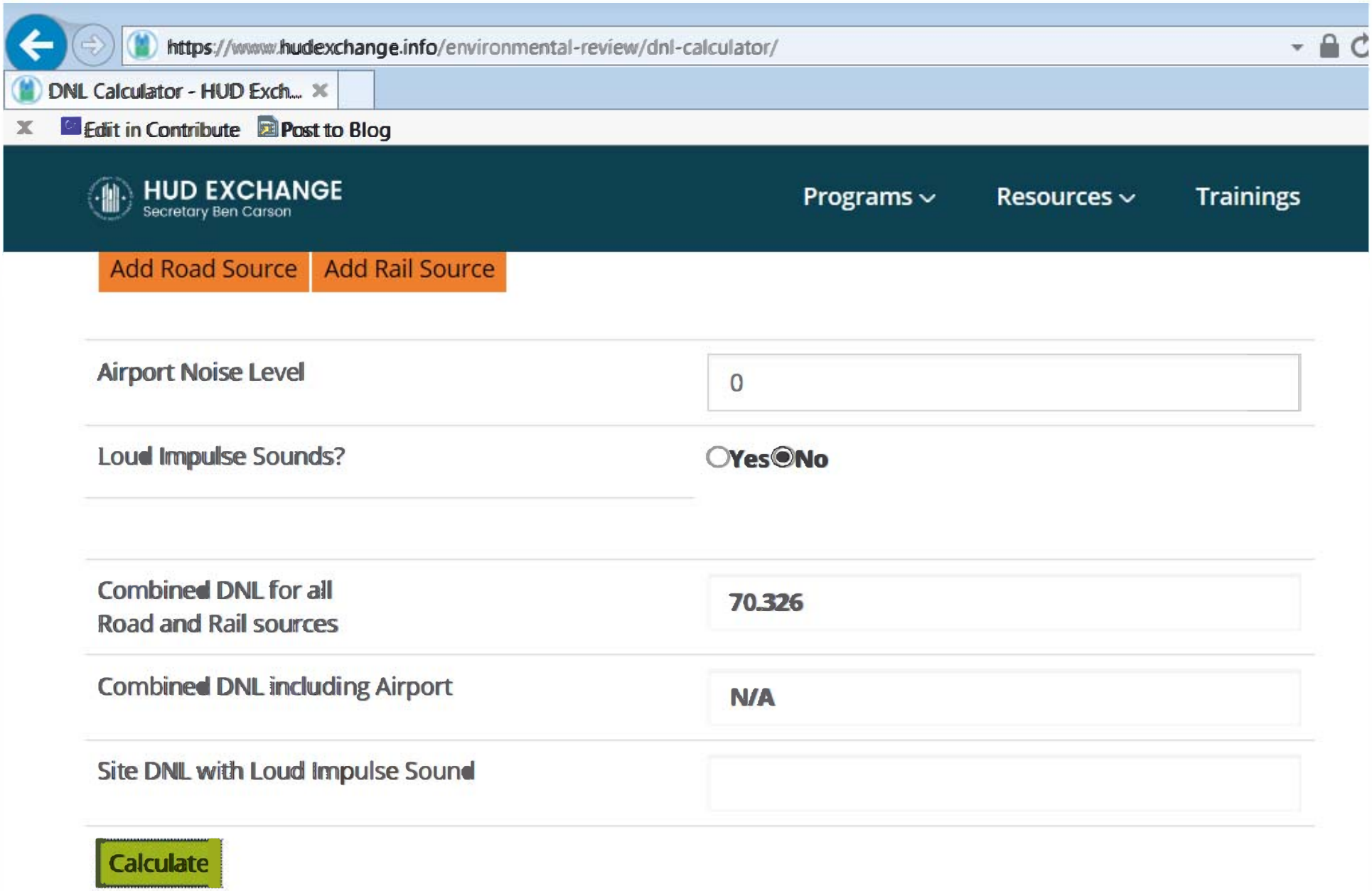
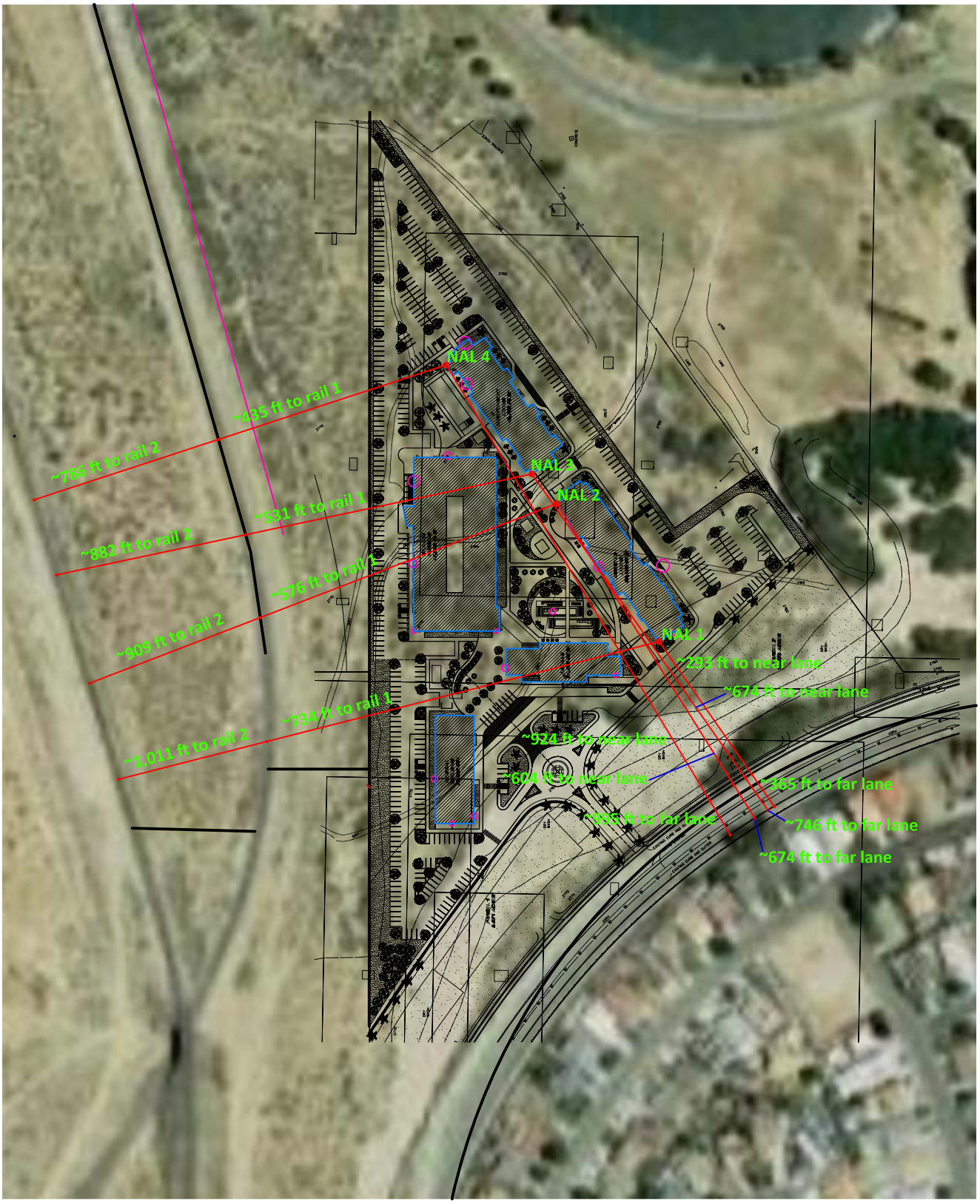

https://www.hudexchange.info/environmental-review/dnl-calculator/
DNL Calculator - HUD Exch...
Edit in Contribute
Post to Blog
HUD EXCHANGE
Secretary Ben Carson
Programs
Resources
Trainings
Add Road Source
Add Rail Source
Airport Noise Level
0
Loud Impulse Sounds?
Yes
No
Combined DNL for all Road and Rail sources
70.326
Combined DNL including Airport
N/A
Site DNL with Loud Impulse Sound
Calculate

Figure 1
Rail and Roadway Distances to NAL 1-4



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 6602a

Worksheet B **Noise Assessment Guidelines**

Aircraft Noise - Mojave Narrow Chateau Senior Living Facility

List all airports within 15 miles of the site:

1. Southern California Logistics Airport is located approximately 7.8 miles north of the project site. As a logistics airport, it is designed for business, military, and freight use. There are no commercial passenger services at this facility except for FBO and charter flights. The 65 CNEL/Ldn noise contour is approximately 6.4 miles northeast of the project site.

2. Osborne Airport is located approximately 5 miles north of the project site. It is a small airport and with a maximum runway length of 2600 it accomodates smaller aircraft, such as a single engine piston or high-performance turboprop. No jets are recorded to use this airport. Noise contours are not available for this airport.

3. Apple Valley Airport is located approximately 6.25 miles northeast of the project site. It has two runways and is used for general aviation and can accomodate private jets. The project site is approximately 6.5 miles southwest of the 65 CNEL noise contour for this airport.

4. Hesperia Airport is located approximately 8.8 miles south of the proejct site. The national plan of integrated airport system classified the airport as a general aviation, basic utility airport. It has a runway length of 3910 feet and is suitable for small prop planes. The 65 CNEL noise contour is approximately 8.6 miles south of the project site.

5. Adelanto Airport 52CL is located approximately 10.5 miles west of the project site. This is a private airport owned by a home owner's association. Noise contours are not available for this airport. No jets are recorded to utilize this airport.

Necessary Information:	Airport 1	Airport 2	Airport 3	Airport 4	Airport 5
1. Are DNL, NEF or CNR contours available? (yes/no)	Y	N	Y	Y	N
2. Any supersonic aircraft operations? (yes/no)	N	N	N	N	N
3. Estimating approximate contours from Figure 3:					
a. number of nighttime jet operations		0			0
b. number of daytime jet operations		0			0
c. effective number of operations (10 times a + b)		0			0
d. distance A for 65 dB					
70 dB					
75 dB					
e. distance B for 65 dB					
70 dB					
75 dB					
4. Estimating DNL from Table 2:					
a. distance from 65 dB contour to flight path, D^1					
b. distance from NAL to flight path, D^2					
c. D^2 divided by D^1					
d. DNL					
5. Operations projected for what year?	n/a	n/a	2023	n/a	n/a

6. Total DNL from all airports 0

Signed _____ Date _____

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date *(MM/DD/YYYY)*: 03 / 21 / 2017

B. Reporting Agency: ☐ Railroad ☐ Transit ☒ State ☐ Other

C. Reason for Update *(Select only one)*: ☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction

D. DOT Crossing Inventory Number: 026077M

Part I: Location and Classification Information

1. Primary Operating Railroad: BNSF Railway Company [BNSF]

2. State: CALIFORNIA

3. County: SAN BERNARDINO

4. City / Municipality: ☒ In ☐ Near VICTORVILLE

5. Street/Road Name & Block Number: 1ST st | *(Street/Road Name)* | ** (Block Number)*

6. Highway Type & No.: ls

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR

8. Do Other Railroads Operate Over Your Track at Crossing? ☒ Yes ☐ No
If Yes, Specify RR: ATK

9. Railroad Division or Region: ☐ None CALIFORNIA

10. Railroad Subdivision or District: ☐ None CAJON

11. Branch or Line Name: ☐ None BARSTOW-S BERN

12. RR Milepost: | 0031.979 | *(prefix) | (nnnn.nnn) | (suffix)*

13. Line Segment *: 7600

14. Nearest RR Timetable Station *: ORO GRANDE YD, CA

15. Parent RR *(if applicable)*: ☒ N/A

16. Crossing Owner *(if applicable)*: ☐ N/A BNSF

17. Crossing Type: ☒ Public ☐ Private

18. Crossing Purpose: ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.

19. Crossing Position: ☒ At Grade ☐ RR Under ☐ RR Over

20. Public Access *(if Private Crossing)*: ☐ Yes ☐ No

21. Type of Train: ☐ Freight ☐ Transit ☒ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other

22. Average Passenger Train Count Per Day: ☐ Less Than One Per Day ☒ Number Per Day 2

23. Type of Land Use: ☒ Open Space ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number?: ☐ Yes ☒ No If Yes, Provide Crossing Number

25. Quiet Zone *(FRA provided)*: ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established

26. HSR Corridor ID: ☒ N/A

27. Latitude in decimal degrees *(WGS84 std: nn.nnnnnnn)*: 34.59349

28. Longitude in decimal degrees *(WGS84 std: -nnn.nnnnnnn)*: -117.33229

29. Lat/Long Source: ☒ Actual ☐ Estimated

30.A. Railroad Use *:

31.A. State Use *: CPUC 002-31.90

30.B. Railroad Use *:

31.B. State Use *:

30.C. Railroad Use *:

31.C. State Use *:

30.D. Railroad Use *:

31.D. State Use *:

32.A. Narrative *(Railroad Use)* *****:

32.B. Narrative *(State Use)* *****:

33. Emergency Notification Telephone No. *(posted)*: 800-832-5452

34. Railroad Contact *(Telephone No.)*: 817-352-1549

35. State Contact *(Telephone No.)*: 415-703-3722

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains *(6 AM to 6 PM)*	1.B. Total Night Thru Trains *(6 PM to 6 AM)*	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week?
51	51	0	0	

2. Year of Train Count Data *(YYYY)*: 2013

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed *(mph)*: 60
3.B. Typical Speed Range Over Crossing *(mph)* From 1 to 60

4. Type and Count of Tracks
Main 2 Siding 0 Yard 1 Transit 0 Industry 0

5. Train Detection *(Main Track only)*
☐ Constant Warning Time ☐ Motion Detection ☐AFO ☐ PTC ☒ DC ☐ Other ☐ None

6. Is Track Signaled? ☒ Yes ☐ No

7.A. Event Recorder ☐ Yes ☐ No

7.B. Remote Health Monitoring ☐ Yes ☐ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)*	PAGE 2	D. Crossing Inventory Number *(7 char.)*
03/21/2017		026077M

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)*	2.B. STOP Signs *(R1-1)* *(count)*	2.C. YIELD Signs *(R1-2)* *(count)*	2.D. Advance Warning Signs *(Check all that apply; include count)* ☐ None
0	0	0	☒ W10-1 2 ☐ W10-3 ☐ W10-11 ☐ W10-2 ☐ W10-4 ☐ W10-12

2.E. Low Ground Clearance Sign *(W10-5)*	2.F. Pavement Markings	2.G. Channelization Devices/Medians	2.H. EXEMPT Sign *(R15-3)*	2.I. ENS Sign *(I-13)* Displayed
☐ Yes *(count_____)* ☒ No	☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None	☐ All Approaches ☐ Median ☐ One Approach ☒ None	☐ Yes ☒ No	☒ Yes ☐ No

2.J. Other MUTCD Signs ☒ Yes ☐ No	2.K. Private Crossing Signs *(if private)*	2.L. LED Enhanced Signs *(List types)*
Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	☐ Yes ☐ No	0

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)*	3.B. Gate Configuration	3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)*	3.D. Mast Mounted Flashing Lights *(count of masts)* 2	3.E. Total Count of Flashing Light Pairs
Roadway 2 Pedestrian 0	☒ 2 Quad ☐ Full *(Barrier)* Resistance ☐ 3 Quad ☐ 4 Quad ☐ Median Gates	Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED	☒ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included	4

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)*	3.G. Wayside Horn	3.H. Highway Traffic Signals Controlling Crossing	3.I. Bells *(count)*
_____/_____ ☐ Not Required	☐ Yes Installed on *(MM/YYYY)* _____/_____ ☒ No	☐ Yes ☒ No	2

3.J. Non-Train Active Warning	3.K. Other Flashing Lights or Warning Devices
☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None	Count 0 Specify type _____

4.A. Does nearby Hwy Intersection have Traffic Signals?	4.B. Hwy Traffic Signal Interconnection	4.C. Hwy Traffic Signal Preemption	5. Highway Traffic Pre-Signals	6. Highway Monitoring Devices *(Check all that apply)*
☐ Yes ☒ No	☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs	☐ Simultaneous ☐ Advance	☐ Yes ☒ No Storage Distance * _____ Stop Line Distance * _____	☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad	2. Is Roadway/Pathway Paved?	3. Does Track Run Down a Street?	4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)*
☐ One-way Traffic ☒ Two-way Traffic ☐ Divided Traffic Number of Lanes 2	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* _____/_____ Width * _____ Length * _____
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☒ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* _____

6. Intersecting Roadway within 500 feet?	7. Smallest Crossing Angle	8. Is Commercial Power Available? *
☒ Yes ☐ No If Yes, Approximate Distance *(feet)* 57	☐ 0° – 29° ☐ 30° – 59° ☒ 60° - 90°	☒ Yes ☐ No

Part V: Public Highway Information

1. Highway System	2. Functional Classification of Road at Crossing	3. Is Crossing on State Highway System?	4. Highway Speed Limit
☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☒ (08) Non-Federal Aid	☐ (0) Rural ☒ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☐ (4) Minor Arterial ☒ (7) Local	☐ Yes ☒ No	35 MPH ☒ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)*	8. Estimated Percent Trucks	9. Regularly Used by School Buses?	10. Emergency Services Route
Year 2016 AADT 232	20 %	☐ Yes ☒ No Average Number per Day _____	☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by _____ Organization _____ Phone _____ Date _____

Appendix G

SoundPLAN Inputs and Outputs

Noise Emissions of Road Traffic

Station km	ADT Veh/24	Traffic values: Vehicles type	Vehicle name	day Veh/h	evenin Veh/h	night Veh/h	Speed km/h	Control device	Constr Speed km/h	Affect. veh. %	Road surface	Gradien Min / M %
1		Traffic direction: In entry direction										
0+000	37501	Total	-	2292	1633	567	-	none	-	-	Average (of DGAC and PCC)	0.0
		Automobiles	-	2172	1613	400	56					
		Medium trucks	-	45	8	63	56					
		Heavy trucks	-	75	13	104	56					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary Vehicl	-	-	-	-	-					
0+701	-							-	-	-	-	-

Industry

Source name	Reference Level		Frequency spectrum [dB(A)]							
			63	125	250	500	1	2	4	8
	dB(A)	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	
BNSF Southbound	124.7	-	76.8	87.9	98.4	105.8	107	104.2	97	86.9
BNSF Northbound S	125.7	-	76.8	87.9	98.4	105.8	107	104.2	97	86.9
BNSF Northbound N	126.7	-	76.8	87.9	98.4	105.8	107	104.2	97	86.9

Contribution Levels of the Receivers

Source name	Lane	Level Lden dB(A)
1 Fl		64.9
1		63.6
BNSF Northbound N		42.1
BNSF Northbound S		57.1
BNSF Southbound		54.6
2 Fl		60.7
1		52.5
BNSF Northbound N		46.9
BNSF Northbound S		56.6
BNSF Southbound		56.8
3 Fl		60.9
1		57.7
BNSF Northbound N		45.2
BNSF Northbound S		54.7
BNSF Southbound		54.9
4 Fl		59.1
1		48.4
BNSF Northbound N		47.7
BNSF Northbound S		53.9
BNSF Southbound		56.4
5 Fl		54.0
1		35.6
BNSF Northbound N		43.8
BNSF Northbound S		43.9
BNSF Southbound		53.0
6 Fl		55.8
1		46.3
BNSF Northbound N		44.7
BNSF Northbound S		46.9
BNSF Southbound		54.1
7 Fl		54.7
1		33.0
BNSF Northbound N		44.7
BNSF Northbound S		41.0
BNSF Southbound		54.0
8 Fl		60.8
1		60.7
BNSF Northbound N		30.9
BNSF Northbound S		33.9
BNSF Southbound		41.0
9 Fl		64.7
1		64.3
BNSF Northbound N		26.8
BNSF Northbound S		52.7
BNSF Southbound		47.3
10 Fl		63.5
1		63.4
BNSF Northbound N		30.2
BNSF Northbound S		38.8
BNSF Southbound		43.1
11 Fl		64.2
1		63.8
BNSF Northbound N		37.1
BNSF Northbound S		51.8
BNSF Southbound		50.1
12 Fl		58.2
1		56.6
BNSF Northbound N		39.5

Contribution Levels of the Receivers

Source name	Lane	Level Lden dB(A)
BNSF Northbound S		48.9
BNSF Southbound		50.6

Spectra of the Receivers

No	Name	Floor	Time	50 H	63 H	80 H	100	125	160	200	250	315	400	500	630	800	1 kH	1 kH	2 kH	2 kH	3 kH	4 kH	5 kH	6 kH	8 kH	10 k
11	11	Fl	Lden	32.5	39.4	43.3	45.7	47.7	49.4	51.5	55.3	54.4	53.5	56.2	54.5	53.3	54.0	48.7	44.5	47.3	45.6	46.9	43.0	37.0	39.0	36.0	31.0
9	9	Fl	Lden	33.0	39.8	43.8	46.3	48.3	49.9	52.0	55.5	54.5	54.0	56.4	55.4	53.0	54.4	49.4	46.3	48.5	46.8	47.2	42.0	39.4	39.0	36.0	32.2
8	8	Fl	Lden	29.5	36.2	40.3	42.7	44.5	46.4	48.5	51.8	51.3	50.4	52.3	51.8	50.0	49.2	45.7	42.3	41.8	43.0	43.9	39.2	34.2	35.5	32.5	28.3
12	12	Fl	Lden	27.5	34.0	38.3	40.5	42.7	43.8	45.4	48.9	47.2	46.2	50.9	47.3	45.3	50.5	39.9	35.0	44.4	36.2	38.3	37.3	30.9	32.4	29.4	24.9
10	10	Fl	Lden	32.0	38.7	42.8	45.2	47.0	48.9	51.0	54.2	53.9	53.0	54.7	54.5	52.8	52.0	48.8	45.0	45.5	46.4	46.4	41.0	38.8	38.0	35.7	31.3
6	6	Fl	Lden	20.3	28.7	30.8	33.0	37.7	35.9	36.9	45.3	36.3	35.4	51.0	36.3	33.9	51.2	27.5	21.5	46.7	23.0	25.3	35.0	20.0	20.0	18.2	12.5
7	7	Fl	Lden	7.3	23.0	18.0	20.3	33.9	23.0	25.2	43.0	22.3	15.9	50.3	18.3	17.0	50.0	6.5	2.7	46.7	2.0	1.4	35.0	-15	-8.2	13.3	-15
5	5	Fl	Lden	10.5	22.5	21.3	23.4	32.2	26.5	28.0	41.4	24.3	19.4	48.4	20.4	19.3	50.7	10.9	7.3	46.3	3.3	3.2	34.0	-9.9	-8.1	11.4	-15
3	3	Fl	Lden	27.0	34.9	38.4	40.8	43.4	44.3	46.3	51.3	48.7	47.0	54.7	48.0	46.5	54.0	40.0	35.5	50.3	36.8	39.0	41.2	31.5	33.0	30.3	25.9
4	4	Fl	Lden	19.4	29.0	30.3	32.5	38.8	36.0	37.9	48.3	39.9	38.0	54.3	39.0	36.3	54.7	27.3	20.7	50.7	22.0	24.8	39.9	18.7	19.3	20.9	11.0
1	1	Fl	Lden	32.2	39.3	43.0	45.4	47.0	49.3	51.2	55.2	54.3	53.2	57.0	54.7	53.0	56.9	49.2	46.3	52.3	46.8	46.5	43.8	39.8	39.3	36.3	31.9
2	2	Fl	Lden	22.5	31.3	33.3	35.7	40.0	39.3	41.3	49.8	43.7	42.0	55.0	43.4	41.0	56.3	34.0	28.3	52.3	29.0	32.0	41.8	26.5	26.0	25.4	19.3

Noise Emissions of Industry Sources

Source name	Reference	Level	Corrections		
		Leq1	Kwall	CI	CT
		dB	dB(A)	dB(A)	dB(A)
1	Unit	86.1	-	-	-
2	Unit	86.1	-	-	-
3	Unit	86.1	-	-	-
4	Unit	86.1	-	-	-
5	Unit	86.1	-	-	-
6	Unit	86.1	-	-	-
7	Unit	86.1	-	-	-
8	Unit	86.1	-	-	-
9	Unit	86.1	-	-	-
10	Unit	86.1	-	-	-
11	Unit	86.1	-	-	-
12	Unit	86.1	-	-	-
13	Unit	86.1	-	-	-
14	Unit	86.1	-	-	-
15	Unit	86.1	-	-	-
16	Unit	86.1	-	-	-
17	Unit	86.1	-	-	-
18	Unit	86.1	-	-	-
19	Unit	86.1	-	-	-
20	Unit	86.1	-	-	-
21	Unit	86.1	-	-	-
22	Unit	86.1	-	-	-
23	Unit	86.1	-	-	-
24	Unit	86.1	-	-	-
25	Unit	86.1	-	-	-
26	Unit	86.1	-	-	-
27	Unit	86.1	-	-	-
28	Unit	86.1	-	-	-
29	Unit	86.1	-	-	-
30	Unit	86.1	-	-	-
31	Unit	86.1	-	-	-
32	Unit	86.1	-	-	-
33	Unit	86.1	-	-	-
34	Unit	86.1	-	-	-
35	Unit	86.1	-	-	-
36	Unit	86.1	-	-	-
37	Unit	86.1	-	-	-
38	Unit	86.1	-	-	-
39	Unit	86.1	-	-	-
40	Unit	86.1	-	-	-
41	Unit	86.1	-	-	-
42	Unit	86.1	-	-	-
43	Unit	86.1	-	-	-
44	Unit	86.1	-	-	-
45	Unit	86.1	-	-	-
46	Unit	86.1	-	-	-
47	Unit	86.1	-	-	-
48	Unit	86.1	-	-	-
49	Unit	86.1	-	-	-
50	Unit	86.1	-	-	-
51	Unit	86.1	-	-	-

Noise Emissions of Parking Lot Traffic

Name	Parking lot type	Low noise trolleys	Size	Moveme per hour Leq1	Road surface	Separated method	Level dB(A)
1	Visitors and staff	-	18 car places	11.000	Asphaltic lanes	no	77.9
2	Visitors and staff	-	5 car places	3.000	Asphaltic lanes	no	70.0
3	Visitors and staff	-	9 car places	5.000	Asphaltic lanes	no	72.5
4	Visitors and staff	-	5 car places	3.000	Asphaltic lanes	no	70.0
5	Visitors and staff	-	10 car places	6.000	Asphaltic lanes	no	73.0
6	Visitors and staff	-	9 car places	5.000	Asphaltic lanes	no	72.5
7	Visitors and staff	-	14 car places	9.000	Asphaltic lanes	no	76.2
8	Visitors and staff	-	70 car places	43.000	Asphaltic lanes	no	85.9
9	Visitors and staff	-	33 car places	20.000	Asphaltic lanes	no	81.6
10	Visitors and staff	-	20 car places	12.000	Asphaltic lanes	no	78.6
11	Visitors and staff	-	12 car places	7.000	Asphaltic lanes	no	75.0
12	Visitors and staff	-	88 car places	54.000	Asphaltic lanes	no	87.2
13	Visitors and staff	-	10 car places	6.000	Asphaltic lanes	no	73.0
14	Visitors and staff	-	3 car places	2.000	Asphaltic lanes	no	67.8
15	Visitors and staff	-	18 car places	11.000	Asphaltic lanes	no	77.9
16	Visitors and staff	-	20 car places	12.000	Asphaltic lanes	no	78.6
17	Visitors and staff	-	48 car places	29.000	Asphaltic lanes	no	83.8
18	Visitors and staff	-	9 car places	5.000	Asphaltic lanes	no	72.5
19	Visitors and staff	-	14 car places	9.000	Asphaltic lanes	no	76.2

Receiver List

No.	Receiver name	Building side	Floor	Limit Leq1 dB(A)	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)	Difference Leq1 dB(A)	Conflict Leq1 dB(A)	Leq2 dB(A)	Leq3 dB(A)	Lmax dB(A)
1	1		Fl	-	46.3	0.0	-46.3	-	-	-	-
2	2		Fl	-	47.6	0.0	-47.6	-	-	-	-
3	3		Fl	-	47.6	0.0	-47.6	-	-	-	-
4	4		Fl	-	47.3	0.0	-47.3	-	-	-	-
5	5		Fl	-	46.7	0.0	-46.7	-	-	-	-
6	6		Fl	-	45.1	0.0	-45.1	-	-	-	-
7	7		Fl	-	43.4	0.0	-43.4	-	-	-	-
8	8		Fl	-	48.9	0.0	-48.9	-	-	-	-

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
1 Fl	46.3 0.0	
1	35.5	0.0
1	28.9	0.0
2	17.8	0.0
2	29.0	0.0
3	21.5	0.0
3	27.2	0.0
4	27.1	0.0
4	17.1	0.0
5	26.6	0.0
5	18.7	0.0
6	26.6	0.0
6	16.5	0.0
7	26.1	0.0
7	23.0	0.0
8	26.0	0.0
8	26.0	0.0
9	25.7	0.0
9	21.5	0.0
10	25.6	0.0
10	16.6	0.0
11	9.4	0.0
11	25.1	0.0
12	24.6	0.0
12	38.6	0.0
13	25.2	0.0
13	7.7	0.0
14	24.5	0.0
14	-2.3	0.0
15	25.2	0.0
15	20.7	0.0
16	24.9	0.0
16	29.6	0.0
17	23.8	0.0
17	42.0	0.0
18	26.0	0.0
18	23.2	0.0
19	23.1	0.0
19	31.9	0.0
20	22.9	0.0
21	22.5	0.0
22	22.3	0.0
23	22.2	0.0
24	22.0	0.0
25	21.6	0.0
26	21.9	0.0
27	23.8	0.0
28	19.1	0.0
29	18.4	0.0
30	23.1	0.0
31	19.0	0.0
32	22.3	0.0
33	19.4	0.0
34	21.7	0.0
35	19.6	0.0
36	21.2	0.0
37	21.1	0.0
38	19.6	0.0
39	20.9	0.0
40	21.1	0.0
41	20.7	0.0
42	21.2	0.0
43	20.7	0.0
44	20.8	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
45	19.9	0.0
46	20.5	0.0
47	19.6	0.0
48	20.2	0.0
49	20.5	0.0
50	21.7	0.0
51	21.8	0.0
2 Fl	47.6	0.0
1	37.8	0.0
1	31.9	0.0
2	21.3	0.0
2	32.4	0.0
3	25.4	0.0
3	30.0	0.0
4	29.6	0.0
4	20.0	0.0
5	29.3	0.0
5	21.2	0.0
6	28.9	0.0
6	18.8	0.0
7	28.6	0.0
7	25.4	0.0
8	28.2	0.0
8	27.3	0.0
9	28.1	0.0
9	21.4	0.0
10	27.8	0.0
10	20.4	0.0
11	12.4	0.0
11	29.7	0.0
12	29.0	0.0
12	35.1	0.0
13	28.0	0.0
13	10.6	0.0
14	26.8	0.0
14	2.0	0.0
15	28.1	0.0
15	17.0	0.0
16	27.8	0.0
16	28.4	0.0
17	26.4	0.0
17	43.2	0.0
18	28.6	0.0
18	25.3	0.0
19	26.0	0.0
19	34.6	0.0
20	25.0	0.0
21	24.7	0.0
22	24.5	0.0
23	24.2	0.0
24	24.0	0.0
25	23.5	0.0
26	23.7	0.0
27	25.9	0.0
28	25.8	0.0
29	20.6	0.0
30	24.9	0.0
31	24.3	0.0
32	24.0	0.0
33	23.8	0.0
34	22.0	0.0
35	23.1	0.0
36	21.4	0.0
37	22.9	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
38	22.6	0.0
39	22.5	0.0
40	22.6	0.0
41	22.1	0.0
42	22.2	0.0
43	21.7	0.0
44	21.9	0.0
45	21.5	0.0
46	21.7	0.0
47	21.0	0.0
48	21.4	0.0
49	24.8	0.0
50	23.9	0.0
51	23.2	0.0
3 Fl	47.6	0.0
1	35.8	0.0
1	31.4	0.0
2	23.5	0.0
2	33.0	0.0
3	27.0	0.0
3	32.8	0.0
4	29.7	0.0
4	23.0	0.0
5	31.3	0.0
5	24.5	0.0
6	29.3	0.0
6	21.4	0.0
7	32.1	0.0
7	28.1	0.0
8	28.9	0.0
8	28.3	0.0
9	30.3	0.0
9	17.4	0.0
10	28.5	0.0
10	17.9	0.0
11	9.5	0.0
11	28.6	0.0
12	30.3	0.0
12	37.1	0.0
13	31.9	0.0
13	8.4	0.0
14	30.4	0.0
14	-0.9	0.0
15	32.1	0.0
15	23.2	0.0
16	32.0	0.0
16	26.4	0.0
17	28.4	0.0
17	41.0	0.0
18	27.4	0.0
18	27.9	0.0
19	27.8	0.0
19	32.3	0.0
20	27.6	0.0
21	27.1	0.0
22	26.9	0.0
23	27.2	0.0
24	26.1	0.0
25	25.3	0.0
26	25.8	0.0
27	19.9	0.0
28	27.0	0.0
29	26.5	0.0
30	19.2	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
31	25.5	0.0
32	19.7	0.0
33	22.3	0.0
34	19.8	0.0
35	19.9	0.0
36	19.9	0.0
37	20.0	0.0
38	20.0	0.0
39	24.0	0.0
40	24.0	0.0
41	23.5	0.0
42	23.5	0.0
43	22.9	0.0
44	23.0	0.0
45	22.5	0.0
46	22.5	0.0
47	22.1	0.0
48	22.1	0.0
49	22.1	0.0
50	20.0	0.0
51	20.1	0.0
4 Fl	47.3	0.0
1	32.3	0.0
1	28.0	0.0
2	22.6	0.0
2	31.0	0.0
3	26.4	0.0
3	31.1	0.0
4	29.5	0.0
4	22.9	0.0
5	31.1	0.0
5	27.0	0.0
6	29.5	0.0
6	24.0	0.0
7	31.1	0.0
7	30.4	0.0
8	29.5	0.0
8	37.4	0.0
9	31.1	0.0
9	20.0	0.0
10	27.4	0.0
10	18.7	0.0
11	16.7	0.0
11	28.3	0.0
12	29.0	0.0
12	38.5	0.0
13	29.9	0.0
13	9.4	0.0
14	29.6	0.0
14	5.5	0.0
15	32.0	0.0
15	20.8	0.0
16	32.4	0.0
16	26.1	0.0
17	29.9	0.0
17	38.0	0.0
18	24.0	0.0
18	31.9	0.0
19	29.6	0.0
19	29.7	0.0
20	29.1	0.0
21	28.7	0.0
22	28.0	0.0
23	27.5	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
24	27.0	0.0
25	27.7	0.0
26	26.5	0.0
27	18.0	0.0
28	18.9	0.0
29	21.9	0.0
30	19.1	0.0
31	19.4	0.0
32	19.6	0.0
33	19.4	0.0
34	20.8	0.0
35	19.7	0.0
36	24.4	0.0
37	20.8	0.0
38	19.5	0.0
39	24.8	0.0
40	25.4	0.0
41	24.2	0.0
42	25.1	0.0
43	23.6	0.0
44	23.7	0.0
45	23.2	0.0
46	23.1	0.0
47	22.7	0.0
48	22.7	0.0
49	19.3	0.0
50	19.6	0.0
51	19.7	0.0
5 Fl	46.7	0.0
1	29.2	0.0
1	25.4	0.0
2	19.2	0.0
2	26.5	0.0
3	23.6	0.0
3	26.5	0.0
4	25.4	0.0
4	19.4	0.0
5	26.5	0.0
5	27.7	0.0
6	25.3	0.0
6	24.9	0.0
7	26.5	0.0
7	30.9	0.0
8	25.3	0.0
8	41.8	0.0
9	28.7	0.0
9	30.9	0.0
10	27.7	0.0
10	14.4	0.0
11	7.3	0.0
11	26.5	0.0
12	27.1	0.0
12	35.4	0.0
13	27.3	0.0
13	8.2	0.0
14	27.8	0.0
14	-4.5	0.0
15	29.1	0.0
15	13.8	0.0
16	30.0	0.0
16	24.8	0.0
17	29.0	0.0
17	35.7	0.0
18	20.8	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
18	29.2	0.0
19	28.4	0.0
19	26.4	0.0
20	28.8	0.0
21	27.4	0.0
22	27.6	0.0
23	26.5	0.0
24	27.0	0.0
25	27.5	0.0
26	27.4	0.0
27	17.9	0.0
28	18.4	0.0
29	18.5	0.0
30	23.8	0.0
31	19.9	0.0
32	24.9	0.0
33	23.8	0.0
34	21.3	0.0
35	23.4	0.0
36	17.3	0.0
37	18.5	0.0
38	21.0	0.0
39	25.1	0.0
40	24.3	0.0
41	24.5	0.0
42	23.9	0.0
43	23.4	0.0
44	23.2	0.0
45	23.0	0.0
46	22.7	0.0
47	22.7	0.0
48	22.3	0.0
49	20.8	0.0
50	24.4	0.0
51	24.0	0.0
6 Fl	45.1	0.0
1	26.3	0.0
1	23.0	0.0
2	16.2	0.0
2	23.5	0.0
3	19.7	0.0
3	23.6	0.0
4	23.0	0.0
4	16.0	0.0
5	23.6	0.0
5	25.5	0.0
6	23.0	0.0
6	23.6	0.0
7	23.7	0.0
7	29.3	0.0
8	23.1	0.0
8	41.1	0.0
9	23.7	0.0
9	30.1	0.0
10	23.1	0.0
10	18.3	0.0
11	7.1	0.0
11	24.0	0.0
12	24.6	0.0
12	33.8	0.0
13	24.6	0.0
13	7.9	0.0
14	25.0	0.0
14	-5.8	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
15	25.9	0.0
15	11.6	0.0
16	26.7	0.0
16	22.1	0.0
17	26.5	0.0
17	33.2	0.0
18	17.9	0.0
18	27.2	0.0
19	26.3	0.0
19	23.6	0.0
20	26.5	0.0
21	25.5	0.0
22	25.9	0.0
23	25.0	0.0
24	25.6	0.0
25	24.7	0.0
26	26.1	0.0
27	23.5	0.0
28	21.4	0.0
29	20.8	0.0
30	19.8	0.0
31	22.1	0.0
32	17.5	0.0
33	18.7	0.0
34	16.6	0.0
35	17.7	0.0
36	15.9	0.0
37	16.9	0.0
38	17.8	0.0
39	23.8	0.0
40	23.0	0.0
41	22.6	0.0
42	22.5	0.0
43	22.5	0.0
44	22.1	0.0
45	22.4	0.0
46	21.8	0.0
47	21.6	0.0
48	21.5	0.0
49	20.9	0.0
50	18.5	0.0
51	17.3	0.0
7 Fl	43.4	0.0
1	24.4	0.0
1	21.3	0.0
2	13.2	0.0
2	21.6	0.0
3	17.5	0.0
3	21.7	0.0
4	21.3	0.0
4	13.6	0.0
5	21.7	0.0
5	22.7	0.0
6	21.4	0.0
6	21.2	0.0
7	21.7	0.0
7	26.9	0.0
8	21.4	0.0
8	39.5	0.0
9	21.7	0.0
9	28.8	0.0
10	21.4	0.0
10	20.2	0.0
11	6.2	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
11	22.5	0.0
12	23.0	0.0
12	33.1	0.0
13	22.6	0.0
13	6.9	0.0
14	23.0	0.0
14	-7.3	0.0
15	23.4	0.0
15	10.3	0.0
16	24.2	0.0
16	20.0	0.0
17	24.4	0.0
17	31.3	0.0
18	15.9	0.0
18	25.2	0.0
19	23.8	0.0
19	21.7	0.0
20	24.7	0.0
21	23.3	0.0
22	24.2	0.0
23	23.0	0.0
24	23.7	0.0
25	23.2	0.0
26	22.4	0.0
27	21.6	0.0
28	21.2	0.0
29	20.8	0.0
30	18.3	0.0
31	19.1	0.0
32	16.6	0.0
33	18.2	0.0
34	16.5	0.0
35	17.7	0.0
36	15.0	0.0
37	16.4	0.0
38	17.4	0.0
39	22.1	0.0
40	21.9	0.0
41	21.4	0.0
42	21.1	0.0
43	21.2	0.0
44	21.2	0.0
45	21.0	0.0
46	20.3	0.0
47	20.5	0.0
48	20.0	0.0
49	18.7	0.0
50	17.4	0.0
51	17.2	0.0
8 Fl	48.9	0.0
1	18.4	0.0
1	18.3	0.0
2	4.3	0.0
2	18.1	0.0
3	8.4	0.0
3	18.4	0.0
4	18.6	0.0
4	-5.3	0.0
5	18.8	0.0
5	15.4	0.0
6	18.9	0.0
6	14.7	0.0
7	19.3	0.0
7	21.1	0.0

Contribution Levels of the Receivers

Source name	Level w/o NP Leq1 dB(A)	Level w. NP Leq1 dB(A)
8	19.4	0.0
8	43.6	0.0
9	19.6	0.0
9	37.9	0.0
10	19.6	0.0
10	32.2	0.0
11	25.5	0.0
11	20.2	0.0
12	20.2	0.0
12	45.5	0.0
13	20.0	0.0
13	20.9	0.0
14	19.7	0.0
14	12.2	0.0
15	19.7	0.0
15	25.3	0.0
16	19.2	0.0
16	23.4	0.0
17	19.9	0.0
17	32.2	0.0
18	6.1	0.0
18	20.2	0.0
19	20.1	0.0
19	18.1	0.0
20	20.5	0.0
21	20.4	0.0
22	20.4	0.0
23	21.2	0.0
24	20.9	0.0
25	21.9	0.0
26	21.5	0.0
27	20.5	0.0
28	20.6	0.0
29	20.7	0.0
30	21.0	0.0
31	21.3	0.0
32	21.6	0.0
33	21.8	0.0
34	22.3	0.0
35	22.6	0.0
36	22.9	0.0
37	23.0	0.0
38	23.1	0.0
39	23.3	0.0
40	22.6	0.0
41	23.5	0.0
42	23.0	0.0
43	24.2	0.0
44	23.5	0.0
45	24.0	0.0
46	24.4	0.0
47	25.4	0.0
48	24.9	0.0
49	21.1	0.0
50	21.7	0.0
51	22.5	0.0

Appendix F
Figure 1

Rail Calibration (CNEL)

Rail noise in the SoundPLAN noise model was calibrated using SoundPLAN noise reference levels and frequency spectrum to match measured 24 hour noise levels that were converted to CNEL.

Signs and symbols

Receiver

Rail Line

Noise Levels

1 : 600

0 125 250 500 750 1000 feet