APPENDIX U

Noise and Vibration Studies

This appendix includes noise and vibration analyses specific to the National Environmental Policy Act (NEPA) and related Environmental Assessment. The appendix also includes noise and vibration analyses prepared for the Environmental Impact Report (EIR) as part of the California Environmental Quality Act. For example, the construction noise analysis prepared for the EIR also applies to the proposed Project.

Noise and Vibration Updated Analysis

Technical Memorandum

To:	Sam Silverman, Senior Associate Terry A. Hayes Associates Inc. (TAHA) 3535 Hayden Avenue, Suite 350 Culver City, CA 90232
From:	Jonathan Higginson, INCE-USA Senior Manager, Noise
Date:	January 11, 2022
Re:	**NEPA Noise and Vibration Assessment of Inglewood Transit Connector Project**

1. Introduction

The purpose of this memorandum is to evaluate the potential noise and vibration impacts associated with construction and operation of the Inglewood Transit Connector (ITC) Project (proposed Project), consistent with the requirements of the National Environmental Policy Act (NEPA). The analysis provided in this memorandum is based on data from the proposed Project's Draft Environmental Impact Report (DEIR) (City of Inglewood, 2021), which was prepared to meet the requirements of the California Environmental Quality Act (CEQA). Data from the DEIR has been converted or interpreted as necessary to best meet the requirements of NEPA. However, no new noise or vibration modeling has been conducted. The assessment provided in this memorandum is based primarily on the guidance provided in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). The DEIR contains extensive information about the project description, fundamentals of noise and vibration, and the methods of analysis. Therefore, this memorandum does not repeat all that information but summarizes key information, as necessary.

2. Project Description

The City proposes the Inglewood Transit Connector Project (ITC or proposed Project) to extend service from the Metro K (Crenshaw/LASX) Line to the City's activity centers. The ITC is a 1.6-mile, three station, fully elevated, electrically powered Automated Transit System (ATS system) that will connect directly to the Metro K Line Downtown Inglewood Station. The City proposes the ITC Project to address projected future congestion, improve overall mobility and levels of service, and advance its sustainability goals. Providing transit access to the City's activity centers would advance local and regional goals to increase transportation choice, significantly reduce greenhouse gas (GHG) emissions, improve air quality and human health, reduce per-capita vehicle miles traveled (VMT), reduce the growth of congestion on local and regional roads, and encourage sustainable development patterns.

As currently proposed, the ATS system will have three stations including: Market Street/Florence Avenue Station, Prairie Avenue/Manchester Boulevard Station, and Prairie Avenue/Hardy Street Station. Station design capacity would be established by pedestrian demand volumes under typical peak conditions, in addition to increased demand during special events, service disruptions, and emergency evacuation situations. Stations would provide pedestrian access to the elevated ATS from existing sidewalk and pedestrian travel areas adjacent to the station locations. Final station locations and configurations will be determined during the design and procurement process.

Existing infrastructure along the Project alignment may need to be relocated or reconfigured to accommodate new elevated transit guideway structures and stations. In addition to surface improvements, utility infrastructure under the roadway surface may need to be relocated to accommodate the guideway columns, footings, and other components.

The proposed Project is in the central and northern portions of the City of Inglewood east of the San Diego Freeway (I-405) and north of the Glen Anderson Freeway (I-105) in Los Angeles County, California. The ITC will be constructed in an area generally bounded by the Metro K Line to the north; Hardy Street to the south; the NFL stadium and the Forum to the east; and La Brea Avenue to the west. The Project extends from the Metro K Line Downtown Inglewood station southwest to the intersection of Market Street and Regent Street, continues south on Market Street, east on Manchester Boulevard, and south on Prairie Avenue to Hardy Street. The ATS will be largely located within the public rights-of-way for the streets and sidewalk areas along Market Street, Manchester Boulevard, and the west side of Prairie Avenue (See Figure ES-4: Location of Alternative Alignments in the LPA Report). The entire Project is situated within the City of Inglewood, an incorporated city within Los Angeles County.

Project Characteristics

The proposed Project includes the following components:

- ATS trains operating on an elevated dual-lane guideway with three stations;
- ATS guideway along Prairie Avenue to be constructed on the west side of Prairie Avenue;
- No more than three straddle bents north of Pincay Street along Prairie Avenue immediately south of the Prairie Avenue/Manchester Boulevard Station;
- Passenger walkway systems connecting the stations to the street, mezzanine areas, escalators, and elevators;
- Storage space, operations space, communications systems located within stations;
- Wayfinding signage and amenities;
- A Maintenance and Storage Facility (MSF) to provide regular and preventive maintenance of the ATS trains and equipment, as well as space for storage of the vehicle fleet and the operations control center, among other functions;
- Power Distribution System (PDS) substations located on the MSF and the Prairie Avenue/Hardy Street station sites to provide traction/propulsion power, auxiliary power, and housekeeping power;
- Utilities infrastructure—new, modified and/or relocated—to support the proposed Project;

- Surface public parking lots located at Market Street/Florence Avenue and Prairie Avenue/Hardy Street stations containing multimodal pick-up and drop-off areas, and at 150 S. Market Street to support Downtown Inglewood; and
- Roadway, traffic devices, and streetscape modifications and improvements to accommodate the guideway alignment and support structures.
- Land acquisitions, acquisitions of air rights, easements and encroachment rights, subdivision of parcels, and/or other reconfigurations of parcels, dedications, vacations and/or temporary closures of public rights-of-way, as necessary.

ATS Train Options

The ATS technology may be a self-propelled technology, also known as automated light rail transit (ALRT) or a cable-propelled ATS system. The system will be fully automated (i.e., driverless) to operate at the headways to meet the projected peak ridership needs. The vehicles are smaller than traditional heavy rail technology and can maneuver the tight curves required for the site-specific conditions. This type of technology is often also referred to as automated guideway transit (AGT), automated people mover (APM), or simply monorail; regardless of the terminology used in the industry, it is a form of a light rail technology without an overhead catenary.

The City is considering four transit technologies for the proposed Project, each of which are considered in this memorandum. They include self-propelled rubber-tired APM, monorail, steel-wheeled ALRT, and cable-propelled APM.

Construction Commitment Program

As part of the Project, the City of Inglewood has developed a Construction Commitment Program (CCP) to pro-actively address the effects of the construction of the ATS project on the community. Elements of the CCP that may help to reduce project noise levels, or the associated nuisance effects of those noise levels, include:

- A Construction Staging and Traffic Control Plan that will address the following topics: review worksite traffic control plans and other traffic management plans developed by the Project contractor(s) for the Project to ensure these plans address:
    - Coordination with other public infrastructure projects within the City's boundaries
    - Detour routes, including analysis of impacts to pedestrian, business, bicycle, and traffic flow
    - Coordination of closures and restricted access during the construction period with special attention during periods of expected heavy traffic from events scheduled at SoFi Stadium and other venues in the Los Angeles Sports and Entertainment District at Hollywood Park, the Forum, and the Inglewood Basketball and Entertainment Center.
    - Coordination with the City, police, and fire services department regarding maintenance of emergency access and response times
    - Monitoring and coordination of construction materials deliveries

    - Notification to businesses and residents on upcoming construction activities including but not limited to the establishment of a website with project construction information, signage, and web-based media.

- All haul routes and activities will need to be reviewed and approved with truck deliveries of bulk materials and hauling of soil scheduled during off-peak hours to the extent feasible and on designated routes including freeways and nonresidential streets.
- Parking, staging, or queuing of Project-related vehicles, including workers' vehicles, trucks, and heavy vehicles, shall be prohibited on City streets at all times except in defined workspace areas defined in the Construction Staging and Traffic Control Program.

The Program also includes noise reduction measures, which have been incorporated into the project as Project Design Features. These measures require the use of construction equipment that generates the least amount of noise, use of temporary noise barriers, and restrictions on the use of heavy equipment that create vibration near sensitive uses and buildings. Contact information for a Community Affairs Liaison will be posted throughout the construction area. This liaison shall respond to any noise complaints within 24 hours.

Project Design Features

The proposed Project also includes three project design features, which are also part of the Construction Commitment Program, that would be included as part of the proposed Project to reduce noise and vibration impacts from project construction and operation:

PDF-NOISE-1 Construction Noise Control Plan

A Construction Noise Control Plan shall be developed in coordination with a certified acoustical/vibration consultant and shall be approved by the City's Director of Public Works prior to construction. The Plan shall include measures demonstrating that construction noise levels will be below FTA's General Assessment Construction Noise Criteria. The following construction noise reduction measures shall be incorporated into the Plan:

- Install temporary noise barriers that reduce sound at receptors;
- For any idling that is expected to take longer than five minutes, the engine shall be shut off;
- All equipment shall be equipped with optimal muffler systems;
- Use solar, battery powered, or hybrid equipment whenever practical;
- Locate staging areas as far away from sensitive receptors as feasible;
- Locate stationary noise sources as far away from sensitive receptors as feasible;
- Enclose stationary noise sources, such as diesel-or gasoline-powered generators, with acoustical barriers where necessary and required;
    - If stationary equipment cannot be enclosed within a shed or barrier, such equipment must be muffled and located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.
- Pole power shall be utilized to the maximum extent feasible in lieu of generators.

- Impact tools (i.e., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust and external jackets shall be used where feasible to lower noise levels. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. Additionally, use of "quiet" pile driving technology (such as auger displacement installation), where feasible in consideration of geotechnical and structural requirements and conditions shall be considered.
- Coordinate with the Inglewood Unified School District administrators to avoid disruptive noise during school hours.

In order to ensure that construction noise levels will be below the established standards, the following shall be incorporated into the Plan:

- A monitoring plan shall be implemented during demolition and construction activities. Warning thresholds shall be defined that are 5 dBA below the specified noise limits to allow sufficient time for the Contractor to take actions to reduce noise. A monitoring record that documents all alarms and actions taken to comply with these measures shall be provided to the City upon request.
- In the event the warning level (dBA) is exceeded, construction activities shall be temporarily halted in the vicinity of the area where the exceedance occurs. The source of the noise exceeding the warning level shall be identified followed by actions to be implemented to reduce noise levels below the established standards. Noise measurements shall be gathered after actions are taken to verify noise levels are below the warning level before construction activities restart. The following are examples of actions that can be taken to reduce construction noise levels:
    - Halting/staggering concurrent construction activities in certain locations;
    - Reducing the speed or intensity of the heavy-duty construction equipment being operated simultaneously;
    - Operating equipment at the lowest possible power levels;
    - Modifying equipment, such as dampening of metal surfaces or other redesign to minimize metal-to-metal impacts.

PDF NOISE-2 Construction Vibration Reduction Plan

Prior to the issuance of any demolition or construction permit for each phase of the Project, a Construction Vibration Reduction Plan shall be prepared to minimize construction vibration at nearby sensitive receptors from vibration created by construction activities. The Plan shall be developed in coordination with a certified acoustical/vibration consultant and shall be approved by the City's Director of Public Works. The Plan shall include but not be limited to the following elements to ensure impacts from groundborne vibration are less than significant:

- A Pre-Demolition and Construction Plan that includes but is not limited to:
    - Photos of current conditions of buildings and structures that could be damaged from construction activities. This crack survey shall include photos of existing cracks and other material conditions present on or at the surveyed buildings. Images of interior conditions shall be included if possible. Photos in the report shall be labelled in detail and dated.

- Identify representative cracks in the walls of existing buildings, if any, and install crack gauges on such walls of the buildings to measure changes in existing cracks during project activities.
- Crack gauges shall be installed on multiple representative cracks, particularly on sides of the building facing the Project.
- Determine the number and placement of vibration sensors at the affected buildings in consultation with a qualified architect. The number of units and the locations of these sensors shall take into account proposed demolition and construction activities to ensure that adequate measurements can be taken illustrating vibration levels during the course of the Project, and if/when levels exceed the established threshold.
- A line and grade pre-construction survey at the affected buildings shall be conducted.

- A Vibration Plan During Demolition and Construction that includes the following:
  - Regularly inspect and photograph crack gauges, maintaining records of these inspections to be included in postconstruction reporting. Gauges shall be inspected every two weeks, or more frequently during periods of active project actions in close proximity to crack monitors.
  - The vibration monitoring system shall measure and continuously store the peak particle velocity (PPV) in inches/second. Vibration data shall be stored on a one-second interval. The system shall also be programmed for two preset velocity levels: a regulatory level that represents when PPV levels would exceed the FTA's threshold of significance for a building given its conditions, and a warning level that is 0.05 inch/second (PPV) less than the regulatory level. The system shall also provide real-time alert when the vibration levels exceed either of the two preset levels.
  - In the event the warning level (PPV) is triggered, the contractor shall identify the source of vibration impacts and establish steps to reduce the vibration levels, including but not limited to halting or staggering concurrent activities and using lower vibratory techniques.
  - In the event the regulatory level (PPV) is triggered, halt the construction activities in the vicinity of the trigger area and visually inspect the building for any damage. Results of the inspection must be logged. Identify the source of vibration generation and provide steps to reduce the vibration level. Vibration measurement shall be made with the new construction method to verify that the vibration level is below the warning level (PPV). Construction activities may then restart.
  - In the event work occurs in the proximity of identified historic uses, the system shall be programmed for two preset velocity levels: a regulatory level that represents when PPV levels would exceed the FTA threshold of significance 0.12 inch/second for a building given its conditions, and a warning level that is 0.012 inch/second (PPV) less than the regulatory level.
  - Collect vibration data from receptors and report vibration levels to the City Chief Building Official on a daily basis. The reports shall include annotations regarding project activities as necessary to explain changes in vibration levels.

- Post-Construction Reporting and Repairs:

- Provide a report to the City Chief Building Official regarding crack and vibration monitoring conducted during demolition and construction. In addition to a narrative summary of the monitoring activities and their findings, this report shall include photographs illustrating the postconstruction state of cracks and material conditions that were presented in the pre-construction assessment report, along with images of other relevant conditions showing the impact, or lack of impact, of project activities. The photographs shall sufficiently illustrate damage, if any, caused by the Project and/or show how the Project did not cause physical damage to the buildings. The report shall include analysis of vibration data related to project activities, as well as summarize efforts undertaken to avoid vibration impacts. Finally, a postconstruction line and grade survey shall also be included in this report.
- Perform repairs to buildings if damage is caused by vibration or movement during the demolition and/or construction activities. Repairs may be necessary to address, for example, cracks that expanded as a result of the Project, physical damage visible in post-construction assessment, or holes or connection points that were needed for shoring or stabilization. Repairs shall be directly related to project impacts and will not apply to general rehabilitation or restoration activities of the buildings.

- To minimize the risk of potential structural and building damage:
  - Limit the location of pile driving and vibratory roller activity to not be within 55 feet and 30 feet of the nearest off-site sensitive receptor, respectively.
  - Limit the number of jackhammers operating simultaneously to one (1) piece operating within 45 feet of off-site sensitive receptors.
  - In the event impact pile driving is required, equipment shall only be used from the hours of 7:00 AM to 7:00 PM. If feasible, pile driving should use alternative technology such as vibration or hydraulic insertion.
- To minimize the risk of related to human annoyance:
  - Limit the location of pile driving to 310 feet of off-site vibration sensitive receptors.
  - Limit the location of vibratory roller to 150 feet of off-site vibration sensitive receptors.
  - Limit the location of large bulldozer to 85 feet of off-site vibration sensitive receptors.
  - Limit the location of caisson drilling to 85 feet of off-site vibration sensitive receptors.
  - Limit the location of loaded trucks to 75 feet of off-site vibration sensitive receptors.
  - Limit the location of jackhammers to 45 feet of off-site vibration sensitive receptors.
  - Limit the location of small bulldozer to 25 feet of off-site vibration sensitive receptors.

PDF NOISE-3 Operational

The exterior noise level generated by the ATS train, inclusive of all contributing noise sources, shall not exceed the levels specified in Section 2.2.1, Exterior Airborne Noise, ASCE 21-05 (American Society of Civil Engineers, Automated People Mover Standards - Part 2 Section 2.2.1, Exterior Airborne Noise, ASCE 21-05.).

The design of any barriers along the guideway designed to reduce noise shall be subject to the limits noted in Table [2-1 below].

Table 2-1. Exterior ATS Train Noise Limits

Condition	Maximum dBA Level	Measurement Location
Maximum length train entering and leaving station	76 (slow response)	In the station, 5 feet from the platform edge and 5 feet above the station floor.
Maximum length train stopped in station	74 (slow response)	In the station, 5 feet from the platform edge and 5 feet above the station floor, with vehicle doors and platform doors fully open.
Maximum length train traveling along the entire guideway under any normal velocity, acceleration, and deceleration operating condition	76 (fast response)	At any point on a cylindrical envelope co-axial with, and50 feet from, the centerline of each guideway lane (track), whichever is closer.
Maximum length train traveling at 10 mph	74 (fast response)	At any point on a cylindrical envelope co-axial with, and 50 feet from, the centerline of each guideway lane (track).

Source: American Society of Civil Engineers, Automated People Mover Standards - Part 2 Section 2.2.1, Exterior Airborne Noise, ASCE 21-0.

3. Noise Fundamentals

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is unwanted, disturbing, or annoying.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor. Noise levels are measured using a variety of scientific metrics. The following sections provide an explanation of key concepts and acoustical terms used in the analysis of environmental and community noise.

Frequency, Amplitude, and Decibels

Continuous sound can be described by *frequency* (pitch) and *amplitude* (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz]) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. The amplitude of a sound is typically described in terms of *sound pressure level*, which refers to the root-mean-square pressure of a sound wave and can be measured in units called microPascals (µPa). One µPa is approximately one hundred-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure levels for different kinds of noise environments can range from less than 100 to over 100,000,000 µPa. Because of this large range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe the sound pressure level (also referred

to simply as the sound level) in terms of decibels, abbreviated dB. Specifically, the decibel describes the ratio of the actual sound pressure to a reference pressure and is calculated as follows:

$$SPL = 20 \times \log_{10}\left(\frac{X}{20\mu Pa}\right)$$

where *X* is the actual sound pressure, and 20 µPa is the standard reference pressure level for acoustical measurements in air. The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

Decibel Addition

Because decibels are logarithmic, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one excavator produces a sound pressure level of 80 dB, two excavators would not produce 160 dB. Rather, they would combine to produce 83 dB. The cumulative sound level of any number of sources can be determined using decibel addition. The same decibel addition is used for A-weighted decibels described below.

Perception of Noise and A-Weighting

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 5,000 Hz and perceive sounds within that range better than sounds of the same amplitude at higher or lower frequencies. To approximate the response of the human ear, sound levels in various frequency bands are adjusted (or "weighted"), depending on human sensitivity to those frequencies. The resulting sound pressure level is expressed in A-weighted decibels, abbreviated dBA. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted sound levels of those sounds.

Noise Descriptors

Because sound levels can vary markedly over a short period of time, various descriptors or noise "metrics" have been developed to quantify environmental and community noise. These metrics generally describe either the average character of the noise or the statistical behavior of the variations in the noise level. The metrics used in this study are described below.

Equivalent Sound Level (L_{eq}) is the most common metric used to describe short-term average noise levels. Many noise sources produce levels that fluctuate over time; examples include mechanical equipment that cycles on and off or construction work, which can vary sporadically. The L_{eq} describes the average acoustical energy content of noise for an identified period. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same

acoustical energy over the same duration. The duration of an L_{eq} may be indicated in parentheses, such as $L_{eq(1hr)}$ or $L_{eq(24hr)}$, which denote the 1-hour L_{eq} and 24-hour L_{eq}, respectively.

Maximum Sound Level (L_{max}) and **Minimum Sound Level (L_{min})** refer to the maximum and minimum sound levels, respectively, that occur during the noise measurement period. More specifically, they describe the root-mean-square sound levels that correspond to the loudest and quietest 1-second intervals (when measured on a sound level meter with "slow" time-weighting) or 0.125-second intervals (when measured on a sound level meter with "fast" time-weighting) that occur during the measurement.

Day-Night Sound Level (L_{dn}) is a measure of the cumulative 24-hour noise level that considers not only the variation of the A-weighted noise level but also the duration and the time of day of the disturbance. The L_{dn} is derived from the 24 A-weighted 1-hour L_{eq}s that occur in a day, with a 10-dB "penalty" applied to the level occurring during the nighttime hours (10 p.m. to 7 a.m.) to account for increased noise sensitivity during these hours. Specifically, the L_{dn} is calculated by adding 10 dBA to each hourly L_{eq} between 10 p.m. to 7 a.m., and then taking the energy-average value for all 24 hours. L_{dn} can also be written as DNL.

Groundborne Vibration and Groundborne Noise

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of *velocity* or *acceleration*. The velocity describes the instantaneous speed of the motion, and acceleration is the instantaneous rate of change of the speed. Each of these measures can be further described in terms of *frequency* and *amplitude*.

In contrast to airborne sound, groundborne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually much lower than the threshold of human perception. Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment (such as blasting and pile driving), railroad operations, and heavy trucks on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. Groundborne vibration can be a serious concern for neighbors of nearby sources, causing buildings to shake and rumbling sounds to be heard. If a person is engaged in any type of physical activity, vibration tolerance increases considerably. Vibration can result in effects that range from annoyance to structural damage. Variations in geology and distance result in different vibration levels with different frequencies and amplitudes.

Groundborne noise refers to the noise generated by groundborne vibration. More specifically, groundborne noise is the low-frequency rumbling noise emanating from the motion of building room surfaces due to the vibration of floors and walls; it is perceptible only inside buildings. The relationship between groundborne vibration and groundborne noise depends on the frequency content of the vibration and the acoustical absorption characteristics of the receiving room.

Vibration Descriptors

As noted above, there are various ways to quantify groundborne vibration based on its fundamental characteristics. Because vibration can vary markedly over a short period of time, various descriptors have been developed to quantify vibration. The two most common descriptors used in the analysis

of groundborne vibration are vibration velocity level and peak particle velocity, each of which are described below:

- **Peak particle velocity (PPV)** is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s). Unlike many quantities used in the study of environmental acoustics, PPV is typically presented using linear values and does not employ a dB scale. Because it is related to the stresses that are experienced by buildings, PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage.
- **Vibration Velocity Level (L_v)** describes the rms vibration velocity. Due to the typically small amplitudes of groundborne vibrations, vibration velocity is often expressed in decibels, calculated as follows.

$$L_V = 20 \times \log_{10}\left(\frac{V}{V_{ref}}\right)$$

where V is the actual rms velocity amplitude and V_{ref} is the reference velocity amplitude. It is important to note that there is no universally accepted value for V_{ref}, but the accepted reference quantity for vibration velocity in the U.S. is 1 micro-inch per second (1×10^{-6} in/s). The abbreviation VdB is commonly used for vibration decibels to distinguish from noise level decibels. For rail and other transit projects, L_V is typically used to evaluate human response to vibration levels.

4. Applicable Regulations

For transportation projects, the applicable noise criteria under NEPA depend on the details of the project. Transit-only projects are evaluated using FTA criteria and highway projects are evaluated using FHWA criteria. Multi-modal projects may require analysis using FTA criteria, FHWA criteria, or both, depending on the project details and the dominant noise source(s).

The proposed Project is primarily a transit project, with transit-related noise sources being added along existing roadways that are already part of the ambient noise environment. The ITC project does not propose any changes to freeways and would not add traffic capacity along any other roadways. While the project may require some restriping of existing roadways, it would not be a Type I or Type II project, as defined by FHWA (Title 23, Part 772, Code of Federal Regulations) and Caltrans (Caltrans, 2020), that would require a traffic noise analysis.

The analysis of traffic noise provided in the EIR indicates that the proposed Project would slightly decrease roadway noise levels, relative to without-Project conditions, due to removal and redistribution of trips because of the Project.

As a result of the various considerations described above, the potential noise and vibration impacts of the Project are assessed using criteria described in the FTA's *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). New noise sources that would be introduced by the proposed Project are compared to measured existing noise levels and compared to the FTA criteria. The applicable FTA noise and vibration criteria are described below.

FTA Guidelines

Operational Noise Criteria

FTA guidelines provide noise impact criteria for three different land use categories (1, 2, 3) as defined in Table 4-1. There are three potential levels of impact (no impact, moderate impact, severe impact) as described in Table 4-2. The noise impact criteria, which apply to transit projects and their associated fixed facilities, such as maintenance and storage facilities, passenger stations, parking facilities, and substations, are shown graphically on Figure 4-1.

Table 4-1. Land Use Categories and Metrics for Transit Noise Impact Criteria

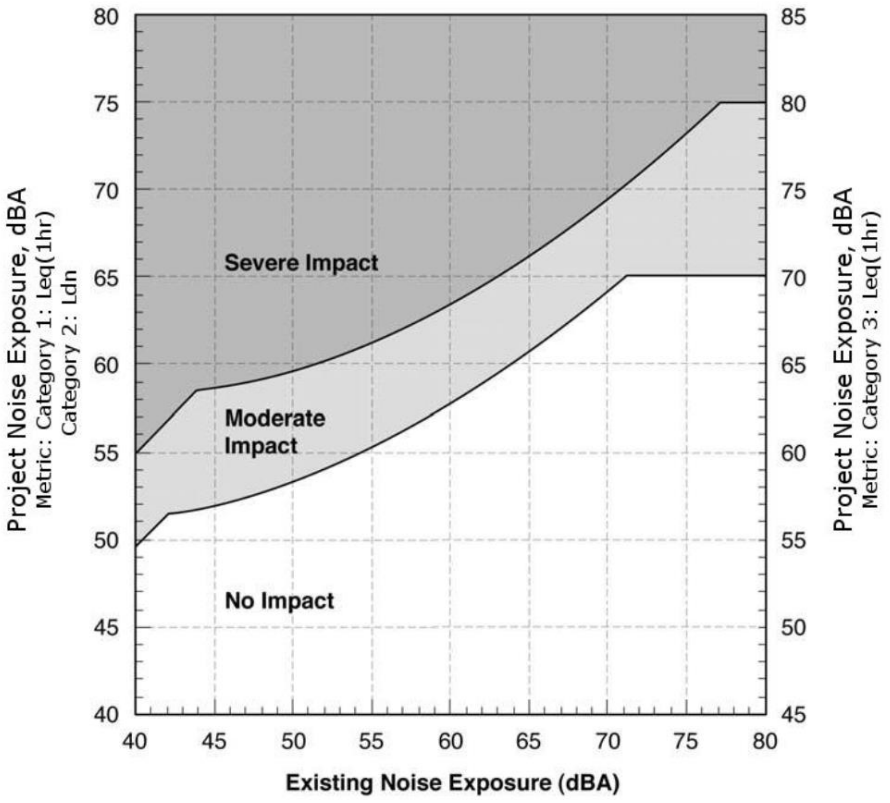
Land Use Category	Land Use Type	Noise Metric, dBA	Description of Land Use Category
1	High Sensitivity	Outdoor $L_{eq(h)}$[1]	Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
2	Residential	Outdoor L_{dn}	This category is applicable all residential land use and buildings where people normally sleep, such as hotels and hospitals.
3	Institutional	Outdoor $L_{eq(h)}$[1]	This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

1 $L_{eq(1hr)}$ for the loudest hour of project-related activity during hours of noise sensitivity
Source: FTA 2018.

Table 4-2. Land Use Categories and Metrics for Transit Noise Impact Criteria

Level of Impact	Description
No Impact	Project-generated noise is not likely to cause community annoyance. Noise projections in this range are considered acceptable by FTA and mitigation is not required.
Moderate Impact	Project-generated noise in this range is considered to cause impact at the threshold of measurable annoyance. Moderate impacts serve as an alert to project planners for potential adverse impacts and complaints from the community. Mitigation should be considered at this level of impact based on project specifics and details concerning the affected properties.
Severe Impact	Project-generated noise in this range is likely to cause a high level of community annoyance. The project sponsor should first evaluate alternative locations/alignments to determine whether it is feasible to avoid severe impacts altogether. In densely populated urban areas, evaluation of alternative locations may reveal a trade-off of affected groups, particularly for surface rail alignments. Projects that are characterized as point sources rather than line sources often present greater opportunity for selecting alternative sites. This guidance manual and FTA's environmental impact regulations both encourage project sites which are compatible with surrounding development when possible. If it is not practical to avoid severe impacts by changing the location of the project, mitigation measures must be considered.

Source: FTA 2018.



Source: FTA 2018

Figure 4-1. Noise Impact Criteria for Transit Projects

For noise exposures below the lower of the two curves on Figure 4-1, a proposed project is considered to have no noise impact because, on average, the introduction of the project would result in an insignificant increase in the number of people highly annoyed by the new noise. The curve defining the onset of noise effects stops increasing at 65 dBA for Category 1 and Category 2 land uses, a standard limit for an acceptable living environment defined by several federal, state, and local agencies. Project noise above the upper curve is considered to cause a severe impact because a substantial percentage of people would be highly annoyed by the new noise.

The upper curve on Figure 4-1 flattens out at 75 dBA for Category 1 and Category 2 land uses, a level associated with an unacceptable living environment. As indicated by the right-hand scale on Figure 4-1, the project noise criteria are 5 decibels (dB) higher for Category 3 land uses because these types of land uses are considered to be slightly less sensitive to noise than the types of land uses in Category 1 and Category 2.

Between the two curves, a project is judged to have a moderate effect. The change in the cumulative noise level is noticeable to most people, but may not be sufficient to cause strong, adverse reactions from the community. In this transitional area, other project-specific factors must be considered to determine the magnitude of the effect and the need for mitigation, such as the existing noise level, predicted level of increase over existing noise levels, and the types and numbers of noise-sensitive land uses affected.

Although the curves on Figure 4-1 are defined in terms of the project noise exposure and the existing noise exposure, the increase in the cumulative noise—when project-generated noise is added to existing noise levels—is the basis for the criteria. To illustrate this point, Figure 4-2 shows the noise impact criteria for Category 1 and Category 2 land uses in terms of the allowable increase in the cumulative noise exposure. Because day-night sound level (L_{dn}) and equivalent sound level (L_{eq}) are measures of total acoustic energy, a new noise source in a community will cause an increase, even if the new source level is lower than the existing level. On Figure 4-2, the criterion for a moderate effect allows a noise exposure increase of 10 dBA if the existing noise exposure is 42 dBA or less, but only a 1 dBA increase when the existing noise exposure is 70 dBA.

As the existing level of ambient noise increases, the allowable level of transit noise increases, but the total amount that community noise exposure is allowed to increase is reduced. This accounts for the unexpected result that a project noise exposure that is lower than the existing noise exposure can still cause an effect.

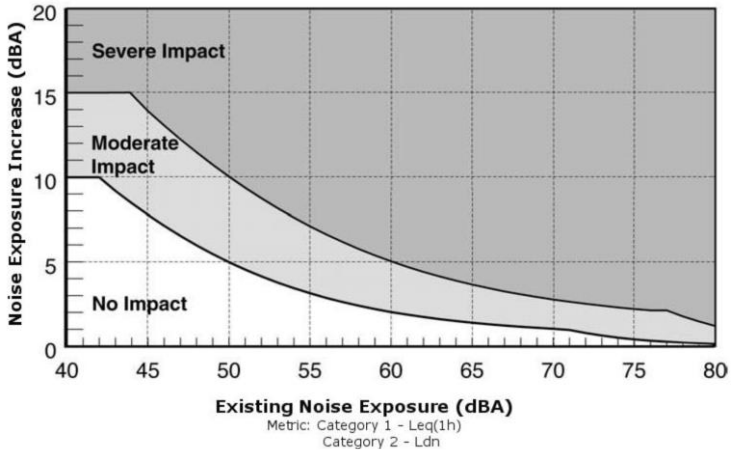


Figure 4-1. Increase in Cumulative Noise Levels Allowed by Criteria (Land Use Cat. 1 & 2)

Operational Vibration Criteria

FTA guidelines provide groundborne vibration impact criteria for four different land use categories as defined in Table 4-3. Community response to vibration correlates with the frequency of events and, intuitively, more frequent events of low vibration levels may evoke the same response as fewer high vibration level events. This effect is accounted for in the FTA impact criteria by characterizing projects by frequency of events, as defined in Table 4-4. The groundborne vibration and groundborne noise impact criteria for transit projects are provided in Table 4-5.

Table 4-3. Land Use Categories for Transit Noise Impact Criteria

Land Use Category	Land Use Type	Description of Land Use Category
-	Special Buildings	This category includes special-use facilities that are very sensitive to vibration and noise that are not included in the categories below and require special consideration. However, if the building will rarely be occupied when the source of the vibration (e.g., the train) is operating, there is no need to evaluate for impact. Examples of these facilities include concert halls, TV and recording studios, and theaters.
1	High Sensitivity	This category includes buildings where vibration levels, including those below the threshold of human annoyance, would interfere with operations within the building. Examples include buildings where vibration-sensitive research and manufacturing[1] is conducted, hospitals with vibration-sensitive equipment, and universities conducting physical research operations. The building's degree of sensitivity to vibration is dependent on the specific equipment that will be affected by the vibration. Equipment moderately sensitive to vibration, such as high resolution lithographic equipment, optical microscopes, and electron microscopes with vibration isolation systems are included in this category.[2] For equipment that is more sensitive, a Detailed Vibration Analysis must be conducted.
2	Residential	This category includes all residential land use and buildings where people normally sleep, such as hotels and hospitals. Transit-generated groundborne vibration and noise from subways or surface running trains are considered to have a similar effect on receivers.[3]
3	Institutional	This category includes institutions and offices that have vibration-sensitive equipment and have the potential for activity interference such as schools, churches, doctors' offices. Commercial or industrial locations including office buildings are not included in this category unless there is vibration-sensitive activity or equipment within the building. As with noise, the use of the building determines the vibration sensitivity.

[1] Manufacturing of computer chips is an example of a vibration-sensitive process.

[2] Standard optical microscopes can be impacted at vibration levels below the threshold of human annoyance.

[3] Even in noisy urban areas, the bedrooms will often be in quiet buildings with effective noise insulation. However, groundborne vibration and noise are experienced indoors, and building occupants have practically no means to reduce their exposure. Therefore, occupants in noisy urban areas are just as likely to be exposed to groundborne vibration and noise as those in quiet suburban areas.

Source: FTA 2018.

Table 4-4. Event Frequency Definitions

Category	Definition	Typical Project Types
Frequent Events	More than 70 events per day	Most rapid transit
Occasional Events	30–70 events per day	Most commuter trunk lines
Infrequent Events	Fewer than 30 events per day	Most commuter rail branch lines

Table 4-5. Indoor Groundborne Vibration (GBV) and Groundborne Noise (GBN) Impact Criteria for General Vibration Assessment

	GBV Impact Levels, VdB			GBN Impact Levels, dBA		
Land Use Category	Frequent Events	Occasional Events	Infrequent Events	Frequent Events	Occasional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB[1]	65 VdB[1]	65 VdB[1]	N/A[2]	N/A[2]	N/A[2]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

[1] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. For equipment that is more sensitive, a Detailed Vibration Analysis must be performed.

[2] Vibration-sensitive equipment is generally not sensitive to groundborne noise; however, the manufacturer's specifications should be reviewed for acoustic and vibration sensitivity.

Source: FTA 2018.

Construction Noise Criteria

With respect to construction noise, no standard criteria apply at the federal level. However, the FTA guidelines offer suggested threshold values for two levels of analysis (general and detailed) that can help identify potential noise impacts from construction equipment. Consistent with the level of analysis provided in the DEIR, the general assessment construction noise criteria are used in this analysis. Those criteria are summarized in Table 4-6.

Table 4-6. FTA General Assessment Construction Noise Criteria

	$L_{eq(1hr)}$, dBA	
Land Use	**Day**	**Night**
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: FTA 2018.

Construction Vibration Criteria

The FTA provides construction vibration criteria designed primarily to prevent building damage, and to assess whether vibration might interfere with vibration-sensitive building activities or temporarily annoy building occupants during the construction period.

To avoid temporary annoyance to building occupants during construction or construction interference with vibration-sensitive equipment inside special-use buildings, such as a magnetic resonance imaging machine, FTA recommends using the same criteria provided for potential operational vibration impacts (refer to Table 4-5, above).

To assess potential building damage, the FTA provides criteria for four building categories, as shown in Table 4-7. These limits are used to estimate potential problems that should be addressed during final design. Because the structural details of all the buildings close to the Project site is unknown, a criterion of 0.2 in/s PPV is used to conservatively assess potential adverse effects at all buildings considered in this analysis.

Table 4-7. Construction Vibration Damage Criteria

Building/Structural Category	PPV, in/s	Approximate L_V, VdB
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

5. Existing Noise Environment

The proposed Project is located in the central portion of the City, partly within the Downtown Transit-Oriented Development (TOD) Plan area and extends south along Market Street to Manchester Boulevard, along Manchester Boulevard to Prairie Avenue, and then south along Prairie Avenue to Hardy Street. The southern portion of the proposed Project is adjacent to the Hollywood Park Specific Plan (HPSP) development site.

The Downtown TOD Plan areas contain a variety of building types and designs and architectural styles. Open spaces within the Downtown TOD Plan area consist of man-made parks, plazas, the Inglewood Cemetery, and landscaped areas that also have an urban and developed character.

Land uses are well balanced in downtown Inglewood with the concentration of commercial retail uses in the historic core. Land uses within Downtown TOD consists of residential uses; retail commercial, and office; and the remainder consists of public services/facilities, industrial, and

vacant parcels. The residential neighborhoods in Downtown Inglewood contain a mix of single-family homes, duplexes, or triplexes, along with apartments or townhomes.

The HPSP area is located along Prairie Avenue from Pincay Street to Century Boulevard. The HPSP is an existing and proposed large mixed-use development, including SoFi Stadium, high density residential, retail space, office development, a relocated casino, hotel, four acres of civic uses, and 25 acres of new public parks, including a large lake.

The properties immediately to the west of the HPSP (across Prairie Avenue) are several single-story retail/commercial and multifamily residential uses.

Sensitive Receptors

Land uses adjacent to and within a quarter mile radius of the proposed Project consisting of the guideway, stations, and the MSF, include noise-sensitive receptors where people normally sleep, such as hotels and single and multifamily residences (identified as Category 2 uses), and schools, places of worship, and medical offices (identified as Category 3 uses). To present the results of the potential noise impact analyses, the land uses nearest to the proposed Project were organized into groups by geographic proximity as shown in Figure 5-1. These receptor groups are used to provide a representation of the potential noise and vibration impacts on sensitive receptors around the proposed Project and represent the areas where baseline noise monitoring was conducted. Although the receptor groups shown do not include all the receiver points in the Project study area, these groups include all sensitive receptors nearest to the proposed Project and represent the greatest potential for impacts. Adjacent commercial and industrial uses that are not noise-sensitive (specifically, receptor groups Site A – commercial uses along E. Queen Street; Site D – commercial uses along Prairie Avenue; Site E – commercial uses along the southern portion of West Century Boulevard; Site J – commercial uses along East Manchester Boulevard; and Site K – commercial uses along East Regent Street) but considered vibration-sensitive for potential building damage, are also listed. As such, the areas where noise monitoring was conducted along the proposed alignment and stations are comprised of the following uses:

Market Street Segment

- Site 1: Residential uses on the east side of N. Locust Street including the Holy Faith Episcopal Church, commercial uses on the west side of North Locust Street;
- Site A: Commercial uses along East Queen Street; and
- Site K: Commercial uses along East Regent Street.

Manchester Boulevard Segment

- Site 2: Residential uses along East Manchester Boulevard, Manchester Drive and South Osage Avenue;
- Site B: Residential uses on the northern portion of East Manchester Boulevard, commercial uses on the southern portion of East Manchester Boulevard;
- Site I: Residential uses on the eastern portion of East Spruce Avenue, commercial uses on the western portion of East Spruce Avenue;
- Site J: Commercial uses along East Manchester Boulevard; and

- Site L: Residential uses along West Manchester Boulevard.

Prairie Avenue Segment

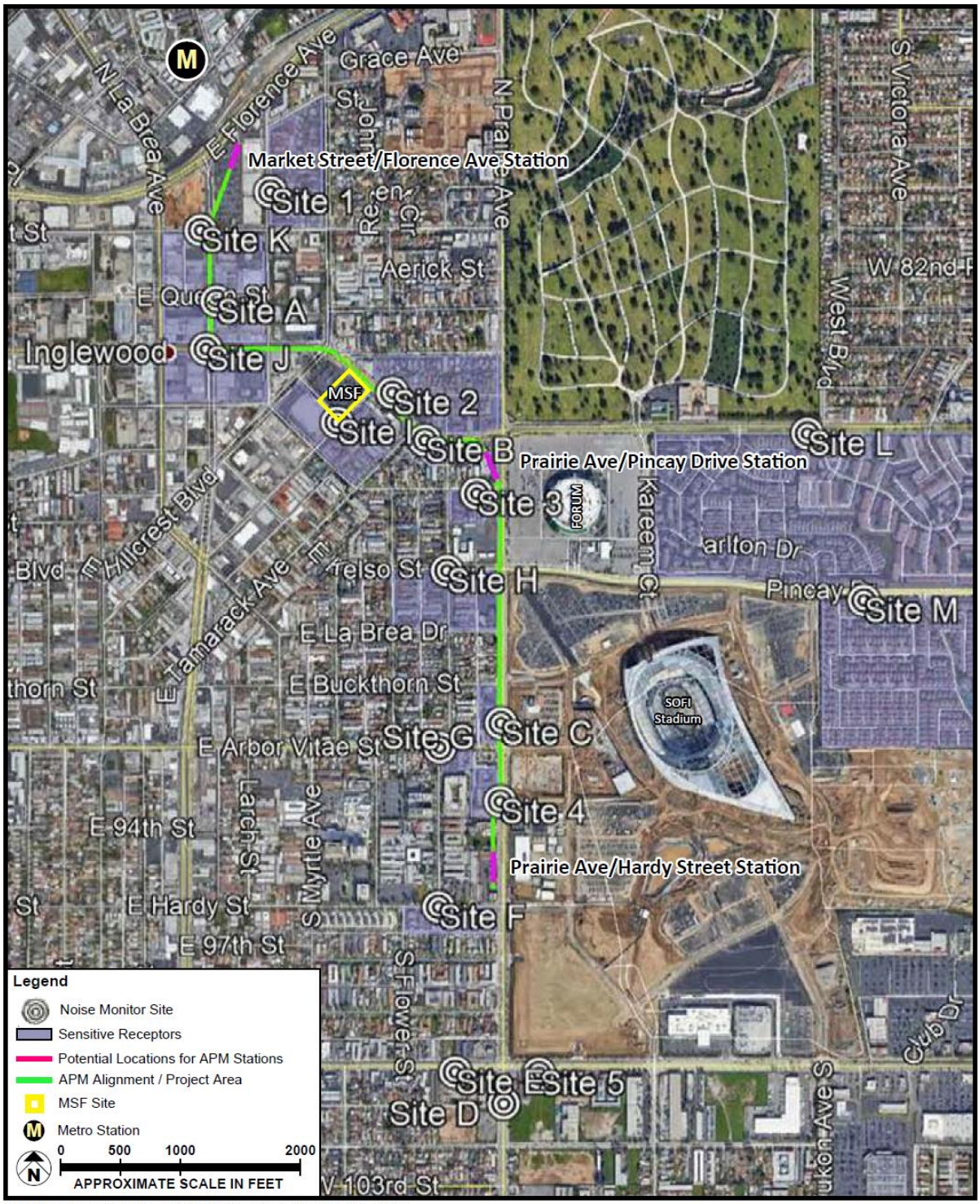
- Site 3: Residential uses along East Nutwood Street, educational facilities along Prairie Avenue;
- Site 4: Mixed-use residential along west side of Prairie Avenue;
- Site H: Residential uses on the northern and southern portion of East Kelso Street; educational uses on the corner of Prairie Avenue and Kelso Street;
- Site G: Residential uses along East Arbor Vitae Street;
- Site M: Residential uses along Pincay Drive;
- Site F: Multifamily residential uses along East Hardy Street;
- Site C: SoFi Stadium to the west of Prairie Avenue, commercial and lodging uses to the east of Prairie Avenue;
- Site 5: Lodging uses on the southern portion of West Century Boulevard;
- Site D: Commercial uses along Prairie Avenue; lodging uses along West Century Boulevard; and
- Site E: Commercial and lodging uses along the southern portion of West Century Boulevard.

Ambient Noise

The immediate area surrounding the proposed Project is highly urbanized with multiple noise sources including, but not limited to, traffic on local and arterial streets, aircraft arrivals to and departures from Los Angeles International Airport (LAX), and commercial and industrial activity (e.g., truck loading/unloading).

To establish baseline noise conditions, long-term 24-hour noise levels were monitored at five representative receptor locations (identified as Sites 1 through 5) in the vicinity of the proposed guideway and stations, and at the proposed MSF site. Thirteen (13) additional locations (Sites A through M) were monitored on two non-consecutive days, with 1-hour measurements conducted during both the daytime (between 7:00 a.m. and 10:00 a.m.) and the evening (between 4:00 p.m. and 7:00 p.m.). Short-term (15-minute) noise measurements were also conducted to represent nighttime noise levels at Sites A through M.

Table 5-1 provides a summary of the ambient noise measurements, with L_{dn} values estimated from daytime and nighttime hourly noise levels, as necessary. Additional details of these measurement results are provided in the complete DEIR. Based on field observations, the ambient noise at the measurement locations is dominated by local vehicular traffic and, to a lesser extent, airplane flyovers and other typical urban noises.



SOURCE: Google Earth - 2021; Meridian Consultants LLC - 2021

Figure 5-1. Noise Sensitive Receptor Groups

Table 5-1. Measured Ambient Noise Levels in the Study Area

Site	Approximate Address	Existing Land Use (Category)[1]	Day L_{eq}	Night L_{eq}	L_{dn}[2]
1	220 Locust Ave	Residential (2), place of worship (3), commercial (N/A)	61.9[3]	54.6[4]	63.1
2	607 Manchester Blvd	Residential (2)	64.1[3]	59.4[4]	66.9
3	818 Nutwood Street	Residential (2), educational (3)	71.2[3]	66.0[4]	73.6
4	923 Prairie Ave	Residential (2), commercial (N/A)	77.2[3]	71.6[4]	79.4
5	3940 Century Blvd	Lodging (2)	73.3[3]	70.0[4]	77.1
A	300 Queen St	Residential (2), commercial (N/A)	64.1[5]	57.8[6]	65.9
B	712 Manchester Blvd	Residential (2), educational (3)	73.5[5]	70.5[6]	77.5
C	823 Prairie Ave	Lodging (2), place of worship (3), commercial (N/A)	76.7[5]	70.6[6]	78.6
D	10023 Prairie Ave	Lodging (2), commercial (N/A)	76.2[5]	67.0[6]	76.5
E	4020 Century Blvd	Lodging (2), commercial (N/A)	72.6[5]	66.2[6]	74.3
F	636 Hardy St	Residential (2)	68.8[5]	59.9[6]	69.2
G	629 Arbor Vitae St	Residential (2)	67.3[5]	61.5[6]	69.4
H	728 Kelso St	Residential (2), educational (3)	67.6[5]	56.6[6]	67.3
I	500 Manchester Blvd	Residential (2), commercial (N/A)	68.0[5]	58.5[6]	68.2
J	201 Market St	Commercial (N/A)	73.6[5]	69.1[6]	76.5
K	205 Market St	Residential (2), commercial (N/A)	67.5[5]	63.4[6]	70.7
L	3500 Manchester Blvd	Residential (2)	74.0[5]	72.8[6]	79.4
M	3681 Chapman Ln	Residential (2)	74.9[5]	67.9[6]	76.3

[1] Includes all land use types described in the DEIR as being represented by each site.
[2] L_{dn} calculated from long-term measurements or estimated from daytime and nighttime short-term measurements.
[3] Daytime period includes 7 a.m. to 10 p.m.
[4] Nighttime period includes 10 p.m. to 7 a.m.
[5] Daytime L_{eq} is the logarithmic average of the four short-term daytime measurements (two a.m. and 2 p.m.)
[6] Nighttime L_{eq} is the measured short-term noise level.
Source: DEIR

Ambient Vibration

Based on FTA guidance, ambient vibration levels are not factored into the impact criteria for the Project. However, the DEIR included ambient vibration measurements and the results are summarized in Table 5-2.

Table 5-2. Measured Ambient Vibration Levels in the Study Area

Site	Approximate Address	24-Hour Vibration Level, VdB
1	220 Locust Ave	52
2	607 Manchester Blvd	60
3	818 Nutwood Street	60
4	923 Prairie Ave	62
5	3940 Century Blvd	67

Source: DEIR

6. Effects Analysis

This section summarizes the noise and vibration effects assessment for the Project. Groundborne noise is not analyzed in detail for the reasons described in the following subsection. The remainder of the section assesses the potential noise and groundborne vibration effects of proposed Project construction and operation.

Groundborne Noise

Groundborne noise occurs when vibration radiates through a building interior and creates a low frequency sound, often described as a rumble, as a train passes by. Groundborne noise that accompanies the building vibration is usually perceptible only inside buildings and typically is only an issue at locations with subway or tunnel operations where there is no airborne noise path or for buildings with substantial sound insulation such as a recording studio. The proposed Project does not include subway or tunnel operations and there are no substantially insulated indoor receptors located within the area surrounding the proposed guideway vicinity. For typical buildings with at-grade or elevated transit operations, the interior airborne noise levels are often higher than the groundborne noise levels. Similarly, the effect of groundborne noise is typically negligible when construction occurs above ground because the overall noise level inside nearby buildings will be dominated by airborne noise transmitted into the building through the building facades. As such, impacts related to groundborne noise are not discussed further.

Construction Noise and Vibration Analysis

Construction would occur in eight phases with construction activity occurring primarily occur over a 16-hour per day schedule with two shifts, a morning shift from approximately 7:00 a.m. to 3:00 p.m. and either an evening shift, from approximately 3:00 p.m. to 11:00 p.m., or a night shift from approximately 11:00 p.m. to 7:00 a.m. There will also be periods when construction activities are scheduled to occur from approximately 11:00 p.m. to 7:00 a.m. to accommodate work activities that cannot be accomplished during the daytime shifts (i.e., during large-scale pours of concrete when it would be necessary to maintain a continuous stream of concrete deliveries through multiple shifts). Construction work is assumed to occur seven days a week. A brief description of each construction phase is provided below. Additional details can be found in the DEIR.

Phase 1: Phase 1 includes demolition of buildings and site improvements on properties acquired for construction, the beginning of construction of the MSF, trenching and installation of primary power duct bank, and preparatory work on the east side of Prairie Avenue to allow for the roadway shift.

Phase 2: Phase 2 would include activities to enable the construction sequence of the guideway along Prairie Avenue from Hardy Street to Manchester Boulevard, and work at the MSF site.

Phase 3: Phase 3 would include foundation work for the ATS guideway, foundation work for the Market Street/Florence Ave Station, and construction for the support structure of the MSF building. Phase 3 work will include utility relocation (if necessary), foundations, cast-in-place (CIP) columns, and setting of prefabricated buildings at the PDSs.

Phase 4: Phase 4 construction would include foundation work for the ATS guideway, guideway column caps along Market Street, and the MSF building deck and shell. Phase 4 activities will include utility relocation (if necessary), foundations, CIP columns, guideway column caps, and installation of equipment at the TPDSs.

Phase 5: Phase 5 construction would include aerial work for the ATS guideway along Prairie Avenue from Hardy Street to Manchester Boulevard and Manchester Boulevard from Prairie Avenue to Market Street, guideway girder along Market Street, and MSF building interior construction. Phase 5 activities will include guideway girders, guideway straddle caps, and installation of equipment at the PDSs.

Phase 6: Phase 6 construction would include aerial work for the ATS guideway along Prairie Avenue from Hardy Street to Manchester Boulevard and Manchester Boulevard from Prairie Avenue to Market Street, completion of Prairie/Manchester Station, completion of Hardy Station, and completion of the MSF building, and the elevated passenger walkway to the Metro Crenshaw/LAX Line Downtown Inglewood Station.

Phase 7: Phase 7 construction would include final site work and completion of the stations.

Phase 8: Phase 8 construction would occur for the guideway along the entire length of the alignment and primarily includes installation of the operating systems and testing and commissioning of the ATS trains.

Construction Noise

The DEIR calculated construction noise levels for each phase of construction based on the anticipated construction equipment by phase described in the Project's construction phasing narrative. Noise levels were also adjusted for the anticipated construction intensity during the various construction shifts (daytime, evening, nighttime). Distances between construction activities for each of the phases and staging area locations (noise source), and surrounding noise-sensitive receptors were measured using concept plans for the proposed Project and aerial imagery. Table 6-1 summarizes the maximum predicted 1-hour L_{eq} for each phase of construction at each receiver site, during both the daytime and nighttime hours, and compares the results to the most stringent applicable FTA criteria for each site (i.e., the criteria for the most sensitive land use associated with each site). As shown in Table 6-1, all construction noise levels comply with the listed criteria. In addition, **PDF NOISE-1** (described in the DEIR and in Section 2 of this memorandum) which would be implemented as part of the Project, includes implementation of a Construction Noise Control Plan which proactively addresses the potential effects of noise during construction. Furthermore, the Construction Noise Control Plan would include a monitoring plan during demolition and construction activities to ensure noise levels are below the specified noise limits. As a result, the Project would not result in an adverse effect related to construction noise.

Table 6-1. Construction Noise Levels and Effects

Site	Most Sensitive Land Use[1]	Time Period	Construction Noise by Phase, Max $L_{eq(1hr)}$, dBA								Criteria, $L_{eq(1hr)}$, dBA	Adverse Effect?
			1	2	3	4	5	6	7	8		
1	Residential	Day	78	52	70	71	71	67	70	76	90	No
		Night	74	49	67	68	68	64	67	73	80	No
2	Residential	Day	69	68	74	75	75	73	67	80	90	No
		Night	66	65	71	72	71	70	63	77	80	No
3	Residential	Day	74	71	69	74	74	72	74	79	90	No
		Night	71	68	66	71	71	69	71	76	80	No
4	Residential	Day	61	73	54	74	75	73	55	80	90	No

Site	Most Sensitive Land Use[1]	Time Period	Construction Noise by Phase, Max $L_{eq(1hr)}$, dBA								Criteria, $L_{eq(1hr)}$, dBA	Adverse Effect?
			1	2	3	4	5	6	7	8		
		Night	58	70	51	71	72	70	52	77	80	No
5	Residential (lodging)	Day	60	55	52	57	57	55	54	62	90	No
		Night	57	52	49	54	54	52	51	59	80	No
A	Residential	Day	61	53	72	73	73	59	57	78	90	No
		Night	58	50	69	70	70	56	54	75	80	No
B	Residential	Day	64	65	73	74	75	73	62	80	90	No
		Night	61	62	70	71	72	70	59	77	80	No
C	Residential (lodging)	Day	57	73	53	74	74	73	52	80	90	No
		Night	54	70	50	71	71	70	49	77	80	No
D	Residential (lodging)	Day	60	56	53	58	58	56	55	63	90	No
		Night	57	53	50	55	55	53	52	60	80	No
E	Residential (lodging)	Day	58	55	50	57	57	55	54	62	90	No
		Night	55	52	47	54	54	52	51	59	80	No
F	Residential	Day	66	65	57	67	67	65	62	72	90	No
		Night	63	62	54	64	64	62	59	69	80	No
G	Residential	Day	61	66	57	67	67	66	55	72	90	No
		Night	58	63	54	64	64	62	52	69	80	No
H	Residential	Day	62	67	62	69	69	67	59	74	90	No
		Night	59	64	59	66	66	64	56	71	80	No
I	Residential	Day	78	76	77	78	71	75	76	76	90	No
		Night	75	73	74	75	68	72	73	73	80	No
J	Commercial	Day	68	55	71	71	71	65	67	76	100	No
		Night	65	52	68	68	68	62	64	73	100	No
K	Residential	Day	73	51	71	72	72	62	70	77	90	No
		Night	70	48	68	69	69	59	67	74	80	No
L	Residential	Day	57	54	55	57	56	54	53	61	90	No
		Night	54	51	52	54	53	51	50	58	80	No
M	Residential	Day	55	53	53	56	56	54	51	61	90	No
		Night	52	50	50	53	53	51	48	58	80	No

[1] Most sensitive land use based on all land use types described in the DEIR as being represented by each site.
Source: DEIR

Construction Vibration

The DEIR calculated groundborne vibration levels from both onsite (dozers, loaders, etc.) and on-road (water trucks, dump trucks, etc.) construction equipment based on the Project's construction phasing narrative. With respect to potential building damage, vibration levels were evaluated at the nearest off-site buildings to the Project area, whereas the potential for human annoyance associated with construction-related vibration were evaluated at the identified receptor locations. In accordance with FTA guidance, vibration impacts are evaluated based on the maximum vibration levels generated by each type of construction equipment. This differs from the analysis of noise impacts which is based on the average/equivalent (L_{eq}) levels, which are dependent on the total number of construction equipment operating during the analysis period (i.e., 1 hour). Table 6-2

summarizes the estimated PPV at the nearest off-site structures from proposed Project construction equipment. As shown in Table 6-2, the forecasted vibration levels due to construction activities would exceed the building damage criterion of 0.2 PPV in/s at sites 1, 4, A, B, C, I, and K. These impacts are primarily caused by impact pile drivers located within 55 feet of the nearest receptor.

As required by the CCP, a Community Affairs Liaison would be identified who would be responsible for responding within 24 hours to any local complaints about construction activities related to noise and vibration. Additionally, implementation of **PDF NOISE-2** (described in the DEIR and in Section 2 of this memorandum) would require preparation of a Construction Vibration Reduction Plan to ensure minimization of construction vibration at nearby sensitive receptors from vibration created by construction activities. The Construction Vibration Reduction Plan would require continuous monitoring and collection of vibration data to verify vibration levels are below the warning level PPV. In the event the regulatory levels of PPV are triggered, construction activities would halt to visually inspect sensitive buildings for damage. **PDF NOISE-2** also requires various other vibration-minimizing techniques such as locating certain construction equipment at minimum distances from vibration-sensitive receptors. Implementation of these construction management practices would limit the potential for building damage with adjusted distance of construction equipment. **PDF NOISE-2** also requires repairs to buildings if damage is caused by vibration or movement during the demolition and/or construction activities. With implementation of the CCP and **PDF NOISE-2**, vibration damage of buildings due to groundborne vibration from Project construction would be avoided or repaired. As a result, the Project would not result in an adverse effect related damage of buildings due to groundborne vibration from Project construction.

Table 6-2. Construction Vibration PPV Levels and Effects – Building Damage

	Estimated PPV at the Nearest Off-Site Structures from Proposed Project Construction, in/s								
Site	**Pile Driver (impact)**	**Vibratory Roller**	**Large Bulldozer**	**Caisson Drilling**	**Loaded Trucks**	**Jackhammer**	**Small bulldozer**	**Criteria, PPV, in/s**	**Adverse Effect?**
1	**0.267**	0.087	0.037	0.037	0.031	0.058	0.001	0.2	Yes
2	0.137	0.045	0.019	0.019	0.016	0.030	0.001	0.2	No
3	0.051	0.017	0.007	0.007	0.006	0.011	0.000	0.2	No
4	***0.490***	0.160	0.068	0.068	0.058	0.107	0.002	0.2	***Yes***
5	0.124	0.040	0.017	0.017	0.015	0.027	0.001	0.2	No
A	***0.318***	0.104	0.044	0.044	0.038	0.069	0.001	0.2	***Yes***
B	***0.318***	0.104	0.044	0.044	0.038	0.069	0.001	0.2	***Yes***
C	***0.318***	0.104	0.044	0.044	0.038	0.069	0.001	0.2	***Yes***
D	0.012	0.004	0.002	0.002	0.001	0.003	0.000	0.2	No
E	0.011	0.004	0.002	0.002	0.001	0.002	0.000	0.2	No
F	0.051	0.017	0.007	0.007	0.006	0.011	0.000	0.2	No
G	0.028	0.009	0.004	0.004	0.003	0.006	0.000	0.2	No
H	0.008	0.003	0.001	0.001	0.001	0.002	0.000	0.2	No
I	***0.228***	0.074	0.031	0.031	0.027	0.049	0.001	0.2	***Yes***
J	0.173	0.056	0.024	0.024	0.020	0.038	0.001	0.2	No
K	***0.228***	0.074	0.031	0.031	0.027	0.049	0.001	0.2	***Yes***
L	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.2	No
M	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No

Source: DEIR

Operational Noise

Traffic Noise

As discussed in Section 4 of this memorandum (*Applicable Regulations*), the proposed Project is primarily a transit project, with transit-related noise sources being added along existing roadways that are already part of the ambient noise environment. The ITC Project does not propose any changes to freeways and would not add traffic capacity along any other roadways. While the Project may require some restriping of existing roadways, it would not be a Type I or Type II project, as defined by FHWA and Caltrans, that would require a traffic noise analysis. In fact, the analysis of traffic noise provided in the EIR indicates that the proposed Project would slightly decrease roadway noise level, relative to without-Project conditions, due to removal and redistribution of trips because of the Project. As a result, no further traffic noise analysis has been conducted in this memorandum.

Project Operations

Operational noise will be produced by various Project elements including the ATS and stationary sources such as the MSF site, PDS substations, backup generators, and stations. As described in the DEIR, stationary noise sources such as PDS substations and backup generators would be screened to control noise levels. Additionally, the backup generators (up to two, total) would only operate intermittently and for short periods of time. Each generator be tested and operated for 2 hours per day during 24 days per year (twice a month) for a total of not more than 50 hours per year. Each standby generator would be tested during different days. If needed for emergency operation, both generators would operate for up to 2 hours each and operation could occur simultaneously.

The sensitive land uses in the study area are all FTA Category 2 (residences and lodging) or Category 3 (places of worship and educational). Potential noise impacts at Category 2 land uses are assessed using the L_{dn} metric. Places of worship and educational facilities are typically not open at night, which is considered to be after 10:00 p.m. for the L_{dn} metric, so potential noise impacts at these Category 3 land uses are assessed using the daytime $L_{eq(1hr)}$ metric. The criteria for moderate and severe noise impacts depend on the existing ambient noise levels, which vary from one receiver site to the next. Table 6-3 lists the moderate and severe impact criteria that would apply to Category 2 and Category 3 land uses at each site, based on the existing ambient noise levels. Table 6-4 provides a summary of the predicted operational noise levels from each ATS option and the MSF site; noise levels are stated both for each individual noise source, and for the combination of ATS and MSF noise. Table 6-5 provides the assessment of impact for each calculated noise level in Table 6-4, relative to the criteria shown in Table 6-3.

Table 6-3. Moderate and Severe Impact Criteria Based on Ambient Noise Levels

	Ambient		Category 2 Impact Criteria, L_{dn}		Category 3 Impact Criteria, Daytime L_{eq}	
Site	L_{dn}	Daytime L_{eq}	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
1	63	62	60	65	64	69
2	67	64	62	67	65	71
3	74	71	65	72	70	75

	Ambient		Category 2 Impact Criteria, L_{dn}		Category 3 Impact Criteria, Daytime L_{eq}	
Site	L_{dn}	Daytime L_{eq}	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
4	79	77	65	75	70	80
5	77	73	65	75	70	77
A	66	64	61	67	65	71
B	77	74	65	75	70	77
C	79	77	65	75	70	80
D	77	76	65	74	70	79
E	74	73	65	73	70	77
F	69	69	64	69	69	74
G	69	67	64	69	67	72
H	67	68	62	68	68	73
I	68	68	63	68	68	73
J	77	74	65	74	70	77
K	71	68	65	70	68	73
L	79	74	65	75	70	77
M	76	75	65	74	70	78

Table 6-4. Individual and Combined Operational Noise Levels for ATS and MSF

	Monorail ATS		Rubber-Tired Guideway ATS		Stationary Sources		Monorail + Stationary		Rubber-Tired Guideway + Stationary	
Site	L_{dn}	Day L_{eq}	L_{dn}	Day L_{eq}	L_{dn}	Day L_{eq}	L_{dn}	Day L_{eq}	L_{dn}	Day L_{eq}
1	58	53	55	49	41	39	58	53	55	49
2	53	48	43	38	59	57	60	57	59	57
3	54	49	46	40	49	47	55	51	51	48
4	52	46	41	35	34	32	52	46	42	37
5	46	41	33	28	38	35	47	42	39	36
A	54	49	43	38	43	41	55	49	46	43
B	54	48	44	39	47	45	55	50	49	46
C	52	46	41	35	36	34	52	47	42	38
D	45	39	37	31	39	37	46	41	41	38
E	45	40	33	28	30	28	45	40	35	31
F	52	46	44	38	40	38	52	47	45	41
G	54	48	47	41	42	40	54	49	48	44
H	54	48	47	42	47	45	55	50	50	47
I	52	46	44	39	68	66	68	66	68	66
J	53	47	40	34	45	43	53	49	46	43
K	61	55	55	49	40	38	61	55	55	50
L	46	40	40	34	42	40	47	43	44	41
M	44	38	37	32	39	36	45	40	41	38

Source: Obtained or calculated from noise predictions in the DEIR

Table 6-5. Assessment of ATS and MSF Noise Levels with FTA Criteria

Site	Monorail ATS		Rubber-Tired Guideway ATS		Stationary Sources		Monorail + Stationary		Rubber-Tired Guideway + Stationary	
	Cat. 2	Cat. 3	Cat. 2	Cat. 3	Cat. 2	Cat. 3	Cat. 2	Cat. 3	Cat. 2	Cat. 3
1	None	None	None	None	None	None	None	None	None	None
2	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
3	None	None	None	None	None	None	None	None	None	None
4	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
5	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
A	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
B	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
C	None	None	None	None	None	None	None	None	None	None
D	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
E	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
F	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
G	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
H	None	None	None	None	None	None	None	None	None	None
I	None	N/A	None	N/A	***Mod. Impact***	N/A	***Mod. Impact***	N/A	***Mod. Impact***	N/A
J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
L	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A
M	None	N/A	None	N/A	None	N/A	None	N/A	None	N/A

Cat. = land use category, None = No Impact, N/A = No receivers at this site are in the relevant land use category, Mod. Impact = moderate impact

Referring to table 6-5, the only predicted impacts are moderate impacts at Site I. There are no impacts (moderate or severe) at any other sites. Site I receivers are residences close to the MSF and the impacts at these receivers are due to MSF noise levels, as illustrated by the fact that ATS noise levels are 16 to 24 dB lower than MSF noise levels at Site I. Operational noise generated by the MSF would result in an adverse effect at nearby residences and noise mitigation must be considered.

Although the analysis in the DEIR does not calculate specific noise levels for a steel-wheeled ALRT system or a cable-propelled APM, conclusions can be drawn regarding the potential noise impacts of these systems by comparing available reference data. According to Table 4-9 of the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), reference noise levels are 82 dBA SEL at 50 feet for a monorail system, 78 dBA SEL at 50 feet for a rubber-tired AGT system, and 80 dBA at 50 feet for a steel-wheeled AGT system. The FTA *Manual* does not include a reference noise level for a cable-propelled system, but research indicates that monitored noise levels from cable-propelled systems similar to what may be utilized for the proposed Project generate operational noise levels of 72 to 75 dBA L_{max} at 50 feet, which are less than the corresponding maximum ATS train noise limits required under PDF Noise-3 for the proposed project (refer to Table 2-1). Accordingly, a conclusion can be drawn that the steel-wheeled ALRT system or the cable-propelled APM system would generate less noise than the monorail, which was not deemed to result in an adverse effect along the length of the alignment.

Operational Vibration

The condition of the rails, type of guideway construction, other proposed Project components, and the mass and stiffness of the guideway structure would have an influence on the level of groundborne vibration. Jointed rail, worn rail, and wheel impacts at special track work can all cause substantial increases in groundborne vibration. It is rare for groundborne vibration to be a problem with elevated railways except when guideway supports are located within 50 feet of buildings. For rubber-tired ATS trains, the smoothness of the roadway/guideway is the critical factor; if the surface is smooth, vibration problems are unlikely.

The buildings nearest to the guideway include commercial and residential uses along Market Street, Manchester Boulevard and Prairie Avenue which would be approximately 30 feet from the guideway centerline. The DEIR predicts groundborne vibration levels based on the *generalized ground surface vibration curves* in the FTA *Manual* (FTA 2018), with adjustments for the proposed Project's elevated structure and anticipated operational speeds. Based on these adjusted vibration level curves, the estimated groundborne vibration levels at the nearest buildings would be approximately 67 VdB for monorail ATS and 64 VdB for the rubber-tired ATS. Referring to the suggested FTA vibration damage criteria (see Table 4-7) both levels are well below the criteria for potential damage. As a result, the Project would not result in an adverse effect related damage of buildings due to groundborne vibration from Project operation.

Residential uses along the guideway would also be sensitive to potential annoyance from ATS operation. Based on headway data and operational hours provided in the DEIR (peak headways of 2 to 6 minutes, with 18 hours of operation per day) ATS operations would fall into the FTA's "frequent event" category, with more than 70 events per day (refer to Table 4-4), resulting in a human annoyance criterion of 72 VdB (refer to Table 4-5). The maximum predicted vibration levels of approximately 67 VdB for the monorail ATS and 64 VdB for the rubber-tired ATS at the closest residences would be below the FTA criterion of 72 VdB. As such, transit-related groundborne vibration from the ATS would not result in an adverse effect related to human annoyance due to groundborne vibration from Project operation.

Although the analysis in the DEIR does not calculate specific groundborne vibration levels for a steel-wheeled ALRT system or a cable-propelled APM, the worst-case calculated vibration levels (i.e., for the monorail ATS) are derived from the FTA's generalized ground surface vibration curve for rapid transit or light rail vehicles. As stated in the FTA Manual, this curve is appropriate for both heavy and light-rail vehicles, which would cover a wide variety of possible technologies including steel-wheeled ALRT systems and cable-propelled APM systems. Accordingly, a conclusion can be drawn that the groundborne vibration levels generated by the steel-wheeled ALRT system or the cable-propelled APM system would not exceed those calculated in the DEIR, which were not deemed to result in an adverse effect along the length of the alignment.

7. Mitigation Measures

Mitigation measure **MM-NOI-1**, below, is recommended to reduce the predicted adverse effects from operation of the MSF. Because the final operational details, site plan, and equipment layout at the MSF are currently unknown, the mitigation measure provides performance-based requirements for additional analysis after design-level Project details have been developed.

MM-NOI-1: Design and Construct the MSF to Control Noise from All Onsite Equipment and Activities. The City of Inglewood shall design and construct the MSF to reduce combined noise levels from all onsite equipment and activities to 62 dB L_{dn} or less, at all surrounding residential uses. To achieve this performance standard, during the architectural and engineering design, and prior to the issuance of any building permits for the MSF, the City or their contractor shall retain an acoustical consultant to evaluate the design and provide written recommendations, as necessary, to reduce noise from all onsite equipment and activities. Such recommendations may include, but are not limited to, changes in site layout or equipment locations; sound power limits or specifications; rooftop parapet walls; acoustical absorption, louvers, screens, or enclosures; intake and exhaust silencers; or administrative controls (such as restricting certain activities to daytime hours). The recommendations shall be incorporated into the Project plans prior to construction.

After implementation of **MM-NOI-1**, noise affects from operation of the MSF would not be adverse.

8. Summary and Conclusions

Noise and vibration from the proposed Inglewood Transit Connector (ITC) Project was assessed relative to FTA criteria based on noise and vibration predictions contained in the Project's DEIR. The analyses indicate that there would be moderate adverse noise effects at residences in the vicinity of the proposed MSF and mitigation (**MM-NOI-1**) has been proposed to address these effects and reduce noise to a level that is not adverse.

All other evaluated noise and vibration effects were found to be not adverse. These include: noise and groundborne vibration from Project construction, groundborne vibration from Project operation, noise from other Project operational components (except the MSF, as described above), and groundborne noise from Project construction or operation. No noise or vibration mitigation measures are required for these Project effects. However, these findings rely on the successful implementation of all noise- and vibration-related conditions described in the City's Construction Commitment Program (CCP) as well as the Project's noise- and vibration-related Project Design Features, **PDF Noise-1** (Construction Noise Control Plan), **PDF NOISE-2** (Construction Vibration Reduction Plan), and **PDF Noise-3** (Operational). The CCP and PDFs, described in the DEIR and summarized in Section 2 of this memorandum, are required to avoid additional adverse noise and vibration effects.

9. References

California Department of Transportation. 2020. *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*. March. Prepared by: California Department of Transportation, Division of Environmental Analysis. Sacramento, CA. April.

City of Inglewood. 2021. *Recirculated Draft Environmental Impact Report for the Inglewood Transit Connector Project*. November 2021. Prepared by: Meridian Consultants. November 2021.

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. Final. FTA Report No. 0123. September 2018. Washington, DC. Prepared by Volpe National Transportation Systems Center. Cambridge, MA.

Ambient Noise Measurements

Monitoring Location: Site 1
Primary Noise Source:

Secondary Noise Source(s):

	Monitoring Period		Monitored Leq	Logarithmic Equivalent	Evening/Night Adjustments 10 dB	5 dB
Midnight		0 / 24	52.2	165959	1659587	524807
am	1:00	100	51.6	144544	1445440	457088
	2:00	200	48.2	66069	660693	208930
	3:00	300	47.7	58884	588844	186209
	4:00	400	51.2	131826	1318257	416869
	5:00	500	54.1	257040	2570396	812831
	6:00	600	59.1	812831	8128305	2570396
	7:00	700	62.5	1778279	17782794	5623413
	8:00	800	62.2	1659587	16595869	5248075
	9:00	900	61.8	1513561	15135612	4786301
	10:00	1000	60	1000000	10000000	3162278
	11:00	1100	63.9	2454709	24547089	7762471
	12:00	1200	61.9	1548817	15488166	4897788
pm	1:00	1300	67.5	5623413	56234133	17782794
	2:00	1400	61.8	1513561	15135612	4786301
	3:00	1500	62.8	1905461	19054607	6025596
	4:00	1600	62.7	1862087	18620871	5888437
	5:00	1700	61.7	1479108	14791084	4677351
	6:00	1800	74.3	26915348	269153480	85113804
	7:00	1900	60.6	1148154	11481536	3630781
	8:00	2000	58.7	741310	7413102	2344229
	9:00	2100	58.2	660693	6606934	2089296
	10:00	2200	57	501187	5011872	1584893
pm	11:00	2300	55.7	371535	3715352	1174898

Leq Morning Peak Hour 7:00-10:00 a.m.
62 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
69 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not adjusted)
54.5 dBA

Leq Daytime 7:00 am-10:00 p.m.
65.4 dBA

Leq 24-Hour
64 dBA

Ldn: 10 dB adjustment between 10:00 p.m. & 7:00 a.m.
65 dBA

CNEL: 5 dB adjustment between 7:00p.m. & 10:00 p.m., & 10 dB
65.4 dBA **adjustment between 10:00 p.m. & 7:00 a.m.**

Difference between CNEL and Ldn
CNEL - Ldn 0.30074363

Monitoring Location: Site 2
Primary Noise Source:

Secondary Noise Source(s):

	Monitoring Period		Monitored Leq	Logarithmic Equivalent	Evening/Night Adjustments 10 dB	5 dB
Midnight		0 / 24	57.5	562341	5623413	1778279
am	1:00	100	56.3	426580	4265795	1348963
	2:00	200	52.3	169824	1698244	537032
	3:00	300	53.4	218776	2187762	691831
	4:00	400	59.8	954993	9549926	3019952
	5:00	500	62.8	1905461	19054607	6025596
	6:00	600	62.7	1862087	18620871	5888437
	7:00	700	68.8	7585776	75857758	23988329
	8:00	800	66.9	4897788	48977882	15488166
	9:00	900	63.5	2238721	22387211	7079458
	10:00	1000	63.3	2137962	21379621	6760830
	11:00	1100	64.7	2951209	29512092	9332543
	12:00	1200	63.2	2089296	20892961	6606934
pm	1:00	1300	64.1	2570396	25703958	8128305
	2:00	1400	65.1	3235937	32359366	10232930
	3:00	1500	63.9	2454709	24547089	7762471
	4:00	1600	64.6	2884032	28840315	9120108
	5:00	1700	65	3162278	31622777	10000000
	6:00	1800	64.3	2691535	26915348	8511380
	7:00	1900	63.2	2089296	20892961	6606934
	8:00	2000	63.1	2041738	20417379	6456542
	9:00	2100	63.9	2454709	24547089	7762471
	10:00	2200	63.2	2089296	20892961	6606934
pm	11:00	2300	60.2	1047129	10471285	3311311

Leq Morning Peak Hour 7:00-10:00 a.m.
67 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
64 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not adjusted)
60.1 dBA

Leq Daytime 7:00 am-10:00 p.m.
64.8 dBA

Leq 24-Hour
64 dBA

Ldn: 10 dB adjustment between 10:00 p.m. & 7:00 a.m.
68 dBA

CNEL: 5 dB adjustment between 7:00p.m. & 10:00 p.m., & 10 dB
68.0 dBA **adjustment between 10:00 p.m. & 7:00 a.m.**

Difference between CNEL and Ldn
CNEL - Ldn = 0.426944

Monitoring Location: Site 3
Primary Noise Source:

Secondary Noise Source(s):

	Monitoring Period		Monitored Leq	Logarithmic Equivalent	Evening/Night Adjustments 10 dB	5 dB
	Midnight	0 / 24	63.7	2344229	23442288	7413102
am	1:00	100	62.1	1621810	16218101	5128614
	2:00	200	58.6	724436	7244360	2290868
	3:00	300	65.4	3467369	34673685	10964782
	4:00	400	64.8	3019952	30199517	9549926
	5:00	500	67.2	5248075	52480746	16595869
	6:00	600	70	10000000	100000000	31622777
	7:00	700	70.9	12302688	123026877	38904514
	8:00	800	70.8	12022644	120226443	38018940
	9:00	900	70.9	12302688	123026877	38904514
	10:00	1000	70.2	10471285	104712855	33113112
	11:00	1100	70	10000000	100000000	31622777
	12:00	1200	71.5	14125375	141253754	44668359
pm	1:00	1300	71.3	13489629	134896288	42657952
	2:00	1400	71.7	14791084	147910839	46773514
	3:00	1500	70.8	12022644	120226443	38018940
	4:00	1600	71.6	14454398	144543977	45708819
	5:00	1700	72	15848932	158489319	50118723
	6:00	1800	72.7	18620871	186208714	58884366
	7:00	1900	71.8	15135612	151356125	47863009
	8:00	2000	70.1	10232930	102329299	32359366
	9:00	2100	69.3	8511380	85113804	26915348
	10:00	2200	69.5	8912509	89125094	28183829
pm	11:00	2300	67	5011872	50118723	15848932

Leq Morning Peak Hour 7:00-10:00 a.m.
71 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
72 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not adjusted)
66.5 dBA

Leq Daytime 7:00 am-10:00 p.m.
71.1 dBA

Leq 24-Hour
70 dBA

Ldn: 10 dB adjustment between 10:00 p.m. & 7:00 a.m.
74 dBA

CNEL: 5 dB adjustment between 7:00p.m. & 10:00 p.m., & 10 dB
74.5 dBA **adjustment between 10:00 p.m. & 7:00 a.m.**

Difference between CNEL and Ldn
CNEL - Ldn = 0.502012682

Monitoring Location: Site 4
Primary Noise Source:

Secondary Noise Source(s):

	Monitoring Period		Monitored Leq	Logarithmic Equivalent	Evening/Night Adjustments 10 dB	5 dB
Midnight		0 / 24	69.8	9549926	95499259	30199517
am	1:00	100	68.3	6760830	67608298	21379621
	2:00	200	66.3	4265795	42657952	13489629
	3:00	300	67.8	6025596	60255959	19054607
	4:00	400	71.4	13803843	138038426	43651583
	5:00	500	73.6	22908677	229086765	72443596
	6:00	600	75.4	34673685	346736850	109647820
	7:00	700	77.4	54954087	549540874	173780083
	8:00	800	77.7	58884366	588843655	186208714
	9:00	900	76.3	42657952	426579519	134896288
	10:00	1000	77	50118723	501187234	158489319
	11:00	1100	75.9	38904514	389045145	123026877
	12:00	1200	76.3	42657952	426579519	134896288
pm	1:00	1300	77.5	56234133	562341325	177827941
	2:00	1400	76.9	48977882	489778819	154881662
	3:00	1500	76.6	45708819	457088190	144543977
	4:00	1600	77	50118723	501187234	158489319
	5:00	1700	76.9	48977882	489778819	154881662
	6:00	1800	75.9	38904514	389045145	123026877
	7:00	1900	74.2	26302680	263026799	83176377
	8:00	2000	75.3	33884416	338844156	107151931
	9:00	2100	76.6	45708819	457088190	144543977
	10:00	2200	75	31622777	316227766	100000000
pm	11:00	2300	74.7	29512092	295120923	93325430

Leq Morning Peak Hour 7:00-10:00 a.m.
77 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
76 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not adjusted)
72.5 dBA

Leq Daytime 7:00 am-10:00 p.m.
76.6 dBA

Leq 24-Hour
75.5 dBA

Ldn: 10 dB adjustment between 10:00 p.m. & 7:00 a.m.
80 dBA

CNEL: 5 dB adjustment between 7:00p.m. & 10:00 p.m., & 10 dB
80.2 dBA **adjustment between 10:00 p.m. & 7:00 a.m.**

Difference between CNEL and Ldn
CNEL - Ldr 0.41662312

Monitoring Location: Site 5
Primary Noise Source:

Secondary Noise Source(s):

	Monitoring Period		Monitored Leq	Logarithmic Equivalent	Evening/Night Adjustments 10 dB	5 dB
Midnight		0 / 24	73	19952623	199526231	63095734
am	1:00	100	66.8	4786301	47863009	15135612
	2:00	200	65.9	3890451	38904514	12302688
	3:00	300	66.8	4786301	47863009	15135612
	4:00	400	70.2	10471285	104712855	33113112
	5:00	500	72	15848932	158489319	50118723
	6:00	600	71.4	13803843	138038426	43651583
	7:00	700	72.2	16595869	165958691	52480746
	8:00	800	72.4	17378008	173780083	54954087
	9:00	900	72.1	16218101	162181010	51286138
	10:00	1000	72.2	16595869	165958691	52480746
	11:00	1100	72.4	17378008	173780083	54954087
	12:00	1200	72.3	16982437	169824365	53703180
pm	1:00	1300	74.2	26302680	263026799	83176377
	2:00	1400	73.1	20417379	204173794	64565423
	3:00	1500	72.8	19054607	190546072	60255959
	4:00	1600	73.3	21379621	213796209	67608298
	5:00	1700	74.7	29512092	295120923	93325430
	6:00	1800	76.8	47863009	478630092	151356125
	7:00	1900	72.4	17378008	173780083	54954087
	8:00	2000	72.5	17782794	177827941	56234133
	9:00	2100	71.5	14125375	141253754	44668359
	10:00	2200	71	12589254	125892541	39810717
pm	11:00	2300	71.3	13489629	134896288	42657952

Leq Morning Peak Hour 7:00-10:00 a.m.
72 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
75 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not adjusted)
70.4 dBA

Leq Daytime 7:00 am-10:00 p.m.
73.2 dBA

Leq 24-Hour
72.4 dBA

Ldn: 10 dB adjustment between 10:00 p.m. & 7:00 a.m.
77 dBA

CNEL: 5 dB adjustment between 7:00p.m. & 10:00 p.m., & 10 dB
77.7 dBA **adjustment between 10:00 p.m. & 7:00 a.m.**

Difference between CNEL and Ldn
CNEL - Ldn = 0.339382

Site	Date	Time Period	1-hour Leq	Average
		AM	64.2	
	26-Nov	PM	64.1	
		AM	63.5	
A	28-Nov	PM	64.6	64.1
		AM	72.1	
	11-Dec	PM	71.2	
		AM	76.1	
B	13-Dec	PM	72.9	73.5
		AM	77.3	
	11-Dec	PM	76.1	
		AM	77.1	
C	13-Dec	PM	76.2	76.7
		AM	75.1	
	27-Nov	PM	78.5	
		AM	74.4	
D	4-Dec	PM	75.4	76.2
		AM	72.8	
	27-Nov	PM	71.7	
		AM	73.1	
E	4-Dec	PM	72.7	72.6
		AM	62.7	
	21-Jan	PM	63.8	
		AM	71.5	
F	23-Jan	PM	70.9	68.8
		AM	64.3	
	11-Dec	PM	67.0	
		AM	68.0	
G	13-Dec	PM	68.8	67.3
		AM	68.1	
	17-Dec	PM	69.1	
		AM	65.4	
H	19-Dec	PM	66.8	67.6
		AM	69.5	
	11-Dec	PM	66.6	
		AM	67.6	
I	13-Dec	PM	67.8	68.0
		AM	73.3	
	17-Dec	PM	73.2	
		AM	73.8	
J	19-Dec	PM	73.9	73.6
		AM	67.1	
	26-Nov	PM	68.0	
		AM	69.1	
K	28-Nov	PM	64.6	67.5
		AM	73.9	
	17-Dec	PM	74.2	
		AM	74.5	
L	19-Dec	PM	73.4	74.0
		AM	72.8	
	17-Dec	PM	75.9	
		AM	73.2	
M	19-Dec	PM	76.6	74.9

Monitoring Location: Site A
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:35:20	56.6	69.5	46.6
20:36:20	55.1	59.8	49.3
20:37:20	61.1	66.0	52.4
20:38:20	57.5	68.5	48.9
20:39:20	59.1	72.7	46.5
20:40:20	58.8	72.1	49.9
20:41:20	58.2	73.9	47.5
20:42:20	55.4	61.7	49.5
20:43:20	59.2	66.2	49.6
20:44:20	57.6	63.5	50.3
20:45:20	52.8	55.7	49.1
20:46:20	58.0	65.6	49.6
20:47:20	54.3	60.9	48.4
20:48:20	51.7	56.3	48.0
20:49:20	61.7	71.2	49.3
20:50:20	53.1	57.3	52.3

15-minute LAeq **57.8**

Monitoring Location: Site B
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:20:17	67.6	76.9	50.5
20:21:17	73.3	79.1	58.5
20:22:17	68.4	75.3	53.0
20:23:17	68.6	75.2	58.8
20:24:17	70.5	79.7	50.6
20:25:17	73.1	79.3	51.2
20:26:17	63.4	71.4	48.8
20:27:17	70.6	78.6	51.9
20:28:17	69.4	76.6	51.1
20:29:17	67.9	74.4	58.6
20:30:17	68.2	77.2	49.9
20:31:17	72.4	80.6	50.6
20:32:17	69.2	78.5	50.6
20:33:17	72.6	79.8	49.7
20:34:17	73.6	82.8	50.0
20:35:17	65.1	66.9	57.2

15-minute LAeq **70.5**

Monitoring Location: Site C
Monitoring Date: 8/5/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:44:28	70.8	76.7	55.6
20:45:28	67.5	76.1	52.5
20:46:28	70.5	76.9	58.7
20:47:28	70.6	80.1	50.0
20:48:28	71.4	76.7	49.8
20:49:28	65.8	72.9	51.0
20:50:28	68.8	76.9	53.4
20:51:28	69.8	76.1	54.0
20:52:28	68.8	76.4	57.1
20:53:28	69.4	74.4	59.9
20:54:28	73.4	85.1	52.9
20:55:28	74.8	87.7	52.8
20:56:28	70.3	79.0	52.8
20:57:28	65.2	73.3	54.0
20:58:28	72.8	81.0	54.2
20:59:28	68.9	70.2	67.2

15-minute LAeq **70.6**

Monitoring Location: Site D
Monitoring Date: 8/5/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:29:59	67.8	77.1	51.2
21:30:59	64.6	72.4	55.3
21:31:59	68.0	76.6	58.7
21:32:59	70.2	80.1	53.9
21:33:59	73.1	79.3	53.1
21:34:59	64.6	73.3	53.7
21:35:59	58.6	69.6	50.2
21:36:59	69.5	77.2	50.8
21:37:59	60.9	70.3	51.0
21:38:59	64.8	77.3	51.5
21:39:59	64.7	76.0	50.4
21:40:59	65.6	75.5	51.7
21:41:59	62.4	70.3	50.8
21:42:59	61.0	69.4	55.2
21:43:59	68.4	76.1	55.4
21:44:59	80.7	83.5	73.2

15-minute LAeq	**70.9**
	67.0

Monitoring Location: Site E
Monitoring Date: 8/5/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:48:43	63.7	70.8	53.4
21:49:43	70.4	77.9	62.1
21:50:43	63.2	70.7	53.4
21:51:43	66.3	76.5	55.3
21:52:43	70.3	82.7	51.9
21:53:43	68.3	75.7	59.5
21:54:43	58.3	64.8	48.7
21:55:43	63.7	70.1	51.2
21:56:43	68.2	77.8	48.5
21:57:43	59.6	69.3	50.3
21:58:43	64.6	73.8	47.1
21:59:43	68.9	75.7	49.0
22:00:43	63.4	71.0	52.9
22:01:43	65.4	74.2	51.2
22:02:43	64.0	73.3	54.4
22:03:43	54.6	55.5	54.2

15-minute LAeq **66.2**

Monitoring Location: Site F
Monitoring Date: 8/5/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:07:08	59.8	69.6	43.2
21:08:08	63.2	73.2	46.6
21:09:08	57.8	69.2	45.0
21:10:08	54.2	64.8	42.7
21:11:08	62.0	75.2	42.6
21:12:08	59.6	70.7	43.9
21:13:08	57.5	65.7	47.1
21:14:08	55.7	64.8	45.1
21:15:08	60.3	69.5	49.2
21:16:08	57.1	66.9	46.3
21:17:08	54.7	58.9	46.5
21:18:08	62.1	73.0	44.8
21:19:08	61.8	69.6	48.4
21:20:08	63.0	75.6	44.5
21:21:08	58.1	70.9	43.2
21:22:08	57.7	59.0	50.0

15-minute LAeq **59.9**

Monitoring Location: Site G
Monitoring Date: 8/5/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:27:12	60.7	67.7	43.9
20:28:12	59.4	69.2	48.0
20:29:12	61.1	67.4	49.6
20:30:12	63.3	70.8	49.4
20:31:12	61.9	71.7	48.8
20:32:12	55.0	61.2	42.8
20:33:12	62.9	72.1	46.1
20:34:12	48.9	58.5	41.8
20:35:12	60.2	67.6	44.1
20:36:12	66.5	80.2	48.2
20:37:12	60.8	68.2	47.9
20:38:12	65.6	72.5	50.5
20:39:12	55.3	66.2	41.8
20:40:12	92.0	105.4	46.9
20:41:12	62.0	69.2	49.9
20:42:12	60.4	67.7	54.0

15-minute LAeq	**80.0**
	61.5

Monitoring Location: Site H
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:40:17	46.7	52.2	43.4
20:41:17	51.4	58.8	43.4
20:42:17	53.2	60.5	47.3
20:43:17	56.2	63.1	44.5
20:44:17	56.1	65.7	44.9
20:45:17	51.1	57.0	45.8
20:46:17	56.1	61.3	49.0
20:47:17	66.0	74.1	46.7
20:48:17	47.5	52.6	44.0
20:49:17	53.5	63.4	45.2
20:50:17	55.2	61.7	44.7
20:51:17	52.2	59.3	44.0
20:52:17	53.2	61.2	44.1
20:53:17	46.6	56.2	42.9
20:54:17	52.0	58.8	43.0
20:55:17	56.0	56.9	55.0

15-minute LAeq **56.6**

Monitoring Location: Site I
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:14:41	54.3	63.7	48.9
21:15:41	60.6	72.2	50.7
21:16:41	54.1	61.5	50.1
21:17:41	65.1	73.7	50.6
21:18:41	54.4	59.7	49.3
21:19:41	56.4	66.2	50.2
21:20:41	62.7	72.9	52.9
21:21:41	59.2	72.8	51.4
21:22:41	55.8	63.6	52.0
21:23:41	55.8	64.1	50.1
21:24:41	53.4	60.1	49.5
21:25:41	56.6	69.2	49.6
21:26:41	55.2	59.8	51.3
21:27:41	57.8	65.0	49.6
21:28:41	54.9	63.5	49.6
21:29:41	55.0	57.4	51.6

15-minute LAeq **58.5**

Monitoring Location: Site J
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:53:54	67.9	76.9	49.4
20:54:54	68.3	74.0	49.9
20:55:54	66.6	72.8	52.3
20:56:54	65.2	72.1	50.9
20:57:54	71.9	76.1	56.9
20:58:54	71.0	79.1	56.9
20:59:54	69.5	74.3	56.6
21:00:54	71.3	83.4	54.5
21:01:54	69.5	76.7	54.0
21:02:54	66.6	72.3	58.4
21:03:54	68.9	75.7	56.1
21:04:54	72.7	78.2	54.4
21:05:54	66.7	76.1	51.0
21:06:54	67.3	73.7	53.2
21:07:54	68.6	75.9	52.1
21:08:54	61.7	67.7	51.4

15-minute LAeq **69.1**

Monitoring Location: Site K
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
20:15:47	62.4	68.0	53.4
20:16:47	59.9	69.9	52.5
20:17:47	65.4	74.5	55.2
20:18:47	63.1	73.8	52.6
20:19:47	60.9	69.7	52.3
20:20:47	62.2	68.8	52.7
20:21:47	61.3	70.8	51.0
20:22:47	62.9	70.0	51.1
20:23:47	67.2	76.7	53.1
20:24:47	62.7	71.1	56.6
20:25:47	60.3	66.0	51.8
20:26:47	57.8	68.9	48.3
20:27:47	60.5	69.0	51.0
20:28:47	64.5	76.2	53.7
20:29:47	58.1	68.2	49.9
20:30:47	68.8	69.2	68.0

15-minute LAeq **63.4**

Monitoring Location: Site L
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:05:20	69.6	75.9	58.5
21:06:20	73.4	78.3	62.9
21:07:20	72.5	81.8	55.9
21:08:20	70.8	80.1	56.7
21:09:20	71.0	82.0	48.7
21:10:20	76.0	84.2	55.8
21:11:20	69.4	76.6	59.0
21:12:20	76.1	85.3	51.8
21:13:20	70.8	78.6	52.5
21:14:20	68.7	78.3	55.5
21:15:20	70.8	76.9	49.7
21:16:20	78.5	92.7	59.8
21:17:20	65.7	76.1	43.3
21:18:20	73.2	82.4	49.7
21:19:20	72.3	81.0	58.1
21:20:20	59.1	61.5	58.7

15-minute LAeq **72.8**

Monitoring Location: Site M
Monitoring Date: 8/4/2020

Monitoring Period

Time	LAeq	LASmax	LASmin
21:28:34	68.0	79.9	45.2
21:29:34	71.3	78.9	53.1
21:30:34	70.2	80.2	53.3
21:31:34	65.7	73.2	55.7
21:32:34	72.0	79.4	49.7
21:33:34	61.8	74.4	41.1
21:34:34	63.8	76.6	44.2
21:35:34	69.0	79.1	47.6
21:36:34	68.9	79.1	54.7
21:37:34	68.8	76.9	46.1
21:38:34	66.5	74.4	45.7
21:39:34	45.8	51.8	42.6
21:40:34	67.4	78.5	41.4
21:41:34	69.6	81.5	47.4
21:42:34	65.1	75.9	48.0
21:43:34	51.2	51.6	49.5

15-minute LAeq **67.9**

Roadway Noise Levels

ROADWAY SEGMENT ADT - TYPICAL WEEKDAY NON-EVENT CONDITIONS ADJUSTED BASELINE WITHOUT ITC PROJECT

STREET	Facility Type	Segment		Adjusted Baseline - ADT			NB		SB		Total	Total				Total			
		From	To	NB/EB	SB/WB	Total	Daytime	Nighttime	Daytime	Nighttime		Daytime	MT	HT		Nighttime	MT	HT	
NORTH/SOUTH STREETS																			
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	9,883	11,102	20,985	595.6154667	105	669	118.4213333	1,264.70	1,226.76	22.76	15.18	223.84	217.12	4.03	2.69	
		Florence Av	Manchester Bl	11,991	12,689	24,680	722.6576	128	765	135.3493333	1,487.38	1,442.76	26.77	17.85	263.25	255.36	4.74	3.16	
		Manchester Bl	Spruce Av/Market St	9,482	9,880	19,362	571.4485333	101	595	105.3866667	1,166.88	1,131.88	21.00	14.00	206.53	200.33	3.72	2.48	
		Spruce Av/Market St	Arbor Vitae St	11,645	13,338	24,983	701.8053333	124	804	142.272	1,505.64	1,460.47	27.10	18.07	266.49	258.49	4.80	3.20	
		Arbor Vitae St	Hardy St	13,988	14,817	28,805	843.0101333	149	893	158.048	1,735.98	1,683.90	31.25	20.83	307.25	298.04	5.53	3.69	
		Hardy St	Century Bl	14,385	15,591	29,976	866.936	153	940	166.304	1,806.55	1,752.36	32.52	21.68	319.74	310.15	5.76	3.84	
Hawthorne Bl	Major Arterial	Century Bl	104th St	20,965	22,090	43,055	1263.490667	224	1,331	235.6266667	2,594.78	2,516.94	46.71	31.14	459.25	445.48	8.27	5.51	
		104th St	Lennox Bl	23,180	25,027	48,207	1396.981333	247	1,508	266.9546667	2,905.28	2,818.12	52.29	34.86	514.21	498.78	9.26	6.17	
Prairie Av	Major Arterial	Florence Av	Regent St	10,924	11,165	22,089	658.3530667	117	673	119.0933333	1,331.23	1,291.29	23.96	15.97	235.62	228.55	4.24	2.83	
		Regent St	Manchester Bl	11,194	10,963	22,157	674.6250667	119	661	116.9386667	1,335.33	1,295.27	24.04	16.02	236.34	229.25	4.25	2.84	
		Manchester Bl	Pincay Dr/Kelso St	14,038	15,213	29,251	846.0234667	150	917	162.272	1,762.86	1,709.97	31.73	21.15	312.01	302.65	5.62	3.74	
		Pincay Dr/Kelso St	Arbor Vitae St	19,733	19,220	38,953	1189.242133	210	1,158	205.0133333	2,347.57	2,277.14	42.26	28.17	415.50	403.03	7.48	4.99	
		Arbor Vitae St	Hardy St	16,480	16,066	32,546	993.1946667	176	968	171.3706667	1,961.44	1,902.60	35.31	23.54	347.16	336.74	6.25	4.17	
		Hardy St	97th St	17,433	17,520	34,953	1050.6288	186	1,056	186.88	2,106.50	2,043.31	37.92	25.28	372.83	361.65	6.71	4.47	
		97th St	Century Bl	17,433	17,520	34,953	1050.6288	186	1,056	186.88	2,106.50	2,043.31	37.92	25.28	372.83	361.65	6.71	4.47	
		Century Bl	102nd St	15,568	15,884	31,452	938.2314667	166	957	169.4293333	1,895.51	1,838.64	34.12	22.75	335.49	325.42	6.04	4.03	
		102nd St	104th St	15,734	16,220	31,954	948.2357333	168	978	173.0133333	1,925.76	1,867.99	34.66	23.11	340.84	330.62	6.14	4.09	
		104th St	Lennox Bl	16,139	16,424	32,563	972.6437333	172	990	175.1893333	1,962.46	1,903.59	35.32	23.55	347.34	336.92	6.25	4.17	
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	11,503	12,165	23,668	693.2474667	123	733	129.76	1,426.39	1,383.60	25.68	17.12	252.46	244.88	4.54	3.03	
		Manchester Bl	Pincay Dr/90th St	12,324	13,967	26,291	742.7264	131	842	148.9813333	1,584.47	1,536.94	28.52	19.01	280.44	272.02	5.05	3.37	
		Pincay Dr/90th St	Arbor Vitae St	14,899	17,120	32,019	897.9130667	159	1,032	182.6133333	1,929.68	1,871.79	34.73	23.16	341.54	331.29	6.15	4.10	
		Arbor Vitae St	Hardy St	14,521	16,351	30,872	875.1322667	155	985	174.4106667	1,860.55	1,804.74	33.49	22.33	329.30	319.42	5.93	3.95	
		Hardy St	Century Bl	14,978	16,704	31,682	902.6741333	160	1,007	178.176	1,909.37	1,852.09	34.37	22.91	337.94	327.80	6.08	4.06	
		Century Bl	104th St	13,087	14,441	27,528	788.7098667	140	870	154.0373333	1,659.02	1,609.25	29.86	19.91	293.63	284.82	5.29	3.52	
Market St	Minor Arterial	Florence Av	Regent St	1,526	1,693	3,219	91.96693333	16	102	18.05866667	194.00	188.18	3.49	2.33	34.34	33.31	0.62	0.41	
		Regent St	Manchester Bl	3,540	4,250	7,790	213.344	38	256	45.33333333	469.48	455.39	8.45	5.63	83.09	80.60	1.50	1.00	
Myrtle Av	Collector	Arbor Vitae St	Hardy St	1,753	2,128	3,881	105.6474667	19	128	22.69866667	233.89	226.88	4.21	2.81	41.40	40.16	0.75	0.50	
Doty Av	Collector	Century Bl	104th St	2,812	2,745	5,557	169.4698667	30	165	29.28	334.90	324.85	6.03	4.02	59.27	57.50	1.07	0.71	
Yukon Av	Collector	Century Bl	104th St	5,068	5,375	10,443	305.4314667	54	324	57.33333333	629.36	610.48	11.33	7.55	111.39	108.05	2.01	1.34	
Locust St	Collector	Florence Av	Manchester Bl	1,859	1,869	3,728	112.0357333	20	113	19.936	224.67	217.93	4.04	2.70	39.77	38.57	0.72	0.48	
EAST/WEST STREETS																			
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	12,891	12,875	25,766	776.8976	138	776	137.3333333	1,552.83	1,506.25	27.95	18.63	274.84	266.59	4.95	3.30	
Florence Av	Major Arterial	Fir Av	La Brea Av	8,467	8,368	16,835	510.2778667	90	504	89.25866667	1,014.59	984.15	18.26	12.18	179.57	174.19	3.23	2.15	
		La Brea Av	Market St	10,817	10,225	21,042	651.9045333	115	616	109.0666667	1,268.13	1,230.09	22.83	15.22	224.45	217.71	4.04	2.69	
		Market St	Centinela Av	12,398	12,098	24,496	747.1861333	132	729	129.0453333	1,476.29	1,432.00	26.57	17.72	261.29	253.45	4.70	3.14	
		Centinela Av	Prairie Av	20,387	20,353	40,740	1228.656533	217	1,227	217.0986667	2,455.26	2,381.61	44.19	29.46	434.56	421.52	7.82	5.21	
		Prairie Ave	West Bl	20,052	20,041	40,093	1208.4672	214	1,208	213.7706667	2,416.27	2,343.78	43.49	29.00	427.66	414.83	7.70	5.13	
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	10,586	10,849	21,435	637.9829333	113	654	115.7226667	1,291.82	1,253.06	23.25	15.50	228.64	221.78	4.12	2.74	
		La Brea Av	Market St	10,741	10,992	21,733	647.3242667	115	662	117.248	1,309.78	1,270.48	23.58	15.72	231.82	224.86	4.17	2.78	
		Market St	Locust St	9,360	9,461	18,821	564.096	100	570	100.9173333	1,134.28	1,100.25	20.42	13.61	200.76	194.73	3.61	2.41	
		Locust St	Hillcrest Bl	9,966	10,224	20,190	600.6176	106	616	109.056	1,216.78	1,180.28	21.90	14.60	215.36	208.90	3.88	2.58	
		Hillcrest Bl	Spruce Av	12,395	12,110	24,505	747.0053333	132	730	129.1733333	1,476.83	1,432.53	26.58	17.72	261.39	253.55	4.70	3.14	
		Spruce Av	Prairie Av	14,335	14,400	28,735	863.9226667	153	868	153.6	1,731.76	1,679.81	31.17	20.78	306.51	297.31	5.52	3.68	
		Prairie Av	Kareem Ct	15,213	16,761	31,974	916.8368	162	1,010	178.784	1,926.97	1,869.16	34.69	23.12	341.06	330.82	6.14	4.09	
		Kareem Ct	Crenshaw Dr	17,986	18,762	36,748	1083.956267	192	1,131	200.128	2,214.68	2,148.24	39.86	26.58	391.98	380.22	7.06	4.70	
		Crenshaw Dr	Crenshaw Bl	13,549	14,346	27,895	816.5530667	145	865	153.024	1,681.14	1,630.70	30.26	20.17	297.55	288.62	5.36	3.57	
		Crenshaw Bl	Van Ness Av	14,947	16,264	31,211	900.8058667	159	980	173.4826667	1,880.98	1,824.55	33.86	22.57	332.92	322.93	5.99	4.00	
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	6,542	7,209	13,751	394.2645333	70	434	76.896	828.73	803.87	14.92	9.94	146.68	142.28	2.64	1.76	
		La Brea Av	Myrtle Av	4,723	4,528	9,251	284.6394667	50	273	48.29866667	557.53	540.80	10.04	6.69	98.68	95.72	1.78	1.18	
		Myrtle Av	Prairie Av	4,181	4,245	8,426	251.9749333	45	256	45.28	507.81	492.57	9.14	6.09	89.88	87.18	1.62	1.08	
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	25,463	25,146	50,609	1534.570133	272	1,515	268.224	3,050.04	2,958.53	54.90	36.60	539.83	523.63	9.72	6.48	
		La Brea Av/Hawthorne Bl	Myrtle Av	20,802	20,477	41,279	1253.6672	222	1,234	218.4213333	2,487.75	2,413.12	44.78	29.85	440.31	427.10	7.93	5.28	
		Myrtle Av	Freeman Av	19,330	18,567	37,897	1164.954667	206	1,119	198.048	2,283.93	2,215.41	41.11	27.41	404.23	392.11	7.28	4.85	
		Freeman Av	Prairie Av	16,823	16,366	33,189	1013.866133	179	986	174.5706667	2,000.19	1,940.18	36.00	24.00	354.02	343.40	6.37	4.25	
		Prairie Av	Doty Av	20,647	20,426	41,073	1244.325867	220	1,231	217.8773333	2,475.33	2,401.07	44.56	29.70	438.11	424.97	7.89	5.26	
		Doty Av	HP Casino Dr	21,464	20,906	42,370	1293.563733	229	1,260	222.9973333	2,553.50	2,476.89	45.96	30.64	451.95	438.39	8.14	5.42	
		HP Casino Dr	Yukon Av	21,464	20,906	42,370	1293.563733	229	1,260	222.9973333	2,553.50	2,476.89	45.96	30.64	451.95	438.39	8.14	5.42	
		Yukon Av	Club Dr	20,470	20,683	41,153	1233.658667	218	1,246	220.6186667	2,480.15	2,405.75	44.64	29.76	438.97	425.80	7.90	5.27	
		Club Dr	Crenshaw Bl	21,605	21,559	43,164	1302.061333	230	1,299	229.9626667	2,601.35	2,523.31	46.82	31.22	460.42	446.60	8.29	5.52	
		Crenshaw Bl	Van Ness Av	18,536	18,097	36,633	1117.102933	198	1,091	193.0346667	2,207.75	2,141.52	39.74	26.49	390.75	379.03	7.03	4.69	
Regent St	Collector	Grevillea Av	La Brea Av	2,676	2,523	5,199	161.2736	29	152	26.912	313.33	303.93	5.64	3.76	55.46	53.79	1.00	0.67	
		La Brea Av	Market St	8,193	7,982	16,175	493.7648	87	481	85.14133333	974.81	945.57	17.55	11.70	172.53	167.36	3.11	2.07	
		Market St	Prairie Ave	3,913	4,286	8,199	235.8234667	42	258	45.71733333	494.13	479.30	8.89	5.93	87.46	84.83	1.57	1.05	
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	4,289	4,412	8,701	258.4837333	46	266	47.06133333	524.38	508.65	9.44	6.29	92.81	90.03	1.67	1.11	
		La Brea Av	Market St	3,830	3,457	7,287	230.8213333	41	208	36.87466667	439.16	425.99	7.90	5.27	77.73	75.40	1.40	0.93	
		Market St	Nutwood St / Locust St	4,530	4,530	9,060	273.008	48	273	48.32	546.02	529.64	9.83	6.55	96.64	93.74	1.74	1.16	
		Nutwood St / Locust St	Manchester Bl	2,597	2,421	5,018	156.5125333	28	146	25.824	302.42	293.35	5.44	3.63	53.53	51.92	0.96	0.64	
		Manchester Bl	Florence Av	3,873	4,073	7,946	233.4128	41	245	43.44533333	478.88	464.51	8.62	5.75	84.76	82.21	1.53	1.02	
Spruce Av	Collector	La Brea Av	Manchester Av	1,301	1,658	2,959	78.40693333	14	100	17.68533333	178.33	172.98	3.21	2.14	31.56	30.62	0.57	0.38	
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	2,637	2,955	5,592	158.9232	28	178	31.52	337.01	326.90	6.07	4.04	59.65	57.86	1.07	0.72	
		Prairie Av	Kareem Ct	10,340	8,798	19,138	623.1573333	110	530	93.84533333	1,153.38	1,118.78	20.76	13.84	204.14	198.01	3.67	2.45	
		Kareem Ct	Crenshaw Bl	7,567	6,797	14,364	456.0378667	81	410	72.50133333	865.67	839.70	15.58	10.39	153.22	148.62	2.76	1.84	
Hardy St	Collector	La Brea Av	Prairie Ave	2,264	2,472	4,736	136.4437333	24	149	26.368	285.42	276.86	5.14	3.43	50.52	49.00	0.91	0.61	
104th St	Collector	Grevillea Av	Hawthorne Bl	3,576	3,283	6,859	215.5136	38	198	35.01866667	413.37	400.97	7.44	4.96	73.16	70.97	1.32	0.88	
		Hawthorne Bl	Prairie Ave	1,920	2,182	4,102	115.712	20	132	23.27466667	247.21	239.80	4.45	2.97	43.75	42.44	0.79	0.53	
		Prairie Av	Doty Av	1,858	1,723	3,581	111.9754667	20	104	18.37866667	215.81	209.34	3.88	2.59	38.20	37.05	0.69	0.46	

ROADWAY SEGMENT ADT - TYPICAL WEEKDAY NON-EVENT CONDITIONS
ADJUSTED BASELINE WITH ITC PROJECT

STREET	Facility Type	Segment		Adjusted Baseline - ADT w/Project		
		From	To	NB/EB	SB/WB	Total
NORTH/SOUTH STREETS						
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	9,712	10,931	20,643
		Florence Av	Manchester Bl	11,810	12,510	24,320
		Manchester Bl	Spruce Av/Market St	9,410	9,814	19,224
		Spruce Av/Market St	Arbor Vitae St	11,283	13,012	24,295
		Arbor Vitae St	Hardy St	13,642	14,587	28,229
		Hardy St	Century Bl	14,134	15,372	29,506
Hawthorne Bl	Major Arterial	Century Bl	104th St	20,764	21,918	42,682
		104th St	Lennox Bl	23,014	24,890	47,904
Prairie Av	Major Arterial	Florence Av	Regent St	10,768	10,987	21,755
		Regent St	Manchester Bl	11,023	10,774	21,797
		Manchester Bl	Pincay Dr/Kelso St	13,592	14,697	28,289
		Pincay Dr/Kelso St	Arbor Vitae St	19,169	18,598	37,767
		Arbor Vitae St	Hardy St	15,845	15,181	31,026
		Hardy St	97th St	16,781	16,711	33,492
		97th St	Century Bl	16,781	16,711	33,492
		Century Bl	102nd St	15,170	15,449	30,619
		102nd St	104th St	15,347	15,792	31,139
		104th St	Lennox Bl	15,804	16,053	31,857
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	11,375	12,048	23,423
		Manchester Bl	Pincay Dr/90th St	12,222	13,886	26,108
		Pincay Dr/90th St	Arbor Vitae St	14,752	17,004	31,756
		Arbor Vitae St	Hardy St	14,364	16,228	30,592
		Hardy St	Century Bl	14,810	16,575	31,385
		Century Bl	104th St	12,947	14,301	27,248
Market St	Minor Arterial	Florence Av	Regent St	1,510	1,688	3,198
		Regent St	Manchester Bl	3,503	4,224	7,727
Myrtle Av	Collector	Arbor Vitae St	Hardy St	1,538	2,017	3,555
Doty Av	Collector	Century Bl	104th St	2,758	2,695	5,453
Yukon Av	Collector	Century Bl	104th St	4,956	5,257	10,213
Locust St	Collector	Florence Av	Manchester Bl	1,840	1,851	3,691
EAST/WEST STREETS						
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	12,725	12,714	25,439
Florence Av	Major Arterial	Fir Av	La Brea Av	8,448	8,349	16,797
		La Brea Av	Market St	10,812	10,223	21,035
		Market St	Centinela Av	12,284	11,997	24,281
		Centinela Av	Prairie Av	20,241	20,225	40,466
		Prairie Ave	West Bl	19,936	19,921	39,857
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	10,349	10,606	20,955
		La Brea Av	Market St	10,403	10,670	21,073
		Market St	Locust St	9,028	9,152	18,180
		Locust St	Hillcrest Bl	9,644	9,923	19,567
		Hillcrest Bl	Spruce Av	11,913	11,960	23,873
		Spruce Av	Prairie Av	13,945	14,038	27,983
		Prairie Av	Kareem Ct	14,934	16,454	31,388
		Kareem Ct	Crenshaw Dr	17,672	18,434	36,106
		Crenshaw Dr	Crenshaw Bl	13,278	14,060	27,338
		Crenshaw Bl	Van Ness Av	14,711	16,024	30,735
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	6,280	6,948	13,228
		La Brea Av	Myrtle Av	4,513	4,400	8,913
		Myrtle Av	Prairie Av	3,887	4,139	8,026
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	25,229	24,903	50,132
		La Brea Av/Hawthorne Bl	Myrtle Av	20,601	20,266	40,867
		Myrtle Av	Freeman Av	19,251	18,402	37,653
		Freeman Av	Prairie Av	16,743	16,199	32,942
		Prairie Av	Doty Av	20,214	20,025	40,239
		Doty Av	HP Casino Dr	21,018	20,504	41,522
		HP Casino Dr	Yukon Av	21,018	20,504	41,522
		Yukon Av	Club Dr	20,023	20,260	40,283
		Club Dr	Crenshaw Bl	21,124	21,110	42,234
		Crenshaw Bl	Van Ness Av	18,243	17,797	36,040
Regent St	Collector	Grevillea Av	La Brea Av	2,636	2,485	5,121
		La Brea Av	Market St	8,099	7,886	15,985
		Market St	Prairie Ave	3,861	4,232	8,093
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	4,220	4,342	8,562
		La Brea Av	Market St	3,760	3,387	7,147
		Market St	Nutwood St / Locust St	4,324	4,323	8,647
		Nutwood St / Locust St	Manchester Bl	2,288	2,419	4,707
		Manchester Bl	Florence Av	3,719	3,917	7,636
Spruce Av	Collector	La Brea Av	Manchester Av	1,057	1,411	2,468
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	2,521	2,835	5,356
		Prairie Av	Kareem Ct	10,140	8,606	18,746
		Kareem Ct	Crenshaw Bl	7,402	6,626	14,028
Hardy St	Collector	La Brea Av	Prairie Ave	1,854	1,952	3,806
104th St	Collector	Grevillea Av	Hawthorne Bl	3,540	3,246	6,786
		Hawthorne Bl	Prairie Ave	1,919	2,181	4,100
		Prairie Av	Doty Av	1,817	1,684	3,501

ROADWAY SEGMENT ADT - WEEKDAY NFL GAME EVENT CONDITIONS
FUTURE (2026) WITHOUT ITC PROJECT

STREET	Facility Type	Segment		Future (2026) ADT w/o Project			NFL Event ADT w/o Project			Future (2026) + NFL Event ADT w/o Project		
		From	To	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total
NORTH/SOUTH STREETS												
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	13,159	12,909	26,068	77	77	154	13,236	12,986	26,222
		Florence Av	Manchester Bl	15,366	14,581	29,947	311	184	495	15,677	14,765	30,442
		Manchester Bl	Spruce Av/Market St	13,087	12,029	25,116	128	128	256	13,215	12,157	25,372
		Spruce Av/Market St	Arbor Vitae St	16,653	17,222	33,875	328	328	656	16,981	17,550	34,531
		Arbor Vitae St	Hardy St	16,303	16,208	32,511	485	434	919	16,788	16,642	33,430
		Hardy St	Century Bl	17,867	18,279	36,146	576	525	1,101	18,443	18,804	37,247
Hawthorne Bl	Major Arterial	Century Bl	104th St	26,658	26,772	53,430	505	303	808	27,163	27,075	54,238
		104th St	Lennox Bl	28,713	29,990	58,703	505	303	808	29,218	30,293	59,511
Prairie Av	Major Arterial	Florence Av	Regent St	11,321	13,382	24,703	343	923	1,266	11,664	14,305	25,969
		Regent St	Manchester Bl	11,311	12,703	24,014	343	923	1,266	11,654	13,626	25,280
		Manchester Bl	Pincay Dr/Kelso St	16,316	18,732	35,048	2,415	1,804	4,219	18,731	20,536	39,267
		Pincay Dr/Kelso St	Arbor Vitae St	19,520	20,594	40,114	1,565	903	2,468	21,085	21,497	42,582
		Arbor Vitae St	Hardy St	17,529	18,375	35,904	1,445	1,053	2,498	18,974	19,428	38,402
		Hardy St	97th St	20,311	21,778	42,089	2,795	2,184	4,979	23,106	23,962	47,068
		97th St	Century Bl	20,311	21,778	42,089	2,795	2,184	4,979	23,106	23,962	47,068
		Century Bl	102nd St	16,858	18,861	35,719	4,557	2,077	6,634	21,415	20,938	42,353
		102nd St	104th St	16,597	18,888	35,485	5,360	2,816	8,176	21,957	21,704	43,661
		104th St	Lennox Bl	16,724	18,834	35,558	5,360	2,817	8,177	22,084	21,651	43,735
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	13,261	14,181	27,442	521	1,392	1,913	13,782	15,573	29,355
		Manchester Bl	Pincay Dr/90th St	14,044	16,150	30,194	1,152	4,042	5,194	15,196	20,192	35,388
		Pincay Dr/90th St	Arbor Vitae St	17,415	20,170	37,585	3,783	3,613	7,396	21,198	23,783	44,981
		Arbor Vitae St	Hardy St	16,831	18,993	35,824	3,783	3,613	7,396	20,614	22,606	43,220
		Hardy St	Century Bl	17,545	19,586	37,131	3,783	3,613	7,396	21,328	23,199	44,527
		Century Bl	104th St	15,677	17,644	33,321	3,536	4,476	8,012	19,213	22,120	41,333
Market St	Minor Arterial	Florence Av	Regent St	2,252	2,272	4,524	0	0	0	2,252	2,272	4,524
		Regent St	Manchester Bl	4,221	5,146	9,367	0	0	0	4,221	5,146	9,367
Myrtle Av	Collector	Arbor Vitae St	Hardy St	2,207	2,429	4,636	0	0	0	2,207	2,429	4,636
Doty Av	Collector	Century Bl	104th St	4,864	5,150	10,014	104	104	208	4,968	5,254	10,222
Yukon Av	Collector	Century Bl	104th St	6,080	5,629	11,709	75	75	150	6,155	5,704	11,859
Locust St	Collector	Florence Av	Manchester Bl	2,494	2,521	5,015	310	310	620	2,804	2,831	5,635
EAST/WEST STREETS												
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	14,396	14,178	28,574	79	30	109	14,475	14,208	28,683
Florence Av	Major Arterial	Fir Av	La Brea Av	9,781	9,486	19,267	1,917	416	2,333	11,698	9,902	21,600
		La Brea Av	Market St	13,127	10,555	23,682	1,948	447	2,395	15,075	11,002	26,077
		Market St	Centinela Av	15,860	13,555	29,415	2,060	559	2,619	17,920	14,114	32,034
		Centinela Av	Prairie Av	23,694	21,774	45,468	2,090	638	2,728	25,784	22,412	48,196
		Prairie Ave	West Bl	23,124	23,028	46,152	1,167	295	1,462	24,291	23,323	47,614
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	12,284	12,463	24,747	1,877	3,453	5,330	14,161	15,916	30,077
		La Brea Av	Market St	12,385	12,471	24,856	1,807	3,510	5,317	14,192	15,981	30,173
		Market St	Locust St	9,640	9,650	19,290	1,807	3,510	5,317	11,447	13,160	24,607
		Locust St	Hillcrest Bl	11,702	11,955	23,657	1,671	3,374	5,045	13,373	15,329	28,702
		Hillcrest Bl	Spruce Av	15,128	15,086	30,214	1,671	3,374	5,045	16,799	18,460	35,259
		Spruce Av	Prairie Av	17,038	17,326	34,364	1,671	3,374	5,045	18,709	20,700	39,409
		Prairie Av	Kareem Ct	17,716	18,782	36,498	1,421	2,269	3,690	19,137	21,051	40,188
		Kareem Ct	Crenshaw Dr	23,000	22,912	45,912	3,282	681	3,963	26,282	23,593	49,875
		Crenshaw Dr	Crenshaw Bl	16,422	16,876	33,298	3,293	692	3,985	19,715	17,568	37,283
		Crenshaw Bl	Van Ness Av	17,365	18,466	35,831	2,412	1,830	4,242	19,777	20,296	40,073
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	7,894	8,434	16,328	17	17	34	7,911	8,451	16,362
		La Brea Av	Myrtle Av	6,970	6,850	13,820	368	317	685	7,338	7,167	14,505
		Myrtle Av	Prairie Av	5,820	6,134	11,954	368	317	685	6,188	6,451	12,639
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	30,502	30,599	61,101	3,494	4,059	7,553	33,996	34,658	68,654
		La Brea Av/Hawthorne Bl	Myrtle Av	24,723	24,523	49,246	3,463	3,877	7,340	28,186	28,400	56,586
		Myrtle Av	Freeman Av	23,646	22,815	46,461	3,464	3,877	7,341	27,110	26,692	53,802
		Freeman Av	Prairie Av	20,974	20,798	41,772	3,464	3,877	7,341	24,438	24,675	49,113
		Prairie Av	Doty Av	25,708	26,073	51,781	3,824	2,305	6,129	29,532	28,378	57,910
		Doty Av	HP Casino Dr	25,565	25,906	51,471	3,720	2,201	5,921	29,285	28,107	57,392
		HP Casino Dr	Yukon Av	25,409	26,307	51,716	3,720	2,201	5,921	29,129	28,508	57,637
		Yukon Av	Club Dr	23,925	24,239	48,164	3,706	2,187	5,893	27,631	26,426	54,057
		Club Dr	Crenshaw Bl	25,118	24,744	49,862	3,706	2,187	5,893	28,824	26,931	55,755
		Crenshaw Bl	Van Ness Av	21,489	21,018	42,507	2,082	1,673	3,755	23,571	22,691	46,262
Regent St	Collector	Grevillea Av	La Brea Av	3,840	3,650	7,490	0	0	0	3,840	3,650	7,490
		La Brea Av	Market St	9,504	9,370	18,874	0	0	0	9,504	9,370	18,874
		Market St	Prairie Ave	4,265	4,924	9,189	0	0	0	4,265	4,924	9,189
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	5,508	5,852	11,360	0	0	0	5,508	5,852	11,360
		La Brea Av	Market St	4,670	4,379	9,049	0	0	0	4,670	4,379	9,049
		Market St	Nutwood St / Locust St	5,151	5,564	10,715	200	200	400	5,351	5,764	11,115
		Nutwood St / Locust St	Manchester Bl	3,206	3,364	6,570	0	0	0	3,206	3,364	6,570
		Manchester Bl	Florence Av	4,952	5,304	10,256	0	0	0	4,952	5,304	10,256
Spruce Av	Collector	La Brea Av	Manchester Av	3,903	4,250	8,153	0	0	0	3,903	4,250	8,153
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	3,558	3,692	7,250	0	0	0	3,558	3,692	7,250
		Prairie Av	Kareem Ct	12,135	10,917	23,052	952	901	1,853	13,087	11,818	24,905
		Kareem Ct	Crenshaw Bl	9,828	8,977	18,805	2,986	6,047	9,033	12,814	15,024	27,838
Hardy St	Collector	La Brea Av	Prairie Ave	3,620	3,750	7,370	0	0	0	3,620	3,750	7,370
104th St	Collector	Grevillea Av	Hawthorne Bl	4,505	3,821	8,326	0	0	0	4,505	3,821	8,326
		Hawthorne Bl	Prairie Ave	2,492	2,660	5,152	0	0	0	2,492	2,660	5,152
		Prairie Av	Doty Av	3,557	3,266	6,823	0	0	0	3,557	3,266	6,823

NB		SB		Total	Daytime	MT	HT	Total	Nighttime	MT	HT
Daytime	Nighttime										
797.69	141.184	782.6229	138.5173	1,580.31	1,532.90	28.45	18.96	279.70	271.31	5.03	3.36
944.801	167.221	889.8373	157.4933	1,834.64	1,779.60	33.02	22.02	324.71	314.97	5.84	3.90
796.424	140.96	732.6619	129.6747	1,529.09	1,483.21	27.52	18.35	270.63	262.52	4.87	3.25
1023.39	181.131	1057.68	187.2	2,081.07	2,018.64	37.46	24.97	368.33	357.28	6.63	4.42
1011.76	179.072	1002.958	177.5147	2,014.71	1,954.27	36.26	24.18	356.59	345.89	6.42	4.28
1111.5	196.725	1133.254	200.576	2,244.75	2,177.41	40.41	26.94	397.30	385.38	7.15	4.77
1637.02	289.739	1631.72	288.8	3,268.74	3,170.68	58.84	39.22	578.54	561.18	10.41	6.94
1760.87	311.659	1825.658	323.1253	3,586.53	3,478.93	64.56	43.04	634.78	615.74	11.43	7.62
702.95	124.416	862.1147	152.5867	1,565.07	1,518.11	28.17	18.78	277.00	268.69	4.99	3.32
702.348	124.309	821.1936	145.344	1,523.54	1,477.84	27.42	18.28	269.65	261.56	4.85	3.24
1128.85	199.797	1237.636	219.0507	2,366.49	2,295.50	42.60	28.40	418.85	406.28	7.54	5.03
1270.72	224.907	1295.553	229.3013	2,566.28	2,489.29	46.19	30.80	454.21	440.58	8.18	5.45
1143.5	202.389	1170.861	207.232	2,314.36	2,244.93	41.66	27.77	409.62	397.33	7.37	4.92
1392.52	246.464	1444.11	255.5947	2,836.63	2,751.53	51.06	34.04	502.06	487.00	9.04	6.02
1392.52	246.464	1444.11	255.5947	2,836.63	2,751.53	51.06	34.04	502.06	487.00	9.04	6.02
1290.61	228.427	1261.863	223.3387	2,552.47	2,475.90	45.94	30.63	451.77	438.21	8.13	5.42
1323.28	234.208	1308.028	231.5093	2,631.30	2,552.36	47.36	31.58	465.72	451.75	8.38	5.59
1330.93	235.563	1304.834	230.944	2,635.76	2,556.69	47.44	31.63	466.51	452.51	8.40	5.60
830.595	147.008	938.5328	166.112	1,769.13	1,716.05	31.84	21.23	313.12	303.73	5.64	3.76
915.812	162.091	1216.905	215.3813	2,132.72	2,068.74	38.39	25.59	377.47	366.15	6.79	4.53
1277.53	226.112	1433.322	253.6853	2,710.85	2,629.53	48.80	32.53	479.80	465.40	8.64	5.76
1242.34	219.883	1362.388	241.1307	2,604.73	2,526.58	46.89	31.26	461.01	447.18	8.30	5.53
1285.37	227.499	1398.126	247.456	2,683.49	2,602.99	48.30	32.20	474.95	460.71	8.55	5.70
1157.9	204.939	1333.099	235.9467	2,491.00	2,416.27	44.84	29.89	440.89	427.66	7.94	5.29
135.721	24.0213	136.9259	24.23467	272.65	264.47	4.91	3.27	48.26	46.81	0.87	0.58
254.386	45.024	310.1323	54.89067	564.52	547.58	10.16	6.77	99.91	96.92	1.80	1.20
133.009	23.5413	146.3877	25.90933	279.40	271.01	5.03	3.35	49.45	47.97	0.89	0.59
299.405	52.992	316.6411	56.04267	616.05	597.56	11.09	7.39	109.03	105.76	1.96	1.31
370.941	65.6533	343.7611	60.84267	714.70	693.26	12.86	8.58	126.50	122.70	2.28	1.52
168.988	29.9093	170.6149	30.19733	339.60	329.41	6.11	4.08	60.11	58.30	1.08	0.72
872.36	154.4	856.2688	151.552	1,728.63	1,676.77	31.12	20.74	305.95	296.77	5.51	3.67
704.999	124.779	596.7605	105.6213	1,301.76	1,262.71	23.43	15.62	230.40	223.49	4.15	2.76
908.52	160.8	663.0539	117.3547	1,571.57	1,524.43	28.29	18.86	278.15	269.81	5.01	3.34
1079.98	191.147	850.6037	150.5493	1,930.58	1,872.66	34.75	23.17	341.70	331.45	6.15	4.10
1553.92	275.029	1350.697	239.0613	2,904.61	2,817.47	52.28	34.86	514.09	498.67	9.25	6.17
1463.94	259.104	1405.599	248.7787	2,869.54	2,783.45	51.65	34.43	507.88	492.65	9.14	6.09
853.436	151.051	959.2043	169.7707	1,812.64	1,758.26	32.63	21.75	320.82	311.20	5.77	3.85
855.305	151.381	963.1216	170.464	1,818.43	1,763.87	32.73	21.82	321.85	312.19	5.79	3.86
689.873	122.101	793.1093	140.3733	1,482.98	1,438.49	26.69	17.80	262.47	254.60	4.72	3.15
805.946	142.645	923.8277	163.5093	1,729.77	1,677.88	31.14	20.76	306.15	296.97	5.51	3.67
1012.42	179.189	1112.523	196.9067	2,124.94	2,061.19	38.25	25.50	376.10	364.81	6.77	4.51
1127.53	199.563	1247.52	220.8	2,375.05	2,303.80	42.75	28.50	420.36	407.75	7.57	5.04
1153.32	204.128	1268.674	224.544	2,422.00	2,349.34	43.60	29.06	428.67	415.81	7.72	5.14
1583.93	280.341	1421.871	251.6587	3,005.80	2,915.63	54.10	36.07	532.00	516.04	9.58	6.38
1188.16	210.293	1058.765	187.392	2,246.92	2,179.51	40.44	26.96	397.69	385.75	7.16	4.77
1191.89	210.955	1223.172	216.4907	2,415.07	2,342.61	43.47	28.98	427.45	414.62	7.69	5.13
476.77	84.384	509.3136	90.144	986.08	956.50	17.75	11.83	174.53	169.29	3.14	2.09
442.237	78.272	431.9312	76.448	874.17	847.94	15.74	10.49	154.72	150.08	2.78	1.86
372.93	66.0053	388.7803	68.81067	761.71	738.86	13.71	9.14	134.82	130.77	2.43	1.62
2048.83	362.624	2088.722	369.6853	4,137.55	4,013.42	74.48	49.65	732.31	710.34	13.18	8.79
1698.68	300.651	1711.573	302.9333	3,410.25	3,307.94	61.38	40.92	603.58	585.48	10.86	7.24
1633.83	289.173	1608.638	284.7147	3,242.47	3,145.19	58.36	38.91	573.89	556.67	10.33	6.89
1472.8	260.672	1487.08	263.2	2,959.88	2,871.08	53.28	35.52	523.87	508.16	9.43	6.29
1779.8	315.008	1710.247	302.6987	3,490.04	3,385.34	62.82	41.88	617.71	599.18	11.12	7.41
1764.91	312.373	1693.915	299.808	3,458.82	3,355.06	62.26	41.51	612.18	593.82	11.02	7.35
1755.51	310.709	1718.082	304.0853	3,473.59	3,369.38	62.52	41.68	614.79	596.35	11.07	7.38
1665.23	294.731	1592.607	281.8773	3,257.84	3,160.10	58.64	39.09	576.61	559.31	10.38	6.92
1737.13	307.456	1623.042	287.264	3,360.17	3,259.36	60.48	40.32	594.72	576.88	10.70	7.14
1420.55	251.424	1367.511	242.0373	2,788.06	2,704.41	50.19	33.46	493.46	478.66	8.88	5.92
231.424	40.96	219.9733	38.93333	451.40	437.86	8.13	5.42	79.89	77.50	1.44	0.96
572.774	101.376	564.6987	99.94667	1,137.47	1,103.35	20.47	13.65	201.32	195.28	3.62	2.42
257.037	45.4933	296.7531	52.52267	553.79	537.18	9.97	6.65	98.02	95.08	1.76	1.18
331.949	58.752	352.6805	62.42133	684.63	664.09	12.32	8.22	121.17	117.54	2.18	1.45
281.445	49.8133	263.9077	46.70933	545.35	528.99	9.82	6.54	96.52	93.63	1.74	1.16
322.487	57.0773	347.3771	61.48267	669.86	649.77	12.06	8.04	118.56	115.00	2.13	1.42
193.215	34.1973	202.7371	35.88267	395.95	384.07	7.13	4.75	70.08	67.98	1.26	0.84
298.441	52.8213	319.6544	56.576	618.09	599.55	11.13	7.42	109.40	106.12	1.97	1.31
235.221	41.632	256.1333	45.33333	491.35	476.61	8.84	5.90	86.97	84.36	1.57	1.04
214.429	37.952	222.5045	39.38133	436.93	423.83	7.86	5.24	77.33	75.01	1.39	0.93
788.71	139.595	712.2315	126.0587	1,500.94	1,455.91	27.02	18.01	265.65	257.68	4.78	3.19
772.257	136.683	905.4464	160.256	1,677.70	1,627.37	30.20	20.13	296.94	288.03	5.34	3.56
218.165	38.6133	226	40	444.17	430.84	7.99	5.33	78.61	76.25	1.42	0.94
271.501	48.0533	230.2789	40.75733	501.78	486.73	9.03	6.02	88.81	86.15	1.60	1.07
150.185	26.5813	160.3093	28.37333	310.49	301.18	5.59	3.73	54.95	53.31	0.99	0.66
214.369	37.9413	196.8309	34.83733	411.20	398.86	7.40	4.93	72.78	70.60	1.31	0.87

TABLE 8
ROADWAY SEGMENT ADT - WEEKDAY NFL GAME EVENT CONDITIONS
FUTURE (2026) WITH ITC PROJECT

STREET	Facility Type	Segment		Future (2026) ADT w/Project			NFL Event ADT w/Project			Future (2026) + NFL Event ADT w/Project		
		From	To	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total
NORTH/SOUTH STREETS												
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	12,958	12,707	25,665	70	69	139	13,028	12,776	25,804
		Florence Av	Manchester Bl	15,152	14,372	29,524	279	165	444	15,431	14,537	29,968
		Manchester Bl	Spruce Av/Market St	12,977	11,930	24,907	116	114	230	13,093	12,044	25,137
		Spruce Av/Market St	Arbor Vitae St	16,225	16,830	33,055	297	295	592	16,522	17,125	33,647
		Arbor Vitae St	Hardy St	15,943	15,961	31,904	434	387	821	16,377	16,348	32,725
		Hardy St	Century Bl	17,575	18,022	35,597	515	468	983	18,090	18,490	36,580
Hawthorne Bl	Major Arterial	Century Bl	104th St	26,413	26,551	52,964	375	271	646	26,788	26,822	53,610
		104th St	Lennox Bl	28,504	29,804	58,308	375	271	646	28,879	30,075	58,954
Prairie Av	Major Arterial	Florence Av	Regent St	11,119	13,159	24,278	230	759	989	11,349	13,918	25,267
		Regent St	Manchester Bl	11,093	12,467	23,560	230	759	989	11,323	13,226	24,549
		Manchester Bl	Pincay Dr/Kelso St	15,771	18,117	33,888	2,070	1,651	3,721	17,841	19,768	37,609
		Pincay Dr/Kelso St	Arbor Vitae St	18,890	19,892	38,782	1,400	852	2,252	20,290	20,744	41,034
		Arbor Vitae St	Hardy St	16,810	17,413	34,223	1,294	913	2,207	18,104	18,326	36,430
		Hardy St	97th St	19,517	20,827	40,344	2,534	2,031	4,565	22,051	22,858	44,909
		97th St	Century Bl	19,517	20,827	40,344	2,534	2,032	4,566	22,051	22,859	44,910
		Century Bl	102nd St	16,344	18,308	34,652	4,171	1,864	6,035	20,515	20,172	40,687
		102nd St	104th St	16,105	18,350	34,455	4,883	2,521	7,404	20,988	20,871	41,859
		104th St	Lennox Bl	16,284	18,353	34,637	4,883	2,521	7,404	21,167	20,874	42,041
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	13,111	14,043	27,154	463	1,335	1,798	13,574	15,378	28,952
		Manchester Bl	Pincay Dr/90th St	13,935	16,063	29,998	1,021	3,836	4,857	14,956	19,899	34,855
		Pincay Dr/90th St	Arbor Vitae St	17,227	20,013	37,240	3,536	3,282	6,818	20,763	23,295	44,058
		Arbor Vitae St	Hardy St	16,651	18,848	35,499	3,535	3,282	6,817	20,186	22,130	42,316
		Hardy St	Century Bl	17,355	19,434	36,789	3,535	3,282	6,817	20,890	22,716	43,606
		Century Bl	104th St	15,518	17,487	33,005	3,229	4,048	7,277	18,747	21,535	40,282
Market St	Minor Arterial	Florence Av	Regent St	2,232	2,263	4,495	0	0	0	2,232	2,263	4,495
		Regent St	Manchester Bl	4,149	5,087	9,236	0	0	0	4,149	5,087	9,236
Myrtle Av	Collector	Arbor Vitae St	Hardy St	1,965	2,296	4,261	0	0	0	1,965	2,296	4,261
Doty Av	Collector	Century Bl	104th St	4,718	4,996	9,714	92	92	184	4,810	5,088	9,898
Yukon Av	Collector	Century Bl	104th St	5,954	5,505	11,459	66	66	132	6,020	5,571	11,591
Locust St	Collector	Florence Av	Manchester Bl	2,479	2,505	4,984	278	278	556	2,757	2,783	5,540
EAST/WEST STREETS												
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	14,200	13,990	28,190	70	27	97	14,270	14,017	28,287
Florence Av	Major Arterial	Fir Av	La Brea Av	9,762	9,467	19,229	1,800	370	2,170	11,562	9,837	21,399
		La Brea Av	Market St	13,122	10,553	23,675	1,827	397	2,224	14,949	10,950	25,899
		Market St	Centinela Av	15,741	13,448	29,189	1,852	422	2,274	17,593	13,870	31,463
		Centinela Av	Prairie Av	23,525	21,622	45,147	1,879	492	2,371	25,404	22,114	47,518
		Prairie Ave	West Bl	22,992	22,891	45,883	1,134	275	1,409	24,126	23,166	47,292
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	12,011	12,184	24,195	1,690	3,231	4,921	13,701	15,415	29,116
		La Brea Av	Market St	12,011	12,113	24,124	1,628	3,281	4,909	13,639	15,394	29,033
		Market St	Locust St	9,316	9,347	18,663	1,628	3,281	4,909	10,944	12,628	23,572
		Locust St	Hillcrest Bl	11,352	11,628	22,980	1,507	3,160	4,667	12,859	14,788	27,647
		Hillcrest Bl	Spruce Av	14,596	14,888	29,484	1,507	3,160	4,667	16,103	18,048	34,151
		Spruce Av	Prairie Av	16,609	16,924	33,533	1,507	3,160	4,667	18,116	20,084	38,200
		Prairie Av	Kareem Ct	17,388	18,437	35,825	1,260	2,266	3,526	18,648	20,703	39,351
		Kareem Ct	Crenshaw Dr	22,545	22,460	45,005	3,098	608	3,706	25,643	23,068	48,711
		Crenshaw Dr	Crenshaw Bl	16,084	16,542	32,626	3,108	618	3,726	19,192	17,160	36,352
		Crenshaw Bl	Van Ness Av	17,069	18,183	35,252	2,248	1,702	3,950	19,317	19,885	39,202
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	7,569	8,102	15,671	15	15	30	7,584	8,117	15,701
		La Brea Av	Myrtle Av	6,667	6,619	13,286	331	286	617	6,998	6,905	13,903
		Myrtle Av	Prairie Av	5,458	5,944	11,402	331	286	617	5,789	6,230	12,019
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	30,242	30,334	60,576	3,178	3,639	6,817	33,420	33,973	67,393
		La Brea Av/Hawthorne Bl	Myrtle Av	24,484	24,269	48,753	3,076	3,480	6,556	27,560	27,749	55,309
		Myrtle Av	Freeman Av	23,518	22,598	46,116	3,076	3,480	6,556	26,594	26,078	52,672
		Freeman Av	Prairie Av	20,850	20,584	41,434	3,076	3,480	6,556	23,926	24,064	47,990
		Prairie Av	Doty Av	25,193	25,587	50,780	3,453	2,061	5,514	28,646	27,648	56,294
		Doty Av	HP Casino Dr	25,030	25,403	50,433	3,360	1,969	5,329	28,390	27,372	55,762
		HP Casino Dr	Yukon Av	24,879	25,792	50,671	3,360	1,969	5,329	28,239	27,761	56,000
		Yukon Av	Club Dr	23,413	23,748	47,161	3,348	1,956	5,304	26,761	25,704	52,465
		Club Dr	Crenshaw Bl	24,570	24,237	48,807	3,349	1,957	5,306	27,919	26,194	54,113
		Crenshaw Bl	Van Ness Av	21,154	20,687	41,841	1,848	1,528	3,376	23,002	22,215	45,217
Regent St	Collector	Grevillea Av	La Brea Av	3,791	3,604	7,395	0	0	0	3,791	3,604	7,395
		La Brea Av	Market St	9,382	9,246	18,628	0	0	0	9,382	9,246	18,628
		Market St	Prairie Ave	4,210	4,868	9,078	0	0	0	4,210	4,868	9,078
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	5,429	5,768	11,197	0	0	0	5,429	5,768	11,197
		La Brea Av	Market St	4,600	4,309	8,909	0	0	0	4,600	4,309	8,909
		Market St	Nutwood St / Locust St	4,962	5,374	10,336	181	181	362	5,143	5,555	10,698
		Nutwood St / Locust St	Manchester Bl	2,898	3,363	6,261	0	0	0	2,898	3,363	6,261
		Manchester Bl	Florence Av	4,782	5,129	9,911	0	0	0	4,782	5,129	9,911
Spruce Av	Collector	La Brea Av	Manchester Av	3,592	3,933	7,525	0	0	0	3,592	3,933	7,525
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	3,407	3,534	6,941	0	0	0	3,407	3,534	6,941
		Prairie Av	Kareem Ct	11,865	10,632	22,497	928	799	1,727	12,793	11,431	24,224
		Kareem Ct	Crenshaw Bl	9,599	8,732	18,331	2,649	5,716	8,365	12,248	14,448	26,696
Hardy St	Collector	La Brea Av	Prairie Ave	3,168	3,191	6,359	0	0	0	3,168	3,191	6,359
104th St	Collector	Grevillea Av	Hawthorne Bl	4,469	3,785	8,254	0	0	0	4,469	3,785	8,254
		Hawthorne Bl	Prairie Ave	2,487	2,653	5,140	0	0	0	2,487	2,653	5,140
		Prairie Av	Doty Av	3,500	3,210	6,710	0	0	0	3,500	3,210	6,710

TABLE 5 update
ROADWAY SEGMENT ADT - WEEKDAY NFL GAME EVENT CONDITIONS
FUTURE (2045) WITHOUT ITC PROJECT

STREET	Facility Type	Segment		Future (2045) ADT w/o Project			NFL Event ADT w/o Project			Future (2045) + NFL Event ADT w/o Project		
		From	To	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total
NORTH/SOUTH STREETS												
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	15,053	14,654	29,707	77	77	154	15,130	14,731	29,861
		Florence Av	Manchester Bl	17,317	16,112	33,429	311	184	495	17,628	16,296	33,924
		Manchester Bl	Spruce Av/Market St	15,066	13,746	28,812	128	128	256	15,194	13,874	29,068
		Spruce Av/Market St	Arbor Vitae St	19,159	19,952	39,111	328	328	656	19,487	20,280	39,767
		Arbor Vitae St	Hardy St	19,222	19,211	38,433	485	434	919	19,707	19,645	39,352
		Hardy St	Century Bl	21,387	22,039	43,426	576	525	1,101	21,963	22,564	44,527
Hawthorne Bl	Major Arterial	Century Bl	104th St	31,632	32,659	64,291	505	303	808	32,137	32,962	65,099
		104th St	Lennox Bl	34,144	36,592	70,736	505	303	808	34,649	36,895	71,544
Prairie Av	Major Arterial	Florence Av	Regent St	12,754	15,183	27,937	343	923	1,266	13,097	16,106	29,203
		Regent St	Manchester Bl	12,087	13,738	25,825	343	923	1,266	12,430	14,661	27,091
		Manchester Bl	Pincay Dr/Kelso St	18,848	22,021	40,869	2,415	1,804	4,219	21,263	23,825	45,088
		Pincay Dr/Kelso St	Arbor Vitae St	21,556	23,612	45,168	1,565	903	2,468	23,121	24,515	47,636
		Arbor Vitae St	Hardy St	20,530	21,506	42,036	1,445	1,053	2,498	21,975	22,559	44,534
		Hardy St	97th St	22,677	24,418	47,095	2,795	2,184	4,979	25,472	26,602	52,074
		97th St	Century Bl	22,677	24,418	47,095	2,795	2,184	4,979	25,472	26,602	52,074
		Century Bl	102nd St	19,551	21,775	41,326	4,557	2,077	6,634	24,108	23,852	47,960
		102nd St	104th St	19,315	22,010	41,325	5,360	2,816	8,176	24,675	24,826	49,501
		104th St	Lennox Bl	19,154	21,632	40,786	5,360	2,817	8,177	24,514	24,449	48,963
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	15,237	16,421	31,658	521	1,392	1,913	15,758	17,813	33,571
		Manchester Bl	Pincay Dr/90th St	16,146	18,597	34,743	1,152	4,042	5,194	17,298	22,639	39,937
		Pincay Dr/90th St	Arbor Vitae St	20,501	23,920	44,421	3,783	3,613	7,396	24,284	27,533	51,817
		Arbor Vitae St	Hardy St	19,597	22,175	41,772	3,783	3,613	7,396	23,380	25,788	49,168
		Hardy St	Century Bl	20,381	22,676	43,057	3,783	3,613	7,396	24,164	26,289	50,453
		Century Bl	104th St	18,280	20,578	38,858	3,536	4,476	8,012	21,816	25,054	46,870
Market St	Minor Arterial	Florence Av	Regent St	2,874	2,776	5,650	0	0	0	2,874	2,776	5,650
		Regent St	Manchester Bl	4,781	5,909	10,690	0	0	0	4,781	5,909	10,690
Myrtle Av	Collector	Arbor Vitae St	Hardy St	2,881	3,218	6,099	0	0	0	2,881	3,218	6,099
Doty Av	Collector	Century Bl	104th St	5,196	5,585	10,781	104	104	208	5,300	5,689	10,989
Yukon Av	Collector	Century Bl	104th St	6,572	6,101	12,673	75	75	150	6,647	6,176	12,823
Locust St	Collector	Florence Av	Manchester Bl	2,918	3,054	5,972	310	310	620	3,228	3,364	6,592
EAST/WEST STREETS												
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	16,403	15,912	32,315	79	30	109	16,482	15,942	32,424
Florence Av	Major Arterial	Fir Av	La Brea Av	12,095	11,894	23,989	1,917	416	2,333	14,012	12,310	26,322
		La Brea Av	Market St	15,953	12,913	28,866	1,948	447	2,395	17,901	13,360	31,261
		Market St	Centinela Av	19,027	16,342	35,369	2,060	559	2,619	21,087	16,901	37,988
		Centinela Av	Prairie Av	27,403	25,029	52,432	2,090	638	2,728	29,493	25,667	55,160
		Prairie Ave	West Bl	26,967	26,795	53,762	1,167	295	1,462	28,134	27,090	55,224
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	13,742	13,859	27,601	1,877	3,453	5,330	15,619	17,312	32,931
		La Brea Av	Market St	13,660	13,794	27,454	1,807	3,510	5,317	15,467	17,304	32,771
		Market St	Locust St	10,721	10,626	21,347	1,807	3,510	5,317	12,528	14,136	26,664
		Locust St	Hillcrest Bl	13,200	13,306	26,506	1,671	3,374	5,045	14,871	16,680	31,551
		Hillcrest Bl	Spruce Av	17,489	17,361	34,850	1,671	3,374	5,045	19,160	20,735	39,895
		Spruce Av	Prairie Av	19,464	19,861	39,325	1,671	3,374	5,045	21,135	23,235	44,370
		Prairie Av	Kareem Ct	20,227	21,841	42,068	1,421	2,269	3,690	21,648	24,110	45,758
		Kareem Ct	Crenshaw Dr	27,215	26,912	54,127	3,282	681	3,963	30,497	27,593	58,090
		Crenshaw Dr	Crenshaw Bl	19,287	19,752	39,039	3,293	692	3,985	22,580	20,444	43,024
		Crenshaw Bl	Van Ness Av	20,103	21,050	41,153	2,412	1,830	4,242	22,515	22,880	45,395
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	9,371	9,833	19,204	17	17	34	9,388	9,850	19,238
		La Brea Av	Myrtle Av	8,007	7,669	15,676	368	317	685	8,375	7,986	16,361
		Myrtle Av	Prairie Av	6,606	7,013	13,619	368	317	685	6,974	7,330	14,304
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	38,039	36,892	74,931	3,494	4,059	7,553	41,533	40,951	82,484
		La Brea Av/Hawthorne Bl	Myrtle Av	29,931	29,158	59,089	3,463	3,877	7,340	33,394	33,035	66,429
		Myrtle Av	Freeman Av	29,049	27,781	56,830	3,464	3,877	7,341	32,513	31,658	64,171
		Freeman Av	Prairie Av	25,692	25,289	50,981	3,464	3,877	7,341	29,156	29,166	58,322
		Prairie Av	Doty Av	30,541	30,626	61,167	3,824	2,305	6,129	34,365	32,931	67,296
		Doty Av	HP Casino Dr	29,973	29,982	59,955	3,720	2,201	5,921	33,693	32,183	65,876
		HP Casino Dr	Yukon Av	29,719	30,277	59,996	3,720	2,201	5,921	33,439	32,478	65,917
		Yukon Av	Club Dr	28,120	27,960	56,080	3,706	2,187	5,893	31,826	30,147	61,973
		Club Dr	Crenshaw Bl	29,452	28,705	58,157	3,706	2,187	5,893	33,158	30,892	64,050
		Crenshaw Bl	Van Ness Av	25,519	24,747	50,266	2,082	1,673	3,755	27,601	26,420	54,021
Regent St	Collector	Grevillea Av	La Brea Av	4,797	4,606	9,403	0	0	0	4,797	4,606	9,403
		La Brea Av	Market St	11,269	11,171	22,440	0	0	0	11,269	11,171	22,440
		Market St	Prairie Ave	4,973	5,863	10,836	0	0	0	4,973	5,863	10,836
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	6,801	7,212	14,013	0	0	0	6,801	7,212	14,013
		La Brea Av	Market St	5,540	5,243	10,783	0	0	0	5,540	5,243	10,783
		Market St	Nutwood St / Locust St	6,118	6,597	12,715	200	200	400	6,318	6,797	13,115
		Nutwood St / Locust St	Manchester Bl	3,708	3,955	7,663	0	0	0	3,708	3,955	7,663
		Manchester Bl	Florence Av	5,658	6,058	11,716	0	0	0	5,658	6,058	11,716
Spruce Av	Collector	La Brea Av	Manchester Av	4,433	5,117	9,550	0	0	0	4,433	5,117	9,550
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	4,240	4,523	8,763	0	0	0	4,240	4,523	8,763
		Prairie Av	Kareem Ct	13,745	12,924	26,669	952	901	1,853	14,697	13,825	28,522
		Kareem Ct	Crenshaw Bl	12,082	11,069	23,151	2,986	6,047	9,033	15,068	17,116	32,184
Hardy St	Collector	La Brea Av	Prairie Ave	4,145	4,185	8,330	0	0	0	4,145	4,185	8,330
104th St	Collector	Grevillea Av	Hawthorne Bl	5,647	4,753	10,400	0	0	0	5,647	4,753	10,400
		Hawthorne Bl	Prairie Ave	3,157	3,338	6,495	0	0	0	3,157	3,338	6,495
		Prairie Av	Doty Av	4,245	3,901	8,146	0	0	0	4,245	3,901	8,146

NB Daytime	NB Nighttime	SB		Total	Daytime	MT	HT	Total	Nighttime	MT	HT
911.835	161.387	887.7883	157.1307	1,799.62	1,745.63	32.39	21.60	318.52	308.96	5.73	3.82
1062.38	188.032	982.1056	173.824	2,044.49	1,983.15	36.80	24.53	361.86	351.00	6.51	4.34
915.692	162.069	836.1397	147.9893	1,751.83	1,699.28	31.53	21.02	310.06	300.76	5.58	3.72
1174.42	207.861	1222.208	216.32	2,396.62	2,324.73	43.14	28.76	424.18	411.46	7.64	5.09
1187.68	210.208	1183.939	209.5467	2,371.61	2,300.47	42.69	28.46	419.75	407.16	7.56	5.04
1323.64	234.272	1359.857	240.6827	2,683.49	2,602.99	48.30	32.20	474.95	460.71	8.55	5.70
1936.79	342.795	1986.51	351.5947	3,923.30	3,805.60	70.62	47.08	694.39	673.56	12.50	8.33
2088.18	369.589	2223.539	393.5467	4,311.72	4,182.37	77.61	51.74	763.14	740.24	13.74	9.16
789.313	139.701	970.6549	171.7973	1,759.97	1,707.17	31.68	21.12	311.50	302.15	5.61	3.74
749.115	132.587	883.5696	156.384	1,632.68	1,583.70	29.39	19.59	288.97	280.30	5.20	3.47
1281.45	226.805	1435.853	254.1333	2,717.30	2,635.78	48.91	32.61	480.94	466.51	8.66	5.77
1393.43	246.624	1477.437	261.4933	2,870.86	2,784.74	51.68	34.45	508.12	492.87	9.15	6.10
1324.36	234.4	1359.556	240.6293	2,683.92	2,603.40	48.31	32.21	475.03	460.78	8.55	5.70
1535.11	271.701	1603.214	283.7547	3,138.33	3,044.18	56.49	37.66	555.46	538.79	10.00	6.67
1535.11	271.701	1603.214	283.7547	3,138.33	3,044.18	56.49	37.66	555.46	538.79	10.00	6.67
1452.91	257.152	1437.481	254.4213	2,890.39	2,803.68	52.03	34.68	511.57	496.23	9.21	6.14
1487.08	263.2	1496.18	264.8107	2,983.26	2,893.76	53.70	35.80	528.01	512.17	9.50	6.34
1477.38	261.483	1473.46	260.7893	2,950.84	2,862.31	53.12	35.41	522.27	506.60	9.40	6.27
949.682	168.085	1073.53	190.0053	2,023.21	1,962.52	36.42	24.28	358.09	347.35	6.45	4.30
1042.49	184.512	1364.377	241.4827	2,406.87	2,334.66	43.32	28.88	425.99	413.21	7.67	5.11
1463.52	259.029	1659.322	293.6853	3,122.84	3,029.15	56.21	37.47	552.71	536.13	9.95	6.63
1409.03	249.387	1554.157	275.072	2,963.19	2,874.30	53.34	35.56	524.46	508.72	9.44	6.29
1456.28	257.749	1584.35	280.416	3,040.63	2,949.42	54.73	36.49	538.17	522.02	9.69	6.46
1314.78	232.704	1509.921	267.2427	2,824.70	2,739.96	50.84	33.90	499.95	484.95	9.00	6.00
173.206	30.656	167.3003	29.61067	340.51	330.29	6.13	4.09	60.27	58.46	1.08	0.72
288.135	50.9973	356.1157	63.02933	644.25	624.92	11.60	7.73	114.03	110.61	2.05	1.37
173.628	30.7307	193.9381	34.32533	367.57	356.54	6.62	4.41	65.06	63.10	1.17	0.78
319.413	56.5333	342.8571	60.68267	662.27	642.40	11.92	7.95	117.22	113.70	2.11	1.41
400.593	70.9013	372.2069	65.87733	772.80	749.62	13.91	9.27	136.78	132.68	2.46	1.64
194.541	34.432	202.7371	35.88267	397.28	385.36	7.15	4.77	70.31	68.21	1.27	0.84
993.315	175.808	960.7712	170.048	1,954.09	1,895.46	35.17	23.45	345.86	335.48	6.23	4.15
844.457	149.461	741.8827	131.3067	1,586.34	1,538.75	28.55	19.04	280.77	272.34	5.05	3.37
1078.83	190.944	805.1627	142.5067	1,884.00	1,827.48	33.91	22.61	333.45	323.45	6.00	4.00
1270.84	224.928	1018.567	180.2773	2,289.41	2,220.73	41.21	27.47	405.21	393.05	7.29	4.86
1777.44	314.592	1546.865	273.7813	3,324.31	3,224.58	59.84	39.89	588.37	570.72	10.59	7.06
1695.54	300.096	1632.624	288.96	3,328.17	3,228.32	59.91	39.94	589.06	571.38	10.60	7.07
941.305	166.603	1043.337	184.6613	1,984.64	1,925.10	35.72	23.82	351.26	340.73	6.32	4.22
932.145	164.981	1042.854	184.576	1,975.00	1,915.75	35.55	23.70	349.56	339.07	6.29	4.19
755.021	133.632	851.9296	150.784	1,606.95	1,558.74	28.93	19.28	284.42	275.88	5.12	3.41
896.226	158.624	1005.248	177.92	1,901.47	1,844.43	34.23	22.82	336.54	326.45	6.06	4.04
1154.71	204.373	1249.629	221.1733	2,404.34	2,332.21	43.28	28.85	425.55	412.78	7.66	5.11
1273.74	225.44	1400.296	247.84	2,674.03	2,593.81	48.13	32.09	473.28	459.08	8.52	5.68
1304.65	230.912	1453.029	257.1733	2,757.68	2,674.95	49.64	33.09	488.09	473.44	8.79	5.86
1837.95	325.301	1662.938	294.3253	3,500.89	3,395.86	63.02	42.01	619.63	601.04	11.15	7.44
1360.82	240.853	1232.092	218.0693	2,592.91	2,515.13	46.67	31.11	458.92	445.15	8.26	5.51
1356.9	240.16	1378.901	244.0533	2,735.81	2,653.73	49.24	32.83	484.21	469.69	8.72	5.81
565.783	100.139	593.6267	105.0667	1,159.41	1,124.63	20.87	13.91	205.21	199.05	3.69	2.46
504.733	89.3333	481.2896	85.184	986.02	956.44	17.75	11.83	174.52	169.28	3.14	2.09
420.3	74.3893	441.7547	78.18667	862.05	836.19	15.52	10.34	152.58	148.00	2.75	1.83
2503.06	443.019	2467.98	436.8107	4,971.04	4,821.90	89.48	59.65	879.83	853.43	15.84	10.56
2012.55	356.203	1990.909	352.3733	4,003.45	3,883.35	72.06	48.04	708.58	687.32	12.75	8.50
1959.45	346.805	1907.922	337.6853	3,867.37	3,751.35	69.61	46.41	684.49	663.96	12.32	8.21
1757.13	310.997	1757.738	311.104	3,514.87	3,409.43	63.27	42.18	622.10	603.44	11.20	7.47
2071.06	366.56	1984.642	351.264	4,055.71	3,934.03	73.00	48.67	717.82	696.29	12.92	8.61
2030.56	359.392	1939.562	343.2853	3,970.13	3,851.02	71.46	47.64	702.68	681.60	12.65	8.43
2015.26	356.683	1957.341	346.432	3,972.60	3,853.42	71.51	47.67	703.11	682.02	12.66	8.44
1918.05	339.477	1816.859	321.568	3,734.91	3,622.86	67.23	44.82	661.05	641.21	11.90	7.93
1998.32	353.685	1861.758	329.5147	3,860.08	3,744.28	69.48	46.32	683.20	662.70	12.30	8.20
1663.42	294.411	1592.245	281.8133	3,255.67	3,158.00	58.60	39.07	576.22	558.94	10.37	6.91
289.099	51.168	277.5883	49.13067	566.69	549.69	10.20	6.80	100.30	97.29	1.81	1.20
679.145	120.203	673.2389	119.1573	1,352.38	1,311.81	24.34	16.23	239.36	232.18	4.31	2.87
299.706	53.0453	353.3435	62.53867	653.05	633.46	11.75	7.84	115.58	112.12	2.08	1.39
409.874	72.544	434.6432	76.928	844.52	819.18	15.20	10.13	149.47	144.99	2.69	1.79
333.877	59.0933	315.9781	55.92533	649.86	630.36	11.70	7.80	115.02	111.57	2.07	1.38
380.765	67.392	409.6325	72.50133	790.40	766.69	14.23	9.48	139.89	135.70	2.52	1.68
223.469	39.552	238.3547	42.18667	461.82	447.97	8.31	5.54	81.74	79.29	1.47	0.98
340.989	60.352	365.0955	64.61867	706.08	684.90	12.71	8.47	124.97	121.22	2.25	1.50
267.162	47.2853	308.3845	54.58133	575.55	558.28	10.36	6.91	101.87	98.81	1.83	1.22
255.531	45.2267	272.5861	48.24533	528.12	512.27	9.51	6.34	93.47	90.67	1.68	1.12
885.739	156.768	833.1867	147.4667	1,718.93	1,667.36	30.94	20.63	304.23	295.11	5.48	3.65
908.098	160.725	1031.524	182.5707	1,939.62	1,881.43	34.91	23.28	343.30	333.00	6.18	4.12
249.805	44.2133	252.216	44.64	502.02	486.96	9.04	6.02	88.85	86.19	1.60	1.07
340.326	60.2347	286.4475	50.69867	626.77	607.97	11.28	7.52	110.93	107.61	2.00	1.33
190.262	33.6747	201.1701	35.60533	391.43	379.69	7.05	4.70	69.28	67.20	1.25	0.83
255.832	45.28	235.1003	41.61067	490.93	476.20	8.84	5.89	86.89	84.28	1.56	1.04

ROADWAY SEGMENT ADT - WEEKDAY NFL GAME EVENT CONDITIONS
FUTURE (2045) WITH ITC PROJECT

STREET	Facility Type	Segment		Future (2045) ADT w/Project			NFL Event ADT w/Project			Future (2045) + NFL Event ADT w/Project		
		From	To	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total	NB/EB	SB/WB	Total
NORTH/SOUTH STREETS												
La Brea Av	Major Arterial	Hyde Park Bl	Florence Av	14,847	14,444	29,291	67	66	133	14,914	14,510	29,424
		Florence Av	Manchester Bl	17,100	15,899	32,999	266	158	424	17,366	16,057	33,423
		Manchester Bl	Spruce Av/Market St	14,949	13,640	28,589	111	109	220	15,060	13,749	28,809
		Spruce Av/Market St	Arbor Vitae St	18,723	19,546	38,269	285	283	568	19,008	19,829	38,837
		Arbor Vitae St	Hardy St	18,852	18,949	37,801	415	370	785	19,267	19,319	38,586
		Hardy St	Century Bl	21,080	21,765	42,845	492	447	939	21,572	22,212	43,784
Hawthorne Bl	Major Arterial	Century Bl	104th St	31,379	32,431	63,810	360	260	620	31,739	32,691	64,430
		104th St	Lennox Bl	33,927	36,400	70,327	360	260	620	34,287	36,660	70,947
Prairie Av	Major Arterial	Florence Av	Regent St	12,535	14,941	27,476	220	728	948	12,755	15,669	28,424
		Regent St	Manchester Bl	11,850	13,482	25,332	220	728	948	12,070	14,210	26,280
		Manchester Bl	Pincay Dr/Kelso St	18,256	21,357	39,613	1,983	1,588	3,571	20,239	22,945	43,184
		Pincay Dr/Kelso St	Arbor Vitae St	20,899	22,860	43,759	1,344	821	2,165	22,243	23,681	45,924
		Arbor Vitae St	Hardy St	19,730	20,465	40,195	1,241	879	2,120	20,971	21,344	42,315
		Hardy St	97th St	21,817	23,402	45,219	2,431	1,952	4,383	24,248	25,354	49,602
		97th St	Century Bl	21,817	23,402	45,219	2,432	1,951	4,383	24,249	25,353	49,602
		Century Bl	102nd St	18,976	21,163	40,139	4,002	1,789	5,791	22,978	22,952	45,930
		102nd St	104th St	18,762	21,411	40,173	4,685	2,420	7,105	23,447	23,831	47,278
		104th St	Lennox Bl	18,662	21,101	39,763	4,684	2,419	7,103	23,346	23,520	46,866
Crenshaw Bl	Major Arterial	80th St	Manchester Bl	15,072	16,272	31,344	444	1,316	1,760	15,516	17,588	33,104
		Manchester Bl	Pincay Dr/90th St	16,034	18,504	34,538	979	3,768	4,747	17,013	22,272	39,285
		Pincay Dr/90th St	Arbor Vitae St	20,280	23,723	44,003	3,454	3,174	6,628	23,734	26,897	50,631
		Arbor Vitae St	Hardy St	19,396	22,005	41,401	3,454	3,174	6,628	22,850	25,179	48,029
		Hardy St	Century Bl	20,174	22,506	42,680	3,454	3,174	6,628	23,628	25,680	49,308
		Century Bl	104th St	18,110	20,408	38,518	3,126	3,907	7,033	21,236	24,315	45,551
Market St	Minor Arterial	Florence Av	Regent St	2,852	2,763	5,615	0	0	0	2,852	2,763	5,615
		Regent St	Manchester Bl	4,704	5,838	10,542	0	0	0	4,704	5,838	10,542
Myrtle Av	Collector	Arbor Vitae St	Hardy St	2,619	3,061	5,680	0	0	0	2,619	3,061	5,680
Doty Av	Collector	Century Bl	104th St	5,040	5,417	10,457	88	88	176	5,128	5,505	10,633
Yukon Av	Collector	Century Bl	104th St	6,436	5,966	12,402	64	64	128	6,500	6,030	12,530
Locust St	Collector	Florence Av	Manchester Bl	2,899	3,032	5,931	268	268	536	3,167	3,300	6,467
EAST/WEST STREETS												
Centinela Av	Major Arterial	Hyde Park Bl	Florence Av	16,181	15,697	31,878	67	26	93	16,248	15,723	31,971
Florence Av	Major Arterial	Fir Av	La Brea Av	12,076	11,875	23,951	1,762	355	2,117	13,838	12,230	26,068
		La Brea Av	Market St	15,943	12,909	28,852	1,788	381	2,169	17,731	13,290	31,021
		Market St	Centinela Av	18,903	16,229	35,132	1,812	405	2,217	20,715	16,634	37,349
		Centinela Av	Prairie Av	27,224	24,864	52,088	1,838	472	2,310	29,062	25,336	54,398
		Prairie Ave	West Bl	26,832	26,650	53,482	1,123	265	1,388	27,955	26,915	54,870
Manchester Bl	Major Arterial	Grevillea Av	La Brea Av	13,445	13,554	26,999	1,619	3,156	4,775	15,064	16,710	31,774
		La Brea Av	Market St	13,261	13,409	26,670	1,560	3,204	4,764	14,821	16,613	31,434
		Market St	Locust St	10,378	10,311	20,689	1,561	3,204	4,765	11,939	13,515	25,454
		Locust St	Hillcrest Bl	12,823	12,959	25,782	1,445	3,088	4,533	14,268	16,047	30,315
		Hillcrest Bl	Spruce Av	16,916	17,132	34,048	1,445	3,088	4,533	18,361	20,220	38,581
		Spruce Av	Prairie Av	18,999	19,430	38,429	1,445	3,088	4,533	20,444	22,518	42,962
		Prairie Av	Kareem Ct	19,865	21,468	41,333	1,208	2,237	3,445	21,073	23,705	44,778
		Kareem Ct	Crenshaw Dr	26,679	26,397	53,076	3,038	583	3,621	29,717	26,980	56,697
		Crenshaw Dr	Crenshaw Bl	18,909	19,384	38,293	3,047	593	3,640	21,956	19,977	41,933
		Crenshaw Bl	Van Ness Av	19,775	20,742	40,517	2,194	1,658	3,852	21,969	22,400	44,369
Arbor Vitae St	Major Arterial	Grevillea Av	La Brea Av	9,039	9,502	18,541	15	15	30	9,054	9,517	18,571
		La Brea Av	Myrtle Av	7,698	7,439	15,137	316	273	589	8,014	7,712	15,726
		Myrtle Av	Prairie Av	6,246	6,822	13,068	316	273	589	6,562	7,095	13,657
Century Bl	Major Arterial	Grevillea Av	La Brea Av/Hawthorne Bl	37,787	36,628	74,415	3,064	3,486	6,550	40,851	40,114	80,965
		La Brea Av/Hawthorne Bl	Myrtle Av	29,692	28,900	58,592	2,968	3,335	6,303	32,660	32,235	64,895
		Myrtle Av	Freeman Av	28,915	27,554	56,469	2,969	3,335	6,304	31,884	30,889	62,773
		Freeman Av	Prairie Av	25,562	25,065	50,627	2,968	3,335	6,303	28,530	28,400	56,930
		Prairie Av	Doty Av	30,008	30,118	60,126	3,331	1,976	5,307	33,339	32,094	65,433
		Doty Av	HP Casino Dr	29,424	29,461	58,885	3,243	1,888	5,131	32,667	31,349	64,016
		HP Casino Dr	Yukon Av	29,177	29,747	58,924	3,243	1,888	5,131	32,420	31,635	64,055
		Yukon Av	Club Dr	27,599	27,458	55,057	3,232	1,877	5,109	30,831	29,335	60,166
		Club Dr	Crenshaw Bl	28,891	28,181	57,072	3,231	1,877	5,108	32,122	30,058	62,180
		Crenshaw Bl	Van Ness Av	25,180	24,408	49,588	1,771	1,478	3,249	26,951	25,886	52,837
Regent St	Collector	Grevillea Av	La Brea Av	4,743	4,557	9,300	0	0	0	4,743	4,557	9,300
		La Brea Av	Market St	11,132	11,034	22,166	0	0	0	11,132	11,034	22,166
		Market St	Prairie Ave	4,914	5,801	10,715	0	0	0	4,914	5,801	10,715
Hillcrest Bl	Collector	Grevillea Av	La Brea Av	6,708	7,114	13,822	0	0	0	6,708	7,114	13,822
		La Brea Av	Market St	5,461	5,166	10,627	0	0	0	5,461	5,166	10,627
		Market St	Nutwood St / Locust St	5,921	6,400	12,321	174	174	348	6,095	6,574	12,669
		Nutwood St / Locust St	Manchester Bl	3,400	3,954	7,354	0	0	0	3,400	3,954	7,354
		Manchester Bl	Florence Av	5,474	5,870	11,344	0	0	0	5,474	5,870	11,344
Spruce Av	Collector	La Brea Av	Manchester Av	4,111	4,783	8,894	0	0	0	4,111	4,783	8,894
Kelso St / Pincay Dr	Collector	Spruce Av	Prairie Av	4,071	4,344	8,415	0	0	0	4,071	4,344	8,415
		Prairie Av	Kareem Ct	13,441	12,580	26,021	893	766	1,659	14,334	13,346	27,680
		Kareem Ct	Crenshaw Bl	11,795	10,770	22,565	2,538	5,607	8,145	14,333	16,377	30,710
Hardy St	Collector	La Brea Av	Prairie Ave	3,681	3,615	7,296	0	0	0	3,681	3,615	7,296
104th St	Collector	Grevillea Av	Hawthorne Bl	5,610	4,715	10,325	0	0	0	5,610	4,715	10,325
		Hawthorne Bl	Prairie Ave	3,149	3,328	6,477	0	0	0	3,149	3,328	6,477
		Prairie Av	Doty Av	4,182	3,841	8,023	0	0	0	4,182	3,841	8,023

NB Daytime	NB Nighttime	SB		Total	Daytime	MT	HT	Total	Nighttime	MT	HT	
898.817	159.083	874.4693	154.7733	1,773.29	1,720.09	31.92	21.28	313.86	304.44	5.65	3.77	x
1046.59	185.237	967.7019	171.2747	2,014.29	1,953.86	36.26	24.17	356.51	345.82	6.42	4.28	x
907.616	160.64	828.6064	146.656	1,736.22	1,684.14	31.25	20.83	307.30	298.08	5.53	3.69	x
1145.55	202.752	1195.028	211.5093	2,340.58	2,270.36	42.13	28.09	414.26	401.83	7.46	4.97	
1161.16	205.515	1164.292	206.0693	2,325.45	2,255.69	41.86	27.91	411.58	399.24	7.41	4.94	x
1300.07	230.101	1338.643	236.928	2,638.72	2,559.55	47.50	31.66	467.03	453.02	8.41	5.60	x
1912.8	338.549	1970.178	348.704	3,882.98	3,766.49	69.89	46.60	687.25	666.64	12.37	8.25	x
2066.36	365.728	2209.376	391.04	4,275.74	4,147.47	76.96	51.31	756.77	734.06	13.62	9.08	x
768.701	136.053	944.3184	167.136	1,713.02	1,661.63	30.83	20.56	303.19	294.09	5.46	3.64	x
727.419	128.747	856.3893	151.5733	1,583.81	1,536.29	28.51	19.01	280.32	271.91	5.05	3.36	x
1219.74	215.883	1382.819	244.7467	2,602.56	2,524.48	46.85	31.23	460.63	446.81	8.29	5.53	x
1340.51	237.259	1427.175	252.5973	2,767.69	2,684.66	49.82	33.21	489.86	475.16	8.82	5.88	x
1263.85	223.691	1286.332	227.6693	2,550.18	2,473.68	45.90	30.60	451.36	437.82	8.12	5.42	x
1461.35	258.645	1528.001	270.4427	2,989.35	2,899.67	53.81	35.87	529.09	513.22	9.52	6.35	x
1461.41	258.656	1527.941	270.432	2,989.35	2,899.67	53.81	35.87	529.09	513.22	9.52	6.35	x
1384.81	245.099	1383.241	244.8213	2,768.05	2,685.01	49.82	33.22	489.92	475.22	8.82	5.88	x
1413.07	250.101	1436.215	254.1973	2,849.29	2,763.81	51.29	34.19	504.30	489.17	9.08	6.05	x
1406.99	249.024	1417.472	250.88	2,824.46	2,739.72	50.84	33.89	499.90	484.91	9.00	6.00	x
935.098	165.504	1059.97	187.6053	1,995.07	1,935.22	35.91	23.94	353.11	342.52	6.36	4.24	x
1025.32	181.472	1342.259	237.568	2,367.58	2,296.55	42.62	28.41	419.04	406.47	7.54	5.03	x
1430.37	253.163	1620.993	286.9013	3,051.36	2,959.82	54.92	36.62	540.06	523.86	9.72	6.48	x
1377.09	243.733	1517.454	268.576	2,894.55	2,807.71	52.10	34.73	512.31	496.94	9.22	6.15	x
1423.98	252.032	1547.648	273.92	2,971.63	2,882.48	53.49	35.66	525.95	510.17	9.47	6.31	x
1279.82	226.517	1465.384	259.36	2,745.21	2,662.85	49.41	32.94	485.88	471.30	8.75	5.83	x
171.881	30.4213	166.5168	29.472	338.40	328.25	6.09	4.06	59.89	58.10	1.08	0.72	x
283.494	50.176	351.8368	62.272	635.33	616.27	11.44	7.62	112.45	109.07	2.02	1.35	x
157.838	27.936	184.4763	32.65067	342.31	332.05	6.16	4.11	60.59	58.77	1.09	0.73	x
309.047	54.6987	331.768	58.72	640.82	621.59	11.53	7.69	113.42	110.02	2.04	1.36	x
391.733	69.3333	363.408	64.32	755.14	732.49	13.59	9.06	133.65	129.64	2.41	1.60	x
190.865	33.7813	198.88	35.2	389.74	378.05	7.02	4.68	68.98	66.91	1.24	0.83	x
979.213	173.312	947.5728	167.712	1,926.79	1,868.98	34.68	23.12	341.02	330.79	6.14	4.09	x
833.97	147.605	737.0613	130.4533	1,571.03	1,523.90	28.28	18.85	278.06	269.72	5.01	3.34	x
1068.59	189.131	800.944	141.76	1,869.53	1,813.45	33.65	22.43	330.89	320.96	5.96	3.97	x
1248.42	220.96	1002.476	177.4293	2,250.90	2,183.37	40.52	27.01	398.39	386.44	7.17	4.78	x
1751.47	309.995	1526.916	270.2507	3,278.39	3,180.03	59.01	39.34	580.25	562.84	10.44	6.96	x
1684.75	298.187	1622.077	287.0933	3,306.83	3,207.63	59.52	39.68	585.28	567.72	10.54	7.02	x
907.857	160.683	1007.056	178.24	1,914.91	1,857.47	34.47	22.98	338.92	328.75	6.10	4.07	x
893.212	158.091	1001.21	177.2053	1,894.42	1,837.59	34.10	22.73	335.30	325.24	6.04	4.02	x
719.524	127.349	814.504	144.16	1,534.03	1,488.01	27.61	18.41	271.51	263.36	4.89	3.26	x
859.885	152.192	967.0992	171.168	1,826.98	1,772.17	32.89	21.92	323.36	313.66	5.82	3.88	x
1106.56	195.851	1218.592	215.68	2,325.15	2,255.39	41.85	27.90	411.53	399.18	7.41	4.94	x
1232.09	218.069	1357.085	240.192	2,589.18	2,511.50	46.61	31.07	458.26	444.51	8.25	5.50	x
1270	224.779	1428.621	252.8533	2,698.62	2,617.66	48.58	32.38	477.63	463.30	8.60	5.73	x
1790.94	316.981	1625.995	287.7867	3,416.94	3,314.43	61.50	41.00	604.77	586.62	10.89	7.26	x
1323.21	234.197	1203.947	213.088	2,527.16	2,451.35	45.49	30.33	447.29	433.87	8.05	5.37	x
1324	234.336	1349.973	238.9333	2,673.97	2,593.75	48.13	32.09	473.27	459.07	8.52	5.68	x
545.654	96.576	573.5579	101.5147	1,119.21	1,085.64	20.15	13.43	198.09	192.15	3.57	2.38	x
482.977	85.4827	464.7765	82.26133	947.75	919.32	17.06	11.37	167.74	162.71	3.02	2.01	x
395.47	69.9947	427.592	75.68	823.06	798.37	14.82	9.88	145.67	141.30	2.62	1.75	x
2461.95	435.744	2417.537	427.8827	4,879.49	4,733.11	87.83	58.55	863.63	837.72	15.55	10.36	x
1968.31	348.373	1942.696	343.84	3,911.01	3,793.68	70.40	46.93	692.21	671.45	12.46	8.31	x
1921.54	340.096	1861.577	329.4827	3,783.12	3,669.63	68.10	45.40	669.58	649.49	12.05	8.03	x
1719.41	304.32	1711.573	302.9333	3,430.98	3,328.05	61.76	41.17	607.25	589.04	10.93	7.29	x
2009.23	355.616	1934.198	342.336	3,943.43	3,825.13	70.98	47.32	697.95	677.01	12.56	8.38	x
1968.73	348.448	1889.3	334.3893	3,858.03	3,742.29	69.44	46.30	682.84	662.35	12.29	8.19	x
1953.85	345.813	1906.536	337.44	3,860.38	3,744.57	69.49	46.32	683.25	662.76	12.30	8.20	x
1858.08	328.864	1767.923	312.9067	3,626.00	3,517.22	65.27	43.51	641.77	622.52	11.55	7.70	x
1935.89	342.635	1811.495	320.6187	3,747.38	3,634.96	67.45	44.97	663.25	643.36	11.94	7.96	x
1624.25	287.477	1560.063	276.1173	3,184.31	3,088.78	57.32	38.21	563.59	546.69	10.14	6.76	x
285.845	50.592	274.6352	48.608	560.48	543.67	10.09	6.73	99.20	96.22	1.79	1.19	x
670.889	118.741	664.9824	117.696	1,335.87	1,295.79	24.05	16.03	236.44	229.34	4.26	2.84	x
296.15	52.416	349.6069	61.87733	645.76	626.38	11.62	7.75	114.29	110.86	2.06	1.37	x
404.269	71.552	428.7371	75.88267	833.01	808.02	14.99	10.00	147.43	143.01	2.65	1.77	x
329.116	58.2507	311.3376	55.104	640.45	621.24	11.53	7.69	113.35	109.95	2.04	1.36	x
367.325	65.0133	396.1931	70.12267	763.52	740.61	13.74	9.16	135.14	131.08	2.43	1.62	x
204.907	36.2667	238.2944	42.176	443.20	429.91	7.98	5.32	78.44	76.09	1.41	0.94	x
329.9	58.3893	353.7653	62.61333	683.67	663.16	12.31	8.20	121.00	117.37	2.18	1.45	x
247.756	43.8507	288.2555	51.01867	536.01	519.93	9.65	6.43	94.87	92.02	1.71	1.14	x
245.346	43.424	261.7984	46.336	507.14	491.93	9.13	6.09	89.76	87.07	1.62	1.08	x
863.862	152.896	804.3189	142.3573	1,668.18	1,618.14	30.03	20.02	295.25	286.40	5.31	3.54	x
863.802	152.885	986.9872	174.688	1,850.79	1,795.27	33.31	22.21	327.57	317.75	5.90	3.93	x
221.842	39.264	217.864	38.56	439.71	426.51	7.91	5.28	77.82	75.49	1.40	0.93	x
338.096	59.84	284.1573	50.29333	622.25	603.59	11.20	7.47	110.13	106.83	1.98	1.32	x
189.78	33.5893	200.5675	35.49867	390.35	378.64	7.03	4.68	69.09	67.02	1.24	0.83	x
252.035	44.608	231.4843	40.97067	483.52	469.01	8.70	5.80	85.58	83.01	1.54	1.03	x

Adjusted Baseline Typical Weekday Non-Event Without Proposed Project

Adjusted baseline roadway noise levels during the daytime ranged from a low of 55.8 dBA along Market Street from Florence Avenue to Regent Street to a high of 72.5 dBA along Century Boulevard between Grevillea Avenue and La Brea Avenue/Hawthorne Boulevard. Additionally, nighttime roadway noise levels ranged from a low of 48.2 along Market Street from Florence Avenue to Regent Street to a high of 64.3 dBA along Century Boulevard from Club Drive to Crenshaw Boulevard.

Table 1
Adjusted Baseline Typical Weekday Non-Event Roadway Noise Levels Without Proposed Project

Street	Segment		Noise Level (dBA)	
	From	To	Daytime	Nighttime
	North/South			
La Brea Avenue	Hyde Park Boulevard (Beech Avenue)	Florence Avenue	67.1	59.6
	Florence Avenue	Manchester Boulevard	67.8	60.3
	Manchester Boulevard	Spruce Avenue/ Market Street	66.7	59.2
	Spruce Avenue/Market Street	Arbor Vitae Street	67.8	60.3
	Arbor Vitae Street	Hardy Street	68.5	60.9
	Hardy Street	Century Boulevard	68.6	61.1
Hawthorne Boulevard	Century Boulevard	104th Street	70.2	62.7
	104th Street	Lennox Boulevard	70.7	63.2
Prairie Avenue	Florence Avenue	Regent Street	68.9	61.4
	Regent Street	Manchester Boulevard	69.0	61.5
	Manchester Boulevard	Kelso St/Pincay Drive	70.1	62.6
	Kelso St/Pincay Drive	Arbor Vitae Street	71.4	63.9
	Arbor Vitae Street	Hardy Street	70.6	63.1
	Hardy Street	97th Street	70.9	63.4
	97th Street	Century Boulevard	70.9	63.4
	Century Boulevard	102nd Street	70.4	63.0
	102nd Street	104th Street	70.5	62.9
	104th Street	Lennox Boulevard	70.6	63.1
Crenshaw Boulevard	80th Street	Manchester Boulevard	69.2	61.7
	Manchester Boulevard	Pincay Drive/90th Street	69.6	62.1
	Pincay Drive/90th Street	Arbor Vitae Street	70.5	63.0
	Hardy Street	Century Boulevard	70.5	62.9
	Century Boulevard	104th Street	69.8	62.3
Market Street	Florence Avenue	Regent Street	55.8	48.2
	Regent Street	Manchester Boulevard	59.6	52.0

Street	Segment		Noise Level (dBA)	
	From	To	Daytime	Nighttime
Myrtle Avenue	Arbor Vitae Street	Hardy Street	59.8	52.3
Doty Avenue	Century Boulevard	104th Street	58.1	50.6
Yukon Avenue	Century Boulevard	104th Street	62.4	54.9
Locust Street	Florence Avenue	Manchester Boulevard	56.4	48.8
East/West				
Centinela Avenue	Hyde Park Boulevard	Florence Avenue	68.0	60.5
Florence Avenue	Fir Avenue	La Brea Avenue	67.7	60.2
	La Brea Avenue	Market Street	68.7	61.2
	Market Street	Centinela Avenue	69.3	61.8
	Centinela Avenue	Prairie Avenue	71.5	64.0
	Prairie Avenue	West Boulevard	71.5	64.0
Manchester Boulevard	Grevillea Avenue	La Brea Avenue	67.2	59.6
	La Brea Avenue	Market Street	67.2	59.7
	Market Street	Locust Street	66.6	59.1
	Locust Street	Hillcrest Boulevard	66.9	59.4
	Hillcrest Boulevard	Spruce Avenue	67.7	60.2
	Spruce Avenue	Prairie Avenue	68.4	60.9
	Prairie Avenue	Kareem Court	70.5	63.0
	Kareem Court	Crenshaw Drive	71.1	63.6
	Crenshaw Drive	Crenshaw Boulevard	69.9	62.4
	Crenshaw Boulevard	Van Ness Avenue	70.4	62.9
Arbor Vitae Street	Grevillea Avenue	La Brea Avenue	65.2	57.7
	La Brea Avenue	Myrtle Avenue	63.5	56.0
	Myrtle Avenue	Prairie Avenue	63.1	55.6
Century Boulevard	Grevillea Avenue	La Brea Avenue/Hawthorne Boulevard	72.5	65.0
	La Brea Avenue/Hawthorne Boulevard	Myrtle Avenue	71.6	64.1
	Myrtle Avenue	Freeman Avenue	71.2	63.7
	Freeman Avenue	Prairie Avenue	70.7	63.1
	Prairie Avenue	Doty Avenue	71.6	64.1
	Doty Avenue	HP Casino Way	71.7	64.2
	HP Casino Way	Yukon Avenue	71.7	64.2
	Yukon Avenue	Club Drive	71.6	64.1
	Club Drive	Crenshaw Boulevard	71.8	64.3
	Crenshaw Boulevard	Van Ness Avenue	71.1	63.6
Regent Street	Grevillea Avenue	La Brea Avenue	61.1	53.6
	La Brea Avenue	Market Street	66.0	58.5
	Market Street	Prairie Avenue	63.0	55.5

Street	Segment		Noise Level (dBA)	
	From	To	Daytime	Nighttime
Hillcrest Boulevard	Grevillea Avenue	La Brea Avenue	63.3	55.8
	La Brea Avenue	Market Street	62.5	55.0
	Market Street	Nutwood Street /Locust Street	63.6	56.0
	Nutwood Street /Locust Street	Manchester Boulevard	60.9	53.3
	Manchester Boulevard	Florence Avenue	63.0	55.5
Spruce Avenue	La Brea Avenue	Manchester Avenue	58.6	51.1
Kelso Street/Pincay Drive	Spruce Avenue	Prairie Avenue	63.0	55.4
	Prairie Avenue	Kareem Court	69.8	62.2
	Kareem Court	Crenshaw Boulevard	68.5	61.0
Hardy Street	La Brea Avenue	Prairie Avenue	57.4	49.9
104th Street	Grevillea Avenue	Hawthorne Boulevard	63.8	56.3
	Hawthorne Boulevard	Prairie Avenue	61.6	54.1
	Prairie Avenue	Doty Avenue	61.0	53.5

_____
*Source: Refer to **Appendix 4.10-2.2** for adjusted baseline roadway noise levels*

Adjusted Baseline Typical Weekday Non-Event With Proposed Project

As shown, roadway noise levels increase along analyzed roadways during both the daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) periods would be negligible and would not exceed the 3 dBA Leq increase significance thresholds during both daytime and nighttime periods. Impacts of the proposed Project related to traffic generated noise for the Adjusted Baseline Weekday Non-Event for the proposed Project would be less than significant.

Table 2
Adjusted Baseline Typical Weekday Non-Event With Proposed Project

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
North/South							
La Brea Avenue	Hyde Park Boulevard (Beech Avenue)	Florence Avenue	Daytime	67.1	67.0	-0.1	**No**
			Nighttime	59.6	59.5	-0.1	**No**
	Florence Avenue	Manchester Boulevard	Daytime	67.8	67.7	-0.1	**No**
			Nighttime	60.3	60.2	-0.1	**No**
	Manchester Boulevard	Spruce Avenue/ Market Street	Daytime	66.7	66.7	0.0	**No**
			Nighttime	59.2	59.2	0.0	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	Spruce Avenue/Market Street	Arbor Vitae Street	Daytime	67.8	67.7	-0.1	**No**
			Nighttime	60.3	60.2	-0.1	**No**
	Arbor Vitae Street	Hardy Street	Daytime	68.5	68.4	-0.1	**No**
			Nighttime	60.9	60.8	-0.1	**No**
	Hardy Street	Century Boulevard	Daytime	68.6	68.5	-0.1	**No**
			Nighttime	61.1	61.0	-0.1	**No**
Hawthorne Boulevard	Century Boulevard	104th Street	Daytime	70.2	70.2	0.0	**No**
			Nighttime	62.7	62.6	-0.1	**No**
	104th Street	Lennox Boulevard	Daytime	70.7	70.7	0.0	**No**
			Nighttime	63.2	63.1	-0.1	**No**
Prairie Avenue	Florence Avenue	Regent Street	Daytime	68.9	68.8	-0.1	**No**
			Nighttime	61.4	61.3	-0.1	**No**
	Regent Street	Manchester Boulevard	Daytime	69.0	68.8	-0.2	**No**
			Nighttime	61.5	61.3	-0.2	**No**
	Manchester Boulevard	Kelso St/Pincay Drive	Daytime	70.1	70.0	-0.1	**No**
			Nighttime	62.6	62.4	-0.2	**No**
	Kelso St/Pincay Drive	Arbor Vitae Street	Daytime	71.4	71.2	-0.2	**No**
			Nighttime	63.9	63.7	-0.2	**No**
	Arbor Vitae Street	Hardy Street	Daytime	70.6	70.4	-0.2	**No**
			Nighttime	63.1	62.8	-0.3	**No**
	Hardy Street	97th Street	Daytime	70.9	70.7	-0.2	**No**
			Nighttime	63.4	63.2	-0.2	**No**
	97th Street	Century Boulevard	Daytime	70.9	70.7	-0.2	**No**
			Nighttime	63.4	63.2	-0.2	**No**
	Century Boulevard	102nd Street	Daytime	70.4	70.3	-0.1	**No**
			Nighttime	62.9	62.8	-0.1	**No**
	102nd Street	104th Street	Daytime	70.5	70.4	-0.1	**No**
			Nighttime	63.0	62.9	-0.1	**No**
	104th Street	Lennox Boulevard	Daytime	70.6	70.5	-0.1	**No**
			Nighttime	63.1	63.0	-0.1	**No**
Crenshaw Boulevard	80th Street	Manchester Boulevard	Daytime	69.2	69.1	-0.1	**No**
			Nighttime	61.7	61.6	-0.1	**No**
	Manchester Boulevard	Pincay Drive/90th Street	Daytime	69.6	69.6	0.0	**No**
			Nighttime	62.1	62.1	0.0	**No**
	Pincay Drive/90th Street	Arbor Vitae Street	Daytime	70.5	70.5	0.0	**No**
			Nighttime	63.0	62.9	-0.1	**No**
	Hardy Street		Daytime	70.5	70.4	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
		Century Boulevard	Nighttime	62.9	62.9	0.0	**No**
	Century Boulevard	104th Street	Daytime	69.8	69.8	0.0	**No**
			Nighttime	62.3	62.3	0.0	**No**
Market Street	Florence Avenue	Regent Street	Daytime	55.8	55.7	-0.1	**No**
			Nighttime	48.2	48.1	-0.1	**No**
	Regent Street	Manchester Boulevard	Daytime	59.6	59.5	-0.1	**No**
			Nighttime	52.1	52.0	-0.1	**No**
Myrtle Avenue	Arbor Vitae Street	Hardy Street	Daytime	59.8	59.4	-0.4	**No**
			Nighttime	52.3	51.9	-0.3	**No**
Doty Avenue	Century Boulevard	104th Street	Daytime	58.1	58.0	-0.1	**No**
			Nighttime	50.6	50.5	-0.1	**No**
Yukon Avenue	Century Boulevard	104th Street	Daytime	62.4	62.3	-0.1	**No**
			Nighttime	54.9	54.8	-0.1	**No**
Locust Street	Florence Avenue	Manchester Boulevard	Daytime	56.4	56.3	-0.1	**No**
			Nighttime	48.8	48.8	0.0	**No**
East/West							
Centinela Avenue	Hyde Park Boulevard	Florence Avenue	Daytime	68.0	67.9	-0.1	**No**
			Nighttime	60.5	60.4	-0.1	**No**
Florence Avenue	Fir Avenue	La Brea Avenue	Daytime	67.7	67.7	0.0	**No**
			Nighttime	60.2	60.2	0.0	**No**
	La Brea Avenue	Market Street	Daytime	68.7	68.7	0.0	**No**
			Nighttime	61.2	61.2	0.0	**No**
	Market Street	Centinela Avenue	Daytime	69.3	69.3	0.0	**No**
			Nighttime	61.8	61.8	0.0	**No**
	Centinela Avenue	Prairie Avenue	Daytime	71.5	71.5	0.0	**No**
			Nighttime	64.0	64.0	0.0	**No**
	Prairie Avenue	West Boulevard	Daytime	71.5	71.4	-0.1	**No**
			Nighttime	64.0	63.9	-0.1	**No**
Manchester Boulevard	Grevillea Avenue	La Brea Avenue	Daytime	67.2	67.1	-0.1	**No**
			Nighttime	59.6	59.5	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	67.2	67.1	-0.1	**No**
			Nighttime	59.7	59.6	-0.1	**No**
	Market Street	Locust Street	Daytime	66.6	66.4	-0.2	**No**
			Nighttime	59.1	58.9	-0.2	**No**
	Locust Street	Hillcrest Boulevard	Daytime	66.9	66.8	-0.1	**No**
			Nighttime	59.4	59.2	-0.2	**No**
	Hillcrest Boulevard	Spruce Avenue	Daytime	67.7	67.6	-0.1	**No**
			Nighttime	60.2	60.1	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	Spruce Avenue	Prairie Avenue	Daytime	68.4	68.3	-0.1	**No**
			Nighttime	60.9	60.8	-0.1	**No**
	Prairie Avenue	Kareem Court	Daytime	70.5	70.4	-0.1	**No**
			Nighttime	63.0	62.9	-0.1	**No**
	Kareem Court	Crenshaw Drive	Daytime	71.1	71.0	-0.1	**No**
			Nighttime	63.6	63.5	-0.1	**No**
	Crenshaw Drive	Crenshaw Boulevard	Daytime	69.9	69.8	-0.1	**No**
			Nighttime	62.4	62.3	-0.1	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	70.4	70.3	-0.1	**No**
			Nighttime	62.9	62.8	-0.1	**No**
Arbor Vitae Street	Grevillea Avenue	La Brea Avenue	Daytime	65.2	65.1	-0.2	**No**
			Nighttime	57.7	57.5	-0.2	**No**
	La Brea Avenue	Myrtle Avenue	Daytime	63.5	63.3	-0.2	**No**
			Nighttime	56.0	55.8	-0.2	**No**
	Myrtle Avenue	Prairie Avenue	Daytime	63.1	62.9	-0.2	**No**
			Nighttime	55.6	55.4	-0.2	**No**
Century Boulevard	Grevillea Avenue	La Brea Avenue/Hawthorne Boulevard	Daytime	72.5	72.4	-0.1	**No**
			Nighttime	65.0	64.9	-0.1	**No**
	La Brea Avenue/Hawthorne Boulevard	Myrtle Avenue	Daytime	71.6	71.6	0.0	**No**
			Nighttime	64.1	64.0	0.0	**No**
	Myrtle Avenue	Freeman Avenue	Daytime	71.2	71.2	0.0	**No**
			Nighttime	63.7	63.7	0.0	**No**
	Freeman Avenue	Prairie Avenue	Daytime	70.7	70.6	-0.1	**No**
			Nighttime	63.1	63.1	0.0	**No**
	Prairie Avenue	Doty Avenue	Daytime	71.6	71.5	-0.1	**No**
			Nighttime	64.1	64.0	-0.1	**No**
	Doty Avenue	HP Casino Way	Daytime	71.7	71.6	-0.1	**No**
			Nighttime	64.2	64.1	-0.1	**No**
	HP Casino Way	Yukon Avenue	Daytime	71.7	71.6	-0.1	**No**
			Nighttime	64.2	64.1	-0.1	**No**
	Yukon Avenue	Club Drive	Daytime	71.6	71.5	-0.1	**No**
			Nighttime	64.1	64.0	-0.1	**No**
	Club Drive	Crenshaw Boulevard	Daytime	71.8	71.7	-0.1	**No**
			Nighttime	64.3	64.2	-0.1	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	71.1	71.0	-0.1	**No**
			Nighttime	63.6	63.5	-0.1	**No**
Regent Street			Daytime	61.1	61.0	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	Grevillea Avenue	La Brea Avenue	Nighttime	53.6	53.4	-0.2	**No**
	La Brea Avenue	Market Street	Daytime	66.0	65.9	-0.1	**No**
			Nighttime	58.5	58.4	-0.1	**No**
	Market Street	Prairie Avenue	Daytime	63.0	62.9	-0.1	**No**
			Nighttime	55.5	55.4	-0.1	**No**
Hillcrest Boulevard	Grevillea Avenue	La Brea Avenue	Daytime	63.3	63.2	-0.1	**No**
			Nighttime	55.8	55.7	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	62.5	62.4	-0.1	**No**
			Nighttime	55.0	54.9	-0.1	**No**
	Market Street	Nutwood Street /Locust Street	Daytime	63.6	63.2	-0.4	**No**
			Nighttime	56.0	55.7	-0.3	**No**
	Nutwood Street /Locust Street	Manchester Boulevard	Daytime	60.9	60.6	-0.3	**No**
			Nighttime	53.3	53.1	-0.2	**No**
	Manchester Boulevard	Florence Avenue	Daytime	63.0	62.7	-0.3	**No**
			Nighttime	55.5	55.2	-0.3	**No**
Spruce Avenue	La Brea Avenue	Manchester Avenue	Daytime	58.6	58.6	0.0	**No**
			Nighttime	51.1	51.1	0.0	**No**
Kelso Street/Pincay Drive	Spruce Avenue	Prairie Avenue	Daytime	63.0	62.7	-0.3	**No**
			Nighttime	55.4	55.2	-0.2	**No**
	Prairie Avenue	Kareem Court	Daytime	69.8	69.7	-0.1	**No**
			Nighttime	62.2	62.1	-0.1	**No**
	Kareem Court	Crenshaw Boulevard	Daytime	68.5	68.4	-0.1	**No**
			Nighttime	61.0	60.9	-0.1	**No**
Hardy Street	La Brea Avenue	Prairie Avenue	Daytime	57.4	57.3	-0.1	**No**
			Nighttime	49.9	49.7	-0.2	**No**
104th Street	Grevillea Avenue	Hawthorne Boulevard	Daytime	63.8	63.8	0.0	**No**
			Nighttime	56.3	56.2	-0.1	**No**
	Hawthorne Boulevard	Prairie Avenue	Daytime	61.6	61.6	0.0	**No**
			Nighttime	54.0	54.0	0.0	**No**
	Prairie Avenue	Doty Avenue	Daytime	61.0	61.0	0.0	**No**
			Nighttime	53.5	53.4	-0.1	**No**

*Source: Refer to **Appendix 4.10-4.2** for adjusted baseline plus Project roadway noise levels.*

Future Proposed Project Opening Year (2026) With and Without NFL Game Event

As shown, roadway noise level increases along analyzed roadways during both the daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) periods would be negligible and would not exceed the 3 dBA Leq increase significance thresholds during both daytime and nighttime periods. Impacts of the proposed Project related to traffic generated noise for the Future Opening Year (2026) with Weekday NFL Game for the proposed Project would be less than significant.

Table 4.10-21
Future Opening Year (2026) Noise With and Without Project and Weekday NFL Event

	Segment			Noise Level (dBA)			
Street	From	To	Time Period	Without Project	With Project	Increase	Significant Impact?
North/South							
La Brea Avenue	Hyde Park Boulevard (Beech Avenue)	Florence Avenue	Daytime	68.0	68.0	0.0	**No**
			Nighttime	60.5	60.4	-0.1	**No**
	Florence Avenue	Manchester Boulevard	Daytime	68.7	68.6	-0.1	**No**
			Nighttime	61.2	61.1	-0.1	**No**
	Manchester Boulevard	Spruce Avenue/ Market Street	Daytime	67.9	67.9	0.0	**No**
			Nighttime	60.4	60.3	-0.1	**No**
	Spruce Avenue/Market Street	Arbor Vitae Street	Daytime	69.2	69.1	-0.1	**No**
			Nighttime	61.7	61.6	-0.1	**No**
	Arbor Vitae Street	Hardy Street	Daytime	69.1	69.0	-0.1	**No**
			Nighttime	61.6	61.5	-0.1	**No**
	Hardy Street	Century Boulevard	Daytime	69.6	69.5	0.0	**No**
			Nighttime	62.0	62.0	0.0	**No**
Hawthorne Boulevard	Century Boulevard	104th Street	Daytime	71.2	71.2	0.0	**No**
			Nighttime	63.7	63.6	-0.1	**No**
	104th Street	Lennox Boulevard	Daytime	71.6	71.6	0.0	**No**
			Nighttime	64.1	64.0	-0.1	**No**
Prairie Avenue	Florence Avenue	Regent Street	Daytime	69.6	69.5	-0.1	**No**
			Nighttime	62.1	62.0	-0.1	**No**
	Regent Street	Manchester Boulevard	Daytime	69.5	69.3	-0.2	**No**
			Nighttime	62.0	61.8	-0.2	**No**
	Manchester Boulevard	Kelso St/Pincay Drive	Daytime	71.4	71.2	-0.2	**No**
			Nighttime	63.9	63.7	-0.2	**No**
			Daytime	71.7	71.6	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	Kelso St/Pincay Drive	Arbor Vitae Street	Nighttime	64.2	64.1	-0.1	**No**
	Arbor Vitae Street	Hardy Street	Daytime	71.3	71.1	-0.2	**No**
			Nighttime	63.8	63.5	-0.3	**No**
	Hardy Street	97th Street	Daytime	72.2	72.0	-0.2	**No**
			Nighttime	64.6	64.4	-0.2	**No**
	97th Street	Century Boulevard	Daytime	72.2	72.0	-0.2	**No**
			Nighttime	64.6	64.4	-0.2	**No**
	Century Boulevard	102nd Street	Daytime	71.8	71.5	-0.3	**No**
			Nighttime	64.3	64.0	-0.3	**No**
	102nd Street	104th Street	Daytime	71.8	71.7	-0.1	**No**
			Nighttime	64.3	64.1	-0.2	**No**
	104th Street	Lennox Boulevard	Daytime	71.9	71.7	-0.2	**No**
			Nighttime	64.3	64.2	-0.1	**No**
Crenshaw Boulevard	80th Street	Manchester Boulevard	Daytime	70.1	70.1	0.0	**No**
			Nighttime	62.6	62.5	0.0	**No**
	Manchester Boulevard	Pincay Drive/90th Street	Daytime	70.9	70.9	0.0	**No**
			Nighttime	63.4	63.3	0.0	**No**
	Pincay Drive/90th Street	Arbor Vitae Street	Daytime	72.0	71.9	-0.1	**No**
			Nighttime	64.5	64.4	-0.1	**No**
	Hardy Street	Century Boulevard	Daytime	71.9	71.8	0.0	**No**
			Nighttime	64.4	64.3	-0.1	**No**
	Century Boulevard	104th Street	Daytime	71.6	71.5	-0.1	**No**
			Nighttime	64.1	64.0	-0.1	**No**
Market Street	Florence Avenue	Regent Street	Daytime	57.2	57.1	0.0	**No**
			Nighttime	49.7	49.6	0.0	**No**
	Regent Street	Manchester Boulevard	Daytime	60.3	60.2	-0.1	**No**
			Nighttime	52.8	52.7	-0.1	**No**
Myrtle Avenue	Arbor Vitae Street	Hardy Street	Daytime	60.5	60.4	-0.1	**No**
			Nighttime	53.0	52.9	-0.1	**No**
Doty Avenue	Century Boulevard	104th Street	Daytime	60.7	60.6	-0.1	**No**
			Nighttime	53.2	53.1	-0.1	**No**
Yukon Avenue	Century Boulevard	104th Street	Daytime	63.0	62.9	-0.1	**No**
			Nighttime	55.4	55.3	-0.1	**No**
Locust Street	Florence Avenue	Manchester Boulevard	Daytime	58.1	58.1	0.0	**No**
			Nighttime	50.6	50.5	-0.1	**No**
East/West							
Centinela Avenue	Hyde Park Boulevard	Florence Avenue	Daytime	68.4	68.4	0.0	**No**
			Nighttime	60.9	60.8	0.0	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
Florence Avenue	Fir Avenue	La Brea Avenue	Daytime	68.8	68.8	0.0	**No**
			Nighttime	61.3	61.2	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	69.6	69.6	0.0	**No**
			Nighttime	62.1	62.1	0.0	**No**
	Market Street	Centinela Avenue	Daytime	70.5	70.4	-0.1	**No**
			Nighttime	63.0	62.9	-0.1	**No**
	Centinela Avenue	Prairie Avenue	Daytime	72.3	72.2	-0.1	**No**
			Nighttime	64.8	64.7	-0.1	**No**
	Prairie Avenue	West Boulevard	Daytime	72.2	72.2	0.0	**No**
			Nighttime	64.7	64.7	0.0	**No**
Manchester Boulevard	Grevillea Avenue	La Brea Avenue	Daytime	68.6	68.5	-0.1	**No**
			Nighttime	61.1	61.0	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	68.6	68.5	-0.1	**No**
			Nighttime	61.1	61.0	-0.1	**No**
	Market Street	Locust Street	Daytime	67.8	67.6	-0.2	**No**
			Nighttime	60.2	60.1	-0.1	**No**
	Locust Street	Hillcrest Boulevard	Daytime	68.4	68.3	-0.1	**No**
			Nighttime	60.9	60.7	-0.1	**No**
	Hillcrest Boulevard	Spruce Avenue	Daytime	69.3	69.2	-0.1	**No**
			Nighttime	61.8	61.7	-0.1	**No**
	Spruce Avenue	Prairie Avenue	Daytime	69.8	69.7	-0.1	**No**
			Nighttime	62.3	62.1	-0.1	**No**
	Prairie Avenue	Kareem Court	Daytime	71.5	71.4	-0.1	**No**
			Nighttime	64.0	63.9	-0.1	**No**
	Kareem Court	Crenshaw Drive	Daytime	72.4	72.4	0.0	**No**
			Nighttime	64.9	64.8	-0.1	**No**
	Crenshaw Drive	Crenshaw Boulevard	Daytime	71.2	71.0	-0.2	**No**
			Nighttime	63.6	63.5	-0.1	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	71.5	71.4	-0.1	**No**
			Nighttime	64.0	63.9	-0.1	**No**
Arbor Vitae Street	Grevillea Avenue	La Brea Avenue	Daytime	66.0	65.8	-0.2	**No**
			Nighttime	58.5	58.3	-0.2	**No**
	La Brea Avenue	Myrtle Avenue	Daytime	65.5	65.3	-0.2	**No**
			Nighttime	57.9	57.8	-0.1	**No**
	Myrtle Avenue	Prairie Avenue	Daytime	64.9	64.6	-0.3	**No**
			Nighttime	57.3	57.1	-0.2	**No**
Century Boulevard	Grevillea Avenue	La Brea Avenue/Hawthorne Boulevard	Daytime	73.8	73.7	-0.1	**No**
			Nighttime	66.3	66.2	-0.1	**No**
			Daytime	73.0	72.9	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	La Brea Avenue/Hawthorne Boulevard	Myrtle Avenue	Nighttime	65.4	65.4	0.0	**No**
	Myrtle Avenue	Freeman Avenue	Daytime	72.8	72.7	-0.1	**No**
			Nighttime	65.2	65.1	-0.1	**No**
	Freeman Avenue	Prairie Avenue	Daytime	72.4	72.3	-0.1	**No**
			Nighttime	64.8	64.7	-0.1	**No**
	Prairie Avenue	Doty Avenue	Daytime	73.1	72.9	-0.2	**No**
			Nighttime	65.5	65.4	-0.1	**No**
	Doty Avenue	HP Casino Way	Daytime	73.0	72.9	-0.1	**No**
			Nighttime	65.5	65.4	-0.1	**No**
	HP Casino Way	Yukon Avenue	Daytime	73.0	72.9	-0.1	**No**
			Nighttime	65.5	65.4	-0.1	**No**
	Yukon Avenue	Club Drive	Daytime	72.8	72.6	-0.2	**No**
			Nighttime	65.3	65.1	-0.2	**No**
	Club Drive	Crenshaw Boulevard	Daytime	72.9	72.8	-0.1	**No**
			Nighttime	65.4	65.3	-0.1	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	72.1	72.0	-0.1	**No**
			Nighttime	64.6	64.5	-0.1	**No**
Regent Street	Grevillea Avenue	La Brea Avenue	Daytime	62.6	62.5	-0.1	**No**
			Nighttime	55.1	55.0	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	66.6	66.5	-0.1	**No**
			Nighttime	59.1	59.0	-0.1	**No**
	Market Street	Prairie Avenue	Daytime	63.5	63.4	-0.1	**No**
			Nighttime	56.0	55.9	-0.1	**No**
Hillcrest Boulevard	Grevillea Avenue	La Brea Avenue	Daytime	64.4	64.4	0.0	**No**
			Nighttime	56.9	56.8	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	63.4	63.4	0.0	**No**
			Nighttime	55.9	55.8	-0.1	**No**
	Market Street	Nutwood Street /Locust Street	Daytime	64.3	64.2	-0.1	**No**
			Nighttime	56.8	56.6	-0.2	**No**
	Nutwood Street /Locust Street	Manchester Boulevard	Daytime	62.0	61.8	-0.2	**No**
			Nighttime	54.5	54.3	-0.2	**No**
	Manchester Boulevard	Florence Avenue	Daytime	64.0	63.8	-0.2	**No**
			Nighttime	56.4	56.3	-0.1	**No**
Spruce Avenue	La Brea Avenue	Manchester Avenue	Daytime	63.0	62.6	-0.4	**No**
			Nighttime	55.5	55.1	-0.4	**No**
	Spruce Avenue	Prairie Avenue	Daytime	64.0	64.0	0.0	**No**
			Nighttime	56.5	56.5	0.0	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
Kelso Street/Pinc ay Drive	Prairie Avenue	Kareem Court	Daytime	70.9	70.8	-0.1	**No**
			Nighttime	63.4	63.3	-0.1	**No**
	Kareem Court	Crenshaw Boulevard	Daytime	71.4	71.2	-0.2	**No**
			Nighttime	63.8	63.7	-0.1	**No**
Hardy Street	La Brea Avenue	Prairie Avenue	Daytime	59.3	58.7	-0.6	**No**
			Nighttime	51.8	51.1	-0.7	**No**
104th Street	Grevillea Avenue	Hawthorne Boulevard	Daytime	64.6	64.6	0.0	**No**
			Nighttime	57.1	57.1	0.0	**No**
	Hawthorne Boulevard	Prairie Avenue	Daytime	62.6	62.6	0.0	**No**
			Nighttime	55.0	55.0	0.0	**No**
	Prairie Avenue	Doty Avenue	Daytime	63.8	63.7	-0.1	**No**
			Nighttime	56.3	56.2	-0.1	**No**

*Source: Refer to **Appendix 4.10-4.3** for Future (Year 2026) With and Without Project roadway noise levels.*

Future Long-Term Proposed Project (2045) With and Without Weekday NFL Game Event

As shown, roadway noise levels along analyzed roadways without weekday NFL Game Event during the daytime (7:00 AM to 10:00 PM) ranged from a low of 58.1 dBA along Market Street from Florence Avenue to Regent Street to a high of 74.6 dBA along Century Boulevard between Grevillea Avenue and La Brea Avenue/Hawthorne Boulevard. Additionally, nighttime roadway noise levels ranged from a low of 50.6 dBA along Market Street from Florence Avenue to Regent Street to a high of 66.1 dBA along Century Boulevard between Doty Avenue and HP Casino Way and between HP Casino Way to Yukon Avenue.

Roadway noise level increases with NFL Game Event along analyzed roadways during both the daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) periods would be negligible and would not exceed the 3 dBA Leq increase significance thresholds during both daytime and nighttime periods. Impacts of the proposed Project related to traffic generated noise for the Future Long-Term Proposed Project (2045) With Weekday NFL Game Event would be less than significant.

Table 4.10-22

Future Long-Term (2045) Noise With and Without Project and Weekday NFL Game Event

Street	Segment		Time Period	Noise Level (dBA)		Increase	Significant Impact?
	From	To		Without Project	With Project		
North/South							
La Brea Avenue	Hyde Park Boulevard (Beech Avenue)	Florence Avenue	Daytime	68.6	68.5	-0.1	**No**
			Nighttime	61.1	61.0	-0.1	**No**
	Florence Avenue	Manchester Boulevard	Daytime	69.2	69.1	-0.1	**No**
			Nighttime	61.6	61.6	0.0	**No**
	Manchester Boulevard	Spruce Avenue/ Market Street	Daytime	68.5	68.4	-0.1	**No**
			Nighttime	61.0	60.9	-0.1	**No**
	Spruce Avenue/Market Street	Arbor Vitae Street	Daytime	69.8	69.8	0.0	**No**
			Nighttime	62.3	62.3	0.0	**No**
	Arbor Vitae Street	Hardy Street	Daytime	69.8	69.7	-0.1	**No**
			Nighttime	62.3	62.2	-0.1	**No**
	Hardy Street	Century Boulevard	Daytime	70.3	70.3	0.0	**No**
			Nighttime	62.8	62.7	-0.1	**No**
Hawthorne Boulevard	Century Boulevard	104th Street	Daytime	72.0	71.9	-0.1	**No**
			Nighttime	64.5	64.4	-0.1	**No**
	104th Street	Lennox Boulevard	Daytime	72.4	72.4	0.0	**No**
			Nighttime	64.9	64.8	-0.1	**No**
Prairie Avenue	Florence Avenue	Regent Street	Daytime	70.1	70.0	-0.1	**No**
			Nighttime	62.6	62.5	-0.1	**No**
	Regent Street	Manchester Boulevard	Daytime	69.8	69.6	-0.2	**No**
			Nighttime	62.3	62.1	-0.2	**No**
	Manchester Boulevard	Kelso St/Pincay Drive	Daytime	72.0	71.9	-0.1	**No**
			Nighttime	64.5	64.3	-0.2	**No**
	Kelso St/Pincay Drive	Arbor Vitae Street	Daytime	72.2	72.1	-0.1	**No**
			Nighttime	64.7	64.5	-0.2	**No**
	Arbor Vitae Street	Hardy Street	Daytime	71.9	71.7	-0.2	**No**
			Nighttime	64.4	64.2	-0.2	**No**
	Hardy Street	97th Street	Daytime	72.6	72.4	-0.2	**No**
			Nighttime	65.1	64.9	-0.2	**No**
	97th Street	Century Boulevard	Daytime	72.6	72.4	-0.2	**No**
			Nighttime	65.1	64.9	-0.2	**No**
	Century Boulevard	102nd Street	Daytime	72.3	72.1	-0.2	**No**
			Nighttime	64.7	64.6	-0.1	**No**
	102nd Street	104th Street	Daytime	72.4	72.2	-0.2	**No**
			Nighttime	64.9	64.7	-0.2	**No**
	104th Street		Daytime	72.3	72.2	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
		Lennox Boulevard	Nighttime	64.8	64.6	-0.2	**No**
Crenshaw Boulevard	80th Street	Manchester Boulevard	Daytime	70.7	70.6	-0.1	**No**
			Nighttime	63.2	63.1	-0.1	**No**
	Manchester Boulevard	Pincay Drive/90th Street	Daytime	71.5	71.4	-0.1	**No**
			Nighttime	63.9	63.9	0.0	**No**
	Pincay Drive/90th Street	Arbor Vitae Street	Daytime	72.6	72.5	-0.1	**No**
			Nighttime	65.0	65.0	0.0	**No**
	Hardy Street	Century Boulevard	Daytime	72.5	72.4	-0.1	**No**
			Nighttime	65.0	64.9	-0.1	**No**
	Century Boulevard	104th Street	Daytime	72.2	72.0	-0.2	**No**
			Nighttime	64.6	64.5	-0.1	**No**
Market Street	Florence Avenue	Regent Street	Daytime	58.1	58.1	0.0	**No**
			Nighttime	50.6	50.6	0.0	**No**
	Regent Street	Manchester Boulevard	Daytime	60.9	60.9	0.0	**No**
			Nighttime	53.4	53.3	-0.1	**No**
Myrtle Avenue	Arbor Vitae Street	Hardy Street	Daytime	61.7	61.6	-0.1	**No**
			Nighttime	54.2	54.1	-0.1	**No**
Doty Avenue	Century Boulevard	104th Street	Daytime	61.0	60.9	-0.1	**No**
			Nighttime	53.5	53.4	-0.1	**No**
Yukon Avenue	Century Boulevard	102nd Street	Daytime	63.2	63.2	0.0	**No**
			Nighttime	55.8	55.7	-0.1	**No**
Locust Street	Florence Avenue	Manchester Boulevard	Daytime	58.8	58.7	-0.1	**No**
			Nighttime	51.3	51.2	-0.1	**No**
East/West							
Centinela Avenue	Hyde Park Boulevard	Florence Avenue	Daytime	69.0	68.9	-0.1	**No**
			Nighttime	61.4	61.4	0.0	**No**
Florence Avenue	Fir Avenue	La Brea Avenue	Daytime	69.6	69.6	0.0	**No**
			Nighttime	62.1	62.1	0.0	**No**
	La Brea Avenue	Market Street	Daytime	70.3	70.4	0.1	**No**
			Nighttime	62.9	62.8	-0.1	**No**
	Market Street	Centinela Avenue	Daytime	71.2	71.2	0.0	**No**
			Nighttime	63.7	63.6	-0.1	**No**
	Centinela Avenue	Prairie Avenue	Daytime	72.9	72.8	-0.1	**No**
			Nighttime	65.3	65.3	0.0	**No**
	Prairie Avenue	West Boulevard	Daytime	72.9	72.8	0.0	**No**
			Nighttime	65.3	65.3	0.0	**No**
Manchester	Grevillea Avenue	La Brea Avenue	Daytime	69.0	68.9	-0.1	**No**
			Nighttime	61.5	61.3	-0.2	**No**
	La Brea Avenue	Market Street	Daytime	69.0	68.8	-0.2	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
Boulevard			Nighttime	61.5	61.3	-0.2	**No**
	Market Street	Locust Street	Daytime	68.1	67.9	-0.2	**No**
			Nighttime	60.6	60.4	-0.2	**No**
	Locust Street	Hillcrest Boulevard	Daytime	68.8	68.7	-0.1	**No**
			Nighttime	61.3	61.1	-0.1	**No**
	Hillcrest Boulevard	Spruce Avenue	Daytime	69.9	69.7	-0.1	**No**
			Nighttime	62.3	62.2	-0.1	**No**
	Spruce Avenue	Prairie Avenue	Daytime	70.3	70.2	-0.1	**No**
			Nighttime	62.8	62.7	-0.1	**No**
	Prairie Avenue	Kareem Court	Daytime	72.0	72.0	0.0	**No**
			Nighttime	64.5	64.4	-0.1	**No**
	Kareem Court	Crenshaw Drive	Daytime	73.1	73.0	-0.1	**No**
			Nighttime	65.6	65.5	-0.1	**No**
	Crenshaw Drive	Crenshaw Boulevard	Daytime	71.8	71.7	-0.1	**No**
			Nighttime	64.3	64.1	-0.2	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	72.0	71.9	-0.1	**No**
			Nighttime	64.5	64.4	-0.1	**No**
Arbor Vitae Street	Grevillea Avenue	La Brea Avenue	Daytime	66.7	66.5	-0.1	**No**
			Nighttime	59.2	59.1	-0.1	**No**
	La Brea Avenue	Myrtle Avenue	Daytime	66.0	65.8	-0.2	**No**
			Nighttime	58.4	58.3	-0.1	**No**
	Myrtle Avenue	Prairie Avenue	Daytime	65.4	65.2	-0.2	**No**
			Nighttime	57.9	57.7	-0.2	**No**
Century Boulevard	Grevillea Avenue	La Brea Avenue/Hawthorne Boulevard	Daytime	74.6	74.5	-0.1	**No**
			Nighttime	67.1	67.0	-0.1	**No**
	La Brea Avenue/Hawthorne Boulevard	Myrtle Avenue	Daytime	73.7	73.6	-0.1	**No**
			Nighttime	66.1	66.0	-0.1	**No**
	Myrtle Avenue	Freeman Avenue	Daytime	73.5	73.4	-0.1	**No**
			Nighttime	66.0	65.9	-0.1	**No**
	Freeman Avenue	Prairie Avenue	Daytime	73.1	73.0	-0.1	**No**
			Nighttime	65.6	65.5	-0.1	**No**
	Prairie Avenue	Doty Avenue	Daytime	73.7	73.6	-0.1	**No**
			Nighttime	66.2	66.1	-0.1	**No**
	Doty Avenue	HP Casino Way	Daytime	73.6	73.5	-0.1	**No**
			Nighttime	66.1	66.0	-0.1	**No**
	HP Casino Way	Yukon Avenue	Daytime	73.6	73.5	-0.1	**No**
			Nighttime	66.1	66.0	-0.1	**No**
	Yukon Avenue	Club Drive	Daytime	73.4	73.2	-0.2	**No**
			Nighttime	65.8	65.7	-0.1	**No**

Street	Segment		Time Period	Noise Level (dBA)			Significant Impact?
	From	To		Without Project	With Project	Increase/ Decrease	
	Club Drive	Crenshaw Boulevard	Daytime	73.5	73.4	-0.1	**No**
			Nighttime	66.0	65.9	-0.1	**No**
	Crenshaw Boulevard	Van Ness Avenue	Daytime	72.8	72.7	-0.1	**No**
			Nighttime	65.2	65.2	0.0	**No**
Regent Street	Grevillea Avenue	La Brea Avenue	Daytime	63.6	63.5	-0.1	**No**
			Nighttime	56.1	56.0	-0.1	**No**
	La Brea Avenue	Market Street	Daytime	67.4	67.3	-0.1	**No**
			Nighttime	59.8	59.8	0.0	**No**
	Market Street	Prairie Avenue	Daytime	64.2	64.1	-0.1	**No**
			Nighttime	56.7	56.6	-0.1	**No**
Hillcrest Boulevard	Grevillea Avenue	La Brea Avenue	Daytime	65.3	65.3	0.0	**No**
			Nighttime	57.8	57.8	0.0	**No**
	La Brea Avenue	Market Street	Daytime	64.2	64.1	-0.1	**No**
			Nighttime	56.7	56.6	-0.1	**No**
	Market Street	Nutwood Street /Locust Street	Daytime	65.0	64.9	-0.1	**No**
			Nighttime	57.5	57.4	-0.1	**No**
	Nutwood Street /Locust Street	Manchester Boulevard	Daytime	62.7	62.5	-0.2	**No**
			Nighttime	55.2	55.0	-0.2	**No**
	Manchester Boulevard	Florence Avenue	Daytime	64.6	64.4	-0.2	**No**
			Nighttime	57.0	56.9	-0.1	**No**
Spruce Avenue	La Brea Avenue	Manchester Avenue	Daytime	63.7	63.4	-0.3	**No**
			Nighttime	56.1	55.8	-0.3	**No**
Kelso Street/ Pincay Drive	Spruce Avenue	Prairie Avenue	Daytime	64.9	64.7	-0.2	**No**
			Nighttime	57.4	57.2	-0.2	**No**
	Prairie Avenue	Kareem Court	Daytime	71.5	71.3	-0.2	**No**
			Nighttime	64.0	63.8	-0.2	**No**
	Kareem Court	Crenshaw Boulevard	Daytime	72.0	71.8	-0.2	**No**
			Nighttime	64.5	64.3	-0.2	**No**
Hardy Street	La Brea Avenue	Prairie Avenue	Daytime	59.8	59.3	-0.5	**No**
			Nighttime	52.3	51.7	-0.6	**No**
104th Street	Grevillea Avenue	Hawthorne Boulevard	Daytime	65.6	65.6	0.0	**No**
			Nighttime	58.1	58.1	0.0	**No**
	Hawthorne Boulevard	Prairie Avenue	Daytime	63.6	63.6	0.0	**No**
			Nighttime	56.0	56.0	0.0	**No**
	Prairie Avenue	Doty Avenue	Daytime	64.6	64.5	-0.1	**No**
			Nighttime	57.0	57.0	0.0	**No**

*Source: Refer to **Appendix 4.10-4.4** for Future (Year 2045) With and Without Project roadway noise levels.*

Vibration Monitoring Data Sheets

RMS Level, VdB

One-Third Octave Band Center Frequency (Hz)

Site	4	5	6.3	8	10	12.5	16	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	Max (8-80)
1	53	50	50	49	47	52	46	41	48	48	40	41	38	39	45	48	44	45	47	44	38	52
2	82	77	63	56	53	53	54	55	57	60	53	57	55	52	50	51	51	52	49	42	37	60
3	58	54	49	53	57	60	59	56	55	54	48	42	39	39	40	43	44	51	49	36	25	60
4	54	52	50	54	62	60	57	56	54	52	51	52	48	46	46	45	43	35	29	23	19	62
5	72	69	64	60	63	67	67	62	62	59	58	56	53	53	56	53	52	49	51	52	48	67

Construction Noise Worksheets

Sound Power Level - Phase 1

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Backhoe	3	80	77.6	78.4
Loader	3	80	79.1	79.9
Compressor	2	80	77.7	76.7
Excavator	2	85	80.7	79.7
Bobcat	2	85	85	85
Impact Hammer	3	90	90.3	88.1
Jackhammer	5	89	88.9	88.9
Pneumatic Tools	5	85	85.2	89.2
Concrete Saw	2	90	89.6	85.6
Portable Light Towers for night work	4	70	72.8	75.8
MKN Lifts	3	75	74.7	73.7
	TOTAL		**AVERAGE**	
	34		85.4	84.8

Sound Power Level - Phase 2

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	1	85	80.6	72.6
Backhoe	3	80	77.6	78.4
Loader	4	80	79.1	81.2
Auger Drill Rig	1	85	84.4	77.4
Compressor	2	80	77.7	76.7
Excavator	2	85	80.7	79.7
Bobcat	2	85	85	85
Impact Hammer	3	90	90.3	88.1
Jackhammer	2	89	88.9	84.9
Pneumatic Tools	5	85	85.2	89.2
Concrete Saw	1	90	89.6	82.6
Compactor (ground)	1	83	83.2	76.2
Portable Light Towers	5	70	72.8	76.8
MKN Lifts	8	75	74.7	76.7

TOTAL		**AVERAGE**	
40		84.9	83.1

Sound Power Level - Phase 3

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	3	85	80.6	77.4
Backhoe	3	80	77.6	78.4
Loader	5	80	79.1	82.1
Auger Drill Rig	3	85	84.4	82.1
Compressor	4	80	77.7	79.7
Excavator	2	85	80.7	79.7
Bobcat	2	85	85	85
Impact Hammer	3	90	90.3	88.1
Jackhammer	2	89	88.9	84.9
Pneumatic Tools	10	85	85.2	92.2
Generator	2	82	80.6	80.6
Drum Mixer	2	80	80	80
Concrete Saw	1	90	89.6	82.6
Compactor (ground)	2	83	83.2	79.3
Portable Light Towers	5	70	72.8	76.8
MKN Lifts	8	75	74.7	76.7

TOTAL		**AVERAGE**	
57		84.6	84.1

Sound Power Level - Phase 4

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	6	85	80.6	80.4
Backhoe	3	80	77.6	78.4
Loader	3	80	79.1	79.9
Auger Drill Rig	3		84.4	82.1
Compressor	5	80	77.7	80.7
Excavator	1		80.7	76.7
Bobcat	2	85	85	85
Impact Hammer	2	90	90.3	86.3
Jackhammer	2	89	88.9	84.9
Pneumatic Tools	15	85	85.2	93.9
Generator	3	82	80.6	82.4
Drum Mixer	2	80	80	80
Concrete Saw	1	90	89.6	82.6
Compactor (Ground)	1	83	83.2	76.2
Portable Light Towers	5	70	72.8	76.8
Man Lift	6	75	74.7	75.5
	TOTAL		**AVERAGE**	
	60		84.6	84.7

Sound Power Level - Phase 5

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	6	85	80.6	80.4
Backhoe	3	80	77.6	78.4
Loader	1	80	79.1	75.1
Compressor	4	80	77.7	79.7
Bobcat	2	85	85	85
Impact Hammer	2	90	90.3	86.3
Jackhammer	2	89	88.9	84.9
Pneumatic Tools	15	85	85.2	93.9
Generator	3	82	80.6	82.4
Drum Mixer	1	80	80	77
Concrete Saw	1	90	89.6	82.6
Compactor (ground)	1	83	83.2	76.2
Portable Light Towers	2	70	72.8	72.8
MKN Lifts	6	75	74.7	75.5

TOTAL		**AVERAGE**	
49		84.8	84.9

Sound Power Level - Phase 6

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	6	85	80.6	80.4
Backhoe	1	80	77.6	73.6
Loader	1	80	79.1	75.1
Compressor	3	80	77.7	78.5
Bobcat	2	85	79.1	84.2
Pneumatic Tools	10	85	85.2	92.2
Generator	2	82	80.6	80.6
Drum Mixer	1	80	80	77
Drill Rig Truck	1	84	79.1	72.2
Concrete Saw	1	90	89.6	82.6
Compactor (ground)	1	83	83.2	76.2
Portable Light Towers	2	70	72.8	72.8
MKN Lifts	2	75	74.7	70.7
	TOTAL		**AVERAGE**	
	33		82.3	83.0

Sound Power Level - Phase 7

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Crane	1	85	80.6	72.6
Backhoe	1	80	77.6	73.6
Compressor	1	80	77.7	73.7
Bobcat	2	85	85	85
Pneumatic Tools	8	85	85.2	91.2
Generator	2	82	80.6	80.6
Drill Rig Truck	2	84	79.1	75.2
Compactor (ground)	4	83	83.2	82.3
	TOTAL		**AVERAGE**	
	21		82.1	84.0

Sound Power Level - Phase 8

	Quantity	Spec Lmax (50 feet)	Lmax	Leq
Pneumatic Tools	6	85	85.2	90

TOTAL		**AVERAGE**	
6		85.2	90.0

Phase 1

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)	
Kelso Elementary	G		66.4	62.6	59
Site 1	G		81.4	77.6	74
Site 2	G		72.9	69.1	65.5
Site 3	G		78.1	74.3	70.8
Site 4	G		64.8	61	57.4
Site 5	G		62.7	58.9	55.3
Site A	G		64.7	60.9	57.3
Site B	G		67.7	63.9	60.3
Site C	G		60.4	56.6	53
Site D	G		63.4	59.6	56.1
Site E	G		61.9	58.1	54.5
Site F	G		70	66.2	62.6
Site G	G		64.4	60.6	57
Site H	G		65.5	61.7	58.1
Site I	G		81.4	77.6	74
Site J	G		71.5	67.7	64.1
Site K	G		76.9	73.1	69.6
Site L	G		60.3	56.5	52.9
Site M	G		58.3	54.5	50.9

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
59.6	62.5	59.2	62.6
74.6	77.5	74.2	77.6
66.1	69	65.6	69.1
71.3	74.2	70.9	74.3
58	60.9	57.6	61
55.9	58.8	55.5	58.9
57.9	60.8	57.5	60.9
60.9	63.8	60.5	63.9
53.6	56.5	53.1	56.6
56.6	59.5	56.2	59.6
55.1	58	54.7	58.1
63.2	66.1	62.8	66.2
57.6	60.5	57.1	60.6
58.7	61.6	58.3	61.7
74.6	77.5	74.2	77.6
64.7	67.6	64.3	67.7
70.1	73	69.7	73.1
53.5	56.4	53.1	56.5
51.5	54.4	51.1	54.5

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)	2-3 o'clock dB(A)
59.6	59.6	59.6	59.6
74.6	74.6	74.6	74.6
66.1	66.1	66.1	66.1
71.3	71.3	71.3	71.3
58	58	58	58
55.9	55.9	55.9	55.9
57.9	57.9	57.9	57.9
60.9	60.9	60.9	60.9
53.6	53.6	53.6	53.6
56.6	56.6	56.6	56.6
55.1	55.1	55.1	55.1
63.2	63.2	63.2	63.2
57.6	57.6	57.6	57.6
58.7	58.7	58.7	58.7
74.6	74.6	74.6	74.6
64.7	64.7	64.7	64.7
70.1	70.1	70.1	70.1
53.5	53.5	53.5	53.5
51.5	51.5	51.5	51.5

3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)	6-7 o'clock dB(A)
59.6	59.6	59.6	59.6
74.6	74.6	74.6	74.6
66.1	66.1	66.1	66.1
71.3	71.3	71.3	71.3
58	58	58	58
55.9	55.9	55.9	55.9
57.9	57.9	57.9	57.9
60.9	60.9	60.9	60.9
53.6	53.6	53.6	53.6
56.6	56.6	56.6	56.6
55.1	55.1	55.1	55.1
63.2	63.2	63.2	63.2
57.6	57.6	57.6	57.6
58.7	58.7	58.7	58.7
74.6	74.6	74.6	74.6
64.7	64.7	64.7	64.7
70.1	70.1	70.1	70.1
53.5	53.5	53.5	53.5
51.5	51.5	51.5	51.5

7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)	10-11 o'clock dB(A)
62.6	62.6	62.6	62.6
77.6	77.6	77.6	77.6
69.1	69.1	69.1	69.1
74.3	74.3	74.3	74.3
61	61	61	61
58.9	58.9	58.9	58.9
60.9	60.9	60.9	60.9
63.9	63.9	63.9	63.9
56.6	56.6	56.6	56.6
59.6	59.6	59.6	59.6
58.1	58.1	58.1	58.1
66.2	66.2	66.2	66.2
60.6	60.6	60.6	60.6
61.7	61.7	61.7	61.7
77.6	77.6	77.6	77.6
67.7	67.7	67.7	67.7
73.1	73.1	73.1	73.1
56.5	56.5	56.5	56.5
54.5	54.5	54.5	54.5

11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)	14-15 o'clock dB(A)
62.6	62.6	62.6	62.6
77.6	77.6	77.6	77.6
69.1	69.1	69.1	69.1
74.3	74.3	74.3	74.3
61	61	61	61
58.9	58.9	58.9	58.9
60.9	60.9	60.9	60.9
63.9	63.9	63.9	63.9
56.6	56.6	56.6	56.6
59.6	59.6	59.6	59.6
58.1	58.1	58.1	58.1
66.2	66.2	66.2	66.2
60.6	60.6	60.6	60.6
61.7	61.7	61.7	61.7
77.6	77.6	77.6	77.6
67.7	67.7	67.7	67.7
73.1	73.1	73.1	73.1
56.5	56.5	56.5	56.5
54.5	54.5	54.5	54.5

15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)	18-19 o'clock dB(A)
62.6	62.6	62.6	62.6
77.6	77.6	77.6	77.6
69.1	69.1	69.1	69.1
74.3	74.3	74.3	74.3
61	61	61	61
58.9	58.9	58.9	58.9
60.9	60.9	60.9	60.9
63.9	63.9	63.9	63.9
56.6	56.6	56.6	56.6
59.6	59.6	59.6	59.6
58.1	58.1	58.1	58.1
66.2	66.2	66.2	66.2
60.6	60.6	60.6	60.6
61.7	61.7	61.7	61.7
77.6	77.6	77.6	77.6
67.7	67.7	67.7	67.7
73.1	73.1	73.1	73.1
56.5	56.5	56.5	56.5
54.5	54.5	54.5	54.5

19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)	22-23 o'clock dB(A)
61.4	58.4	58.4	56.6
76.4	73.4	73.4	71.6
67.8	64.9	64.9	63
73.1	70.1	70.1	68.3
59.8	56.8	56.8	55
57.6	54.7	54.7	52.9
59.6	56.7	56.7	54.8
62.6	59.7	59.7	57.9
55.3	52.4	52.4	50.5
58.4	55.4	55.4	53.6
56.8	53.9	53.9	52
64.9	62	62	60.2
59.3	56.4	56.4	54.5
60.5	57.5	57.5	55.7
76.3	73.4	73.4	71.6
66.4	63.5	63.5	61.7
71.9	68.9	68.9	67.1
55.3	52.3	52.3	50.5
53.2	50.3	50.3	48.5

23-24 o'clock dB(A)
59.6
74.6
66.1
71.3
58
55.9
57.9
60.9
53.6
56.6
55.1
63.2
57.6
58.7
74.6
64.7
70.1
53.5
51.5

Phase 2

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G	73.2	69.4	65.8
Site 1	G	55.6	51.8	48.3
Site 2	G	71.5	67.7	64.1
Site 3	G	75.1	71.3	67.7
Site 4	G	76.5	72.7	69.1
Site 5	G	58.7	54.9	51.3
Site A	G	57	53.2	49.7
Site B	G	68.7	64.9	61.3
Site C	G	76.4	72.6	69
Site D	G	59.8	56	52.4
Site E	G	58.5	54.7	51.1
Site F	G	69	65.2	61.7
Site G	G	69.3	65.5	61.9
Site H	G	70.6	66.8	63.2
Site I	G	79.6	75.8	72.2
Site J	G	58.9	55.1	51.6
Site K	G	54.9	51.1	47.5
Site L	G	57.5	53.7	50.2
Site M	G	57	53.2	49.7

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
66.4	69.3	66	69.4
48.8	51.8	48.4	51.8
64.7	67.6	64.3	67.7
68.3	71.2	67.9	71.3
69.7	72.6	69.3	72.7
51.8	54.8	51.4	54.9
50.2	53.1	49.8	53.2
61.8	64.8	61.4	64.9
69.6	72.5	69.2	72.6
53	55.9	52.6	56
51.6	54.6	51.2	54.7
62.2	65.1	61.8	65.2
62.5	65.4	62.1	65.5
63.8	66.7	63.4	66.8
72.8	75.7	72.4	75.8
52.1	55	51.7	55.1
48.1	51	47.7	51.1
50.7	53.7	50.3	53.7
50.2	53.2	49.8	53.2

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
66.4	66.4	66.4
48.8	48.8	48.8
64.7	64.7	64.7
68.3	68.3	68.3
69.7	69.7	69.7
51.8	51.8	51.8
50.2	50.2	50.2
61.8	61.8	61.8
69.6	69.6	69.6
53	53	53
51.6	51.6	51.6
62.2	62.2	62.2
62.5	62.5	62.5
63.8	63.8	63.8
72.8	72.8	72.8
52.1	52.1	52.1
48.1	48.1	48.1
50.7	50.7	50.7
50.2	50.2	50.2

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
66.4	66.4	66.4	66.4
48.8	48.8	48.8	48.8
64.7	64.7	64.7	64.7
68.3	68.3	68.3	68.3
69.7	69.7	69.7	69.7
51.8	51.8	51.8	51.8
50.2	50.2	50.2	50.2
61.8	61.8	61.8	61.8
69.6	69.6	69.6	69.6
53	53	53	53
51.6	51.6	51.6	51.6
62.2	62.2	62.2	62.2
62.5	62.5	62.5	62.5
63.8	63.8	63.8	63.8
72.8	72.8	72.8	72.8
52.1	52.1	52.1	52.1
48.1	48.1	48.1	48.1
50.7	50.7	50.7	50.7
50.2	50.2	50.2	50.2

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
66.4	69.4	69.4	69.4
48.8	51.8	51.8	51.8
64.7	67.7	67.7	67.7
68.3	71.3	71.3	71.3
69.7	72.7	72.7	72.7
51.8	54.9	54.9	54.9
50.2	53.2	53.2	53.2
61.8	64.9	64.9	64.9
69.6	72.6	72.6	72.6
53	56	56	56
51.6	54.7	54.7	54.7
62.2	65.2	65.2	65.2
62.5	65.5	65.5	65.5
63.8	66.8	66.8	66.8
72.8	75.8	75.8	75.8
52.1	55.1	55.1	55.1
48.1	51.1	51.1	51.1
50.7	53.7	53.7	53.7
50.2	53.2	53.2	53.2

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
69.4	69.4	69.4	69.4
51.8	51.8	51.8	51.8
67.7	67.7	67.7	67.7
71.3	71.3	71.3	71.3
72.7	72.7	72.7	72.7
54.9	54.9	54.9	54.9
53.2	53.2	53.2	53.2
64.9	64.9	64.9	64.9
72.6	72.6	72.6	72.6
56	56	56	56
54.7	54.7	54.7	54.7
65.2	65.2	65.2	65.2
65.5	65.5	65.5	65.5
66.8	66.8	66.8	66.8
75.8	75.8	75.8	75.8
55.1	55.1	55.1	55.1
51.1	51.1	51.1	51.1
53.7	53.7	53.7	53.7
53.2	53.2	53.2	53.2

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
69.4	69.4	69.4	69.4
51.8	51.8	51.8	51.8
67.7	67.7	67.7	67.7
71.3	71.3	71.3	71.3
72.7	72.7	72.7	72.7
54.9	54.9	54.9	54.9
53.2	53.2	53.2	53.2
64.9	64.9	64.9	64.9
72.6	72.6	72.6	72.6
56	56	56	56
54.7	54.7	54.7	54.7
65.2	65.2	65.2	65.2
65.5	65.5	65.5	65.5
66.8	66.8	66.8	66.8
75.8	75.8	75.8	75.8
55.1	55.1	55.1	55.1
51.1	51.1	51.1	51.1
53.7	53.7	53.7	53.7
53.2	53.2	53.2	53.2

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
69.4	68.1	65.2	65.2
51.8	50.6	47.6	47.6
67.7	66.4	63.5	63.5
71.3	70.1	67.1	67.1
72.7	71.5	68.5	68.5
54.9	53.6	50.7	50.7
53.2	52	49	49
64.9	63.6	60.7	60.7
72.6	71.3	68.4	68.4
56	54.8	51.8	51.8
54.7	53.4	50.4	50.4
65.2	64	61	61
65.5	64.2	61.3	61.3
66.8	65.5	62.6	62.6
75.8	74.6	71.6	71.6
55.1	53.9	50.9	50.9
51.1	49.9	46.9	46.9
53.7	52.5	49.5	49.5
53.2	52	49	49

22-23 o'clock dB(A)	23-24 o'clock dB(A)
63.4	66.4
45.8	48.8
61.7	64.7
65.3	68.3
66.7	69.7
48.8	51.8
47.2	50.2
58.8	61.8
66.6	69.6
50	53
48.6	51.6
59.2	62.2
59.4	62.5
60.8	63.8
69.8	72.8
49.1	52.1
45.1	48.1
47.7	50.7
47.2	50.2

Phase 3

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)	
Kelso Elementary	G		64.1	60.3	56.8
Site 1	G		73.7	69.9	66.3
Site 2	G		77.9	74.1	70.6
Site 3	G		72.9	69.1	65.5
Site 4	G		57.4	53.6	50
Site 5	G		56	52.2	48.6
Site A	G		76.2	72.4	68.8
Site B	G		77	73.2	69.7
Site C	G		56.9	53.1	49.5
Site D	G		56.5	52.7	49.2
Site E	G		53.9	50.1	46.5
Site F	G		60.9	57.1	53.5
Site G	G		60.7	56.9	53.3
Site H	G		65.6	61.8	58.2
Site I	G		80.9	77.1	73.5
Site J	G		74.3	70.5	67
Site K	G		75.1	71.3	67.7
Site L	G		59	55.2	51.6
Site M	G		56.3	52.5	49

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
	57.3	60.3	56.9	60.3
	66.9	69.8	66.5	69.9
	71.1	74	70.7	74.1
	66.1	69	65.7	69.1
	50.6	53.5	50.2	53.6
	49.2	52.1	48.8	52.2
	69.4	72.3	69	72.4
	70.2	73.1	69.8	73.2
	50.1	53	49.7	53.1
	49.7	52.6	49.3	52.7
	47.1	50	46.7	50.1
	54.1	57	53.7	57.1
	53.9	56.8	53.5	56.9
	58.8	61.7	58.4	61.8
	74.1	77	73.7	77.1
	67.5	70.5	67.1	70.5
	68.3	71.2	67.9	71.3
	52.2	55.1	51.8	55.2
	49.5	52.5	49.1	52.5

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
57.3	57.3	57.3
66.9	66.9	66.9
71.1	71.1	71.1
66.1	66.1	66.1
50.6	50.6	50.6
49.2	49.2	49.2
69.4	69.4	69.4
70.2	70.2	70.2
50.1	50.1	50.1
49.7	49.7	49.7
47.1	47.1	47.1
54.1	54.1	54.1
53.9	53.9	53.9
58.8	58.8	58.8
74.1	74.1	74.1
67.5	67.5	67.5
68.3	68.3	68.3
52.2	52.2	52.2
49.5	49.5	49.5

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
57.3	57.3	57.3	57.3
66.9	66.9	66.9	66.9
71.1	71.1	71.1	71.1
66.1	66.1	66.1	66.1
50.6	50.6	50.6	50.6
49.2	49.2	49.2	49.2
69.4	69.4	69.4	69.4
70.2	70.2	70.2	70.2
50.1	50.1	50.1	50.1
49.7	49.7	49.7	49.7
47.1	47.1	47.1	47.1
54.1	54.1	54.1	54.1
53.9	53.9	53.9	53.9
58.8	58.8	58.8	58.8
74.1	74.1	74.1	74.1
67.5	67.5	67.5	67.5
68.3	68.3	68.3	68.3
52.2	52.2	52.2	52.2
49.5	49.5	49.5	49.5

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
57.3	60.3	60.3	60.3
66.9	69.9	69.9	69.9
71.1	74.1	74.1	74.1
66.1	69.1	69.1	69.1
50.6	53.6	53.6	53.6
49.2	52.2	52.2	52.2
69.4	72.4	72.4	72.4
70.2	73.2	73.2	73.2
50.1	53.1	53.1	53.1
49.7	52.7	52.7	52.7
47.1	50.1	50.1	50.1
54.1	57.1	57.1	57.1
53.9	56.9	56.9	56.9
58.8	61.8	61.8	61.8
74.1	77.1	77.1	77.1
67.5	70.5	70.5	70.5
68.3	71.3	71.3	71.3
52.2	55.2	55.2	55.2
49.5	52.5	52.5	52.5

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
60.3	60.3	60.3	60.3
69.9	69.9	69.9	69.9
74.1	74.1	74.1	74.1
69.1	69.1	69.1	69.1
53.6	53.6	53.6	53.6
52.2	52.2	52.2	52.2
72.4	72.4	72.4	72.4
73.2	73.2	73.2	73.2
53.1	53.1	53.1	53.1
52.7	52.7	52.7	52.7
50.1	50.1	50.1	50.1
57.1	57.1	57.1	57.1
56.9	56.9	56.9	56.9
61.8	61.8	61.8	61.8
77.1	77.1	77.1	77.1
70.5	70.5	70.5	70.5
71.3	71.3	71.3	71.3
55.2	55.2	55.2	55.2
52.5	52.5	52.5	52.5

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
60.3	60.3	60.3	60.3
69.9	69.9	69.9	69.9
74.1	74.1	74.1	74.1
69.1	69.1	69.1	69.1
53.6	53.6	53.6	53.6
52.2	52.2	52.2	52.2
72.4	72.4	72.4	72.4
73.2	73.2	73.2	73.2
53.1	53.1	53.1	53.1
52.7	52.7	52.7	52.7
50.1	50.1	50.1	50.1
57.1	57.1	57.1	57.1
56.9	56.9	56.9	56.9
61.8	61.8	61.8	61.8
77.1	77.1	77.1	77.1
70.5	70.5	70.5	70.5
71.3	71.3	71.3	71.3
55.2	55.2	55.2	55.2
52.5	52.5	52.5	52.5

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
60.3	59.1	56.1	56.1
69.9	68.6	65.7	65.7
74.1	72.9	69.9	69.9
69.1	67.8	64.9	64.9
53.6	52.4	49.4	49.4
52.2	50.9	48	48
72.4	71.1	68.2	68.2
73.2	72	69	69
53.1	51.8	48.9	48.9
52.7	51.5	48.5	48.5
50.1	48.9	45.9	45.9
57.1	55.9	52.9	52.9
56.9	55.6	52.7	52.7
61.8	60.5	57.6	57.6
77.1	75.8	72.9	72.9
70.5	69.3	66.3	66.3
71.3	70.1	67.1	67.1
55.2	53.9	51	51
52.5	51.3	48.3	48.3

22-23 o'clock dB(A)	23-24 o'clock dB(A)
54.3	57.3
63.9	66.9
68.1	71.1
63.1	66.1
47.6	50.6
46.2	49.2
66.4	69.4
67.2	70.2
47	50.1
46.7	49.7
44.1	47.1
51.1	54.1
50.9	53.9
55.8	58.8
71.1	74.1
64.5	67.5
65.3	68.3
49.2	52.2
46.5	49.5

Phase 4

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G	75	71.2	67.7
Site 1	G	74.3	70.5	66.9
Site 2	G	78.7	74.9	71.4
Site 3	G	77.6	73.8	70.2
Site 4	G	78.1	74.3	70.8
Site 5	G	60.8	57	53.5
Site A	G	76.8	73	69.4
Site B	G	78.2	74.4	70.9
Site C	G	78	74.2	70.6
Site D	G	61.8	58	54.5
Site E	G	60.6	56.8	53.2
Site F	G	70.7	66.9	63.4
Site G	G	71.1	67.3	63.7
Site H	G	72.8	69	65.4
Site I	G	81.6	77.8	74.2
Site J	G	75	71.2	67.6
Site K	G	75.7	71.9	68.4
Site L	G	60.9	57.1	53.5
Site M	G	60	56.2	52.6

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
68.2	71.2	67.8	71.2
67.5	70.4	67.1	70.5
71.9	74.8	71.5	74.9
70.8	73.7	70.4	73.8
71.3	74.2	70.9	74.3
54	56.9	53.6	57
70	72.9	69.6	73
71.4	74.4	71	74.4
71.2	74.1	70.8	74.2
55	57.9	54.6	58
53.7	56.7	53.3	56.8
63.9	66.9	63.5	66.9
64.3	67.2	63.9	67.3
66	68.9	65.5	69
74.8	77.7	74.4	77.8
68.2	71.1	67.7	71.2
68.9	71.8	68.5	71.9
54	57	53.6	57.1
53.2	56.1	52.8	56.2

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
68.2	68.2	68.2
67.5	67.5	67.5
71.9	71.9	71.9
70.8	70.8	70.8
71.3	71.3	71.3
54	54	54
70	70	70
71.4	71.4	71.4
71.2	71.2	71.2
55	55	55
53.7	53.7	53.7
63.9	63.9	63.9
64.3	64.3	64.3
66	66	66
74.8	74.8	74.8
68.2	68.2	68.2
68.9	68.9	68.9
54	54	54
53.2	53.2	53.2

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
68.2	68.2	68.2	68.2
67.5	67.5	67.5	67.5
71.9	71.9	71.9	71.9
70.8	70.8	70.8	70.8
71.3	71.3	71.3	71.3
54	54	54	54
70	70	70	70
71.4	71.4	71.4	71.4
71.2	71.2	71.2	71.2
55	55	55	55
53.7	53.7	53.7	53.7
63.9	63.9	63.9	63.9
64.3	64.3	64.3	64.3
66	66	66	66
74.8	74.8	74.8	74.8
68.2	68.2	68.2	68.2
68.9	68.9	68.9	68.9
54	54	54	54
53.2	53.2	53.2	53.2

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
68.2	71.2	71.2	71.2
67.5	70.5	70.5	70.5
71.9	74.9	74.9	74.9
70.8	73.8	73.8	73.8
71.3	74.3	74.3	74.3
54	57	57	57
70	73	73	73
71.4	74.4	74.4	74.4
71.2	74.2	74.2	74.2
55	58	58	58
53.7	56.8	56.8	56.8
63.9	66.9	66.9	66.9
64.3	67.3	67.3	67.3
66	69	69	69
74.8	77.8	77.8	77.8
68.2	71.2	71.2	71.2
68.9	71.9	71.9	71.9
54	57.1	57.1	57.1
53.2	56.2	56.2	56.2

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
71.2	71.2	71.2	71.2
70.5	70.5	70.5	70.5
74.9	74.9	74.9	74.9
73.8	73.8	73.8	73.8
74.3	74.3	74.3	74.3
57	57	57	57
73	73	73	73
74.4	74.4	74.4	74.4
74.2	74.2	74.2	74.2
58	58	58	58
56.8	56.8	56.8	56.8
66.9	66.9	66.9	66.9
67.3	67.3	67.3	67.3
69	69	69	69
77.8	77.8	77.8	77.8
71.2	71.2	71.2	71.2
71.9	71.9	71.9	71.9
57.1	57.1	57.1	57.1
56.2	56.2	56.2	56.2

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
71.2	71.2	71.2	71.2
70.5	70.5	70.5	70.5
74.9	74.9	74.9	74.9
73.8	73.8	73.8	73.8
74.3	74.3	74.3	74.3
57	57	57	57
73	73	73	73
74.4	74.4	74.4	74.4
74.2	74.2	74.2	74.2
58	58	58	58
56.8	56.8	56.8	56.8
66.9	66.9	66.9	66.9
67.3	67.3	67.3	67.3
69	69	69	69
77.8	77.8	77.8	77.8
71.2	71.2	71.2	71.2
71.9	71.9	71.9	71.9
57.1	57.1	57.1	57.1
56.2	56.2	56.2	56.2

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
71.2	70	67	67
70.5	69.2	66.3	66.3
74.9	73.7	70.7	70.7
73.8	72.6	69.6	69.6
74.3	73.1	70.1	70.1
57	55.8	52.8	52.8
73	71.8	68.8	68.8
74.4	73.2	70.2	70.2
74.2	72.9	70	70
58	56.8	53.8	53.8
56.8	55.5	52.6	52.6
66.9	65.7	62.7	62.7
67.3	66	63.1	63.1
69	67.7	64.8	64.8
77.8	76.5	73.6	73.6
71.2	69.9	67	67
71.9	70.7	67.7	67.7
57.1	55.8	52.9	52.9
56.2	55	52	52

22-23 o'clock dB(A)	23-24 o'clock dB(A)
65.2	68.2
64.5	67.5
68.9	71.9
67.8	70.8
68.3	71.3
51	54
67	70
68.4	71.4
68.2	71.2
52	55
50.7	53.7
60.9	63.9
61.3	64.3
62.9	66
71.8	74.8
65.1	68.2
65.9	68.9
51	54
50.2	53.2

Phase 5

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)	
Kelso Elementary	G		75.2	71.4	67.8
Site 1	G		74.5	70.7	67.1
Site 2	G		78.2	74.4	70.9
Site 3	G		77.7	73.9	70.3
Site 4	G		78.3	74.5	71
Site 5	G		60.5	56.7	53.1
Site A	G		77	73.2	69.6
Site B	G		78.4	74.6	71
Site C	G		78.2	74.4	70.8
Site D	G		61.5	57.7	54.1
Site E	G		60.7	56.9	53.3
Site F	G		70.9	67.1	63.5
Site G	G		71.1	67.3	63.8
Site H	G		72.7	68.9	65.3
Site I	G		74.8	71	67.4
Site J	G		75.1	71.3	67.7
Site K	G		75.9	72.1	68.5
Site L	G		59.6	55.8	52.3
Site M	G		59.8	56	52.4

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
68.4	71.3	68	71.4
67.6	70.6	67.2	70.7
71.4	74.4	71	74.4
70.9	73.8	70.4	73.9
71.5	74.4	71.1	74.5
53.7	56.6	53.3	56.7
70.2	73.1	69.8	73.2
71.6	74.5	71.2	74.6
71.4	74.3	71	74.4
54.7	57.6	54.3	57.7
53.9	56.8	53.5	56.9
64	67	63.6	67.1
64.3	67.3	63.9	67.3
65.9	68.8	65.5	68.9
68	70.9	67.6	71
68.3	71.2	67.8	71.3
69.1	72	68.7	72.1
52.8	55.8	52.4	55.8
53	55.9	52.6	56

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
68.4	68.4	68.4
67.6	67.6	67.6
71.4	71.4	71.4
70.9	70.9	70.9
71.5	71.5	71.5
53.7	53.7	53.7
70.2	70.2	70.2
71.6	71.6	71.6
71.4	71.4	71.4
54.7	54.7	54.7
53.9	53.9	53.9
64	64	64
64.3	64.3	64.3
65.9	65.9	65.9
68	68	68
68.3	68.3	68.3
69.1	69.1	69.1
52.8	52.8	52.8
53	53	53

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
68.4	68.4	68.4	68.4
67.6	67.6	67.6	67.6
71.4	71.4	71.4	71.4
70.9	70.9	70.9	70.9
71.5	71.5	71.5	71.5
53.7	53.7	53.7	53.7
70.2	70.2	70.2	70.2
71.6	71.6	71.6	71.6
71.4	71.4	71.4	71.4
54.7	54.7	54.7	54.7
53.9	53.9	53.9	53.9
64	64	64	64
64.3	64.3	64.3	64.3
65.9	65.9	65.9	65.9
68	68	68	68
68.3	68.3	68.3	68.3
69.1	69.1	69.1	69.1
52.8	52.8	52.8	52.8
53	53	53	53

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
68.4	71.4	71.4	71.4
67.6	70.7	70.7	70.7
71.4	74.4	74.4	74.4
70.9	73.9	73.9	73.9
71.5	74.5	74.5	74.5
53.7	56.7	56.7	56.7
70.2	73.2	73.2	73.2
71.6	74.6	74.6	74.6
71.4	74.4	74.4	74.4
54.7	57.7	57.7	57.7
53.9	56.9	56.9	56.9
64	67.1	67.1	67.1
64.3	67.3	67.3	67.3
65.9	68.9	68.9	68.9
68	71	71	71
68.3	71.3	71.3	71.3
69.1	72.1	72.1	72.1
52.8	55.8	55.8	55.8
53	56	56	56

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
71.4	71.4	71.4	71.4
70.7	70.7	70.7	70.7
74.4	74.4	74.4	74.4
73.9	73.9	73.9	73.9
74.5	74.5	74.5	74.5
56.7	56.7	56.7	56.7
73.2	73.2	73.2	73.2
74.6	74.6	74.6	74.6
74.4	74.4	74.4	74.4
57.7	57.7	57.7	57.7
56.9	56.9	56.9	56.9
67.1	67.1	67.1	67.1
67.3	67.3	67.3	67.3
68.9	68.9	68.9	68.9
71	71	71	71
71.3	71.3	71.3	71.3
72.1	72.1	72.1	72.1
55.8	55.8	55.8	55.8
56	56	56	56

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
71.4	71.4	71.4	71.4
70.7	70.7	70.7	70.7
74.4	74.4	74.4	74.4
73.9	73.9	73.9	73.9
74.5	74.5	74.5	74.5
56.7	56.7	56.7	56.7
73.2	73.2	73.2	73.2
74.6	74.6	74.6	74.6
74.4	74.4	74.4	74.4
57.7	57.7	57.7	57.7
56.9	56.9	56.9	56.9
67.1	67.1	67.1	67.1
67.3	67.3	67.3	67.3
68.9	68.9	68.9	68.9
71	71	71	71
71.3	71.3	71.3	71.3
72.1	72.1	72.1	72.1
55.8	55.8	55.8	55.8
56	56	56	56

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
71.4	70.1	67.2	67.2
70.7	69.4	66.5	66.5
74.4	73.2	70.2	70.2
73.9	72.6	69.7	69.7
74.5	73.3	70.3	70.3
56.7	55.4	52.5	52.5
73.2	71.9	69	69
74.6	73.3	70.4	70.4
74.4	73.1	70.2	70.2
57.7	56.4	53.5	53.5
56.9	55.6	52.7	52.7
67.1	65.8	62.9	62.9
67.3	66.1	63.1	63.1
68.9	67.6	64.7	64.7
71	69.7	66.8	66.8
71.3	70	67.1	67.1
72.1	70.9	67.9	67.9
55.8	54.6	51.6	51.6
56	54.7	51.8	51.8

22-23 o'clock dB(A)	23-24 o'clock dB(A)
65.4	68.4
64.6	67.6
68.4	71.4
67.8	70.9
68.5	71.5
50.7	53.7
67.1	70.2
68.6	71.6
68.4	71.4
51.7	54.7
50.9	53.9
61	64
61.3	64.3
62.9	65.9
64.9	68
65.2	68.3
66.1	69.1
49.8	52.8
50	53

Phase 6

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G	73.3	69.5	65.9
Site 1	G	70.5	66.7	63.1
Site 2	G	76.6	72.8	69.3
Site 3	G	75.8	72	68.4
Site 4	G	76.4	72.6	69.1
Site 5	G	58.6	54.8	51.3
Site A	G	63.2	59.4	55.8
Site B	G	76.5	72.7	69.1
Site C	G	76.3	72.5	68.9
Site D	G	59.7	55.9	52.3
Site E	G	58.7	54.9	51.4
Site F	G	69	65.2	61.6
Site G	G	69.3	65.5	61.9
Site H	G	70.8	67	63.5
Site I	G	78.8	75	71.4
Site J	G	69.2	65.4	61.8
Site K	G	66	62.2	58.6
Site L	G	57.9	54.1	50.5
Site M	G	57.8	54	50.4

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
66.5	69.4	66.1	69.5
63.7	66.6	63.2	66.7
69.8	72.8	69.4	72.8
69	71.9	68.6	72
69.6	72.5	69.2	72.6
51.8	54.7	51.4	54.8
56.4	59.3	56	59.4
69.7	72.6	69.3	72.7
69.5	72.4	69.1	72.5
52.9	55.8	52.5	55.9
51.9	54.9	51.5	54.9
62.2	65.1	61.7	65.2
62.4	65.4	62	65.5
64	66.9	63.6	67
72	74.9	71.5	75
62.4	65.3	62	65.4
59.2	62.1	58.8	62.2
51.1	54	50.7	54.1
50.9	53.9	50.5	54

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
66.5	66.5	66.5
63.7	63.7	63.7
69.8	69.8	69.8
69	69	69
69.6	69.6	69.6
51.8	51.8	51.8
56.4	56.4	56.4
69.7	69.7	69.7
69.5	69.5	69.5
52.9	52.9	52.9
51.9	51.9	51.9
62.2	62.2	62.2
62.4	62.4	62.4
64	64	64
72	72	72
62.4	62.4	62.4
59.2	59.2	59.2
51.1	51.1	51.1
50.9	50.9	50.9

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
66.5	66.5	66.5	66.5
63.7	63.7	63.7	63.7
69.8	69.8	69.8	69.8
69	69	69	69
69.6	69.6	69.6	69.6
51.8	51.8	51.8	51.8
56.4	56.4	56.4	56.4
69.7	69.7	69.7	69.7
69.5	69.5	69.5	69.5
52.9	52.9	52.9	52.9
51.9	51.9	51.9	51.9
62.2	62.2	62.2	62.2
62.4	62.4	62.4	62.4
64	64	64	64
72	72	72	72
62.4	62.4	62.4	62.4
59.2	59.2	59.2	59.2
51.1	51.1	51.1	51.1
50.9	50.9	50.9	50.9

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
66.5	69.5	69.5	69.5
63.7	66.7	66.7	66.7
69.8	72.8	72.8	72.8
69	72	72	72
69.6	72.6	72.6	72.6
51.8	54.8	54.8	54.8
56.4	59.4	59.4	59.4
69.7	72.7	72.7	72.7
69.5	72.5	72.5	72.5
52.9	55.9	55.9	55.9
51.9	54.9	54.9	54.9
62.2	65.2	65.2	65.2
62.4	65.5	65.5	65.5
64	67	67	67
72	75	75	75
62.4	65.4	65.4	65.4
59.2	62.2	62.2	62.2
51.1	54.1	54.1	54.1
50.9	54	54	54

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
69.5	69.5	69.5	69.5
66.7	66.7	66.7	66.7
72.8	72.8	72.8	72.8
72	72	72	72
72.6	72.6	72.6	72.6
54.8	54.8	54.8	54.8
59.4	59.4	59.4	59.4
72.7	72.7	72.7	72.7
72.5	72.5	72.5	72.5
55.9	55.9	55.9	55.9
54.9	54.9	54.9	54.9
65.2	65.2	65.2	65.2
65.5	65.5	65.5	65.5
67	67	67	67
75	75	75	75
65.4	65.4	65.4	65.4
62.2	62.2	62.2	62.2
54.1	54.1	54.1	54.1
54	54	54	54

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
69.5	69.5	69.5	69.5
66.7	66.7	66.7	66.7
72.8	72.8	72.8	72.8
72	72	72	72
72.6	72.6	72.6	72.6
54.8	54.8	54.8	54.8
59.4	59.4	59.4	59.4
72.7	72.7	72.7	72.7
72.5	72.5	72.5	72.5
55.9	55.9	55.9	55.9
54.9	54.9	54.9	54.9
65.2	65.2	65.2	65.2
65.5	65.5	65.5	65.5
67	67	67	67
75	75	75	75
65.4	65.4	65.4	65.4
62.2	62.2	62.2	62.2
54.1	54.1	54.1	54.1
54	54	54	54

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
69.5	68.2	65.3	65.3
66.7	65.4	62.5	62.5
72.8	71.6	68.6	68.6
72	70.7	67.8	67.8
72.6	71.4	68.4	68.4
54.8	53.6	50.6	50.6
59.4	58.1	55.2	55.2
72.7	71.4	68.5	68.5
72.5	71.2	68.3	68.3
55.9	54.6	51.7	51.7
54.9	53.7	50.7	50.7
65.2	63.9	61	61
65.5	64.2	61.2	61.2
67	65.8	62.8	62.8
75	73.7	70.8	70.8
65.4	64.2	61.2	61.2
62.2	61	58	58
54.1	52.8	49.9	49.9
54	52.7	49.8	49.8

22-23 o'clock dB(A)	23-24 o'clock dB(A)
63.5	66.5
60.6	63.7
66.8	69.8
66	69
66.6	69.6
48.8	51.8
53.4	56.4
66.7	69.7
66.5	69.5
49.9	52.9
48.9	51.9
59.1	62.2
59.4	62.4
61	64
68.9	72
59.4	62.4
56.2	59.2
48.1	51.1
47.9	50.9

Phase 7

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G	64.8	61	57.4
Site 1	G	74.1	70.3	66.7
Site 2	G	70.3	66.5	62.9
Site 3	G	77.3	73.5	70
Site 4	G	58.8	55	51.4
Site 5	G	57.9	54.1	50.6
Site A	G	60.8	57	53.5
Site B	G	65.7	61.9	58.4
Site C	G	55.7	51.9	48.4
Site D	G	59	55.2	51.6
Site E	G	57.4	53.6	50.1
Site F	G	66	62.2	58.6
Site G	G	59.1	55.3	51.8
Site H	G	62.5	58.7	55.1
Site I	G	79.4	75.6	72
Site J	G	70.6	66.8	63.2
Site K	G	74	70.2	66.7
Site L	G	56.8	53	49.4
Site M	G	55.1	51.3	47.8

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
58	60.9	57.6	61
67.3	70.2	66.9	70.3
63.4	66.4	63	66.5
70.5	73.5	70.1	73.5
52	54.9	51.6	55
51.1	54	50.7	54.1
54	56.9	53.6	57
58.9	61.9	58.5	61.9
48.9	51.9	48.5	51.9
52.2	55.1	51.8	55.2
50.6	53.5	50.2	53.6
59.2	62.1	58.8	62.2
52.3	55.2	51.9	55.3
55.6	58.6	55.2	58.7
72.6	75.5	72.2	75.6
63.8	66.7	63.4	66.8
67.2	70.1	66.8	70.2
49.9	52.9	49.5	53
48.3	51.2	47.9	51.3

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
58	58	58
67.3	67.3	67.3
63.4	63.4	63.4
70.5	70.5	70.5
52	52	52
51.1	51.1	51.1
54	54	54
58.9	58.9	58.9
48.9	48.9	48.9
52.2	52.2	52.2
50.6	50.6	50.6
59.2	59.2	59.2
52.3	52.3	52.3
55.6	55.6	55.6
72.6	72.6	72.6
63.8	63.8	63.8
67.2	67.2	67.2
49.9	49.9	49.9
48.3	48.3	48.3

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
58	58	58	58
67.3	67.3	67.3	67.3
63.4	63.4	63.4	63.4
70.5	70.5	70.5	70.5
52	52	52	52
51.1	51.1	51.1	51.1
54	54	54	54
58.9	58.9	58.9	58.9
48.9	48.9	48.9	48.9
52.2	52.2	52.2	52.2
50.6	50.6	50.6	50.6
59.2	59.2	59.2	59.2
52.3	52.3	52.3	52.3
55.6	55.6	55.6	55.6
72.6	72.6	72.6	72.6
63.8	63.8	63.8	63.8
67.2	67.2	67.2	67.2
49.9	49.9	49.9	49.9
48.3	48.3	48.3	48.3

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
58	61	61	61
67.3	70.3	70.3	70.3
63.4	66.5	66.5	66.5
70.5	73.5	73.5	73.5
52	55	55	55
51.1	54.1	54.1	54.1
54	57	57	57
58.9	61.9	61.9	61.9
48.9	51.9	51.9	51.9
52.2	55.2	55.2	55.2
50.6	53.6	53.6	53.6
59.2	62.2	62.2	62.2
52.3	55.3	55.3	55.3
55.6	58.7	58.7	58.7
72.6	75.6	75.6	75.6
63.8	66.8	66.8	66.8
67.2	70.2	70.2	70.2
49.9	53	53	53
48.3	51.3	51.3	51.3

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
61	61	61	61
70.3	70.3	70.3	70.3
66.5	66.5	66.5	66.5
73.5	73.5	73.5	73.5
55	55	55	55
54.1	54.1	54.1	54.1
57	57	57	57
61.9	61.9	61.9	61.9
51.9	51.9	51.9	51.9
55.2	55.2	55.2	55.2
53.6	53.6	53.6	53.6
62.2	62.2	62.2	62.2
55.3	55.3	55.3	55.3
58.7	58.7	58.7	58.7
75.6	75.6	75.6	75.6
66.8	66.8	66.8	66.8
70.2	70.2	70.2	70.2
53	53	53	53
51.3	51.3	51.3	51.3

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
61	61	61	61
70.3	70.3	70.3	70.3
66.5	66.5	66.5	66.5
73.5	73.5	73.5	73.5
55	55	55	55
54.1	54.1	54.1	54.1
57	57	57	57
61.9	61.9	61.9	61.9
51.9	51.9	51.9	51.9
55.2	55.2	55.2	55.2
53.6	53.6	53.6	53.6
62.2	62.2	62.2	62.2
55.3	55.3	55.3	55.3
58.7	58.7	58.7	58.7
75.6	75.6	75.6	75.6
66.8	66.8	66.8	66.8
70.2	70.2	70.2	70.2
53	53	53	53
51.3	51.3	51.3	51.3

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
61	59.7	56.8	56.8
70.3	69	66.1	66.1
66.5	65.2	62.2	62.2
73.5	72.3	69.3	69.3
55	53.8	50.8	50.8
54.1	52.9	49.9	49.9
57	55.8	52.8	52.8
61.9	60.7	57.7	57.7
51.9	50.7	47.7	47.7
55.2	53.9	51	51
53.6	52.4	49.4	49.4
62.2	60.9	58	58
55.3	54.1	51.1	51.1
58.7	57.4	54.4	54.4
75.6	74.3	71.4	71.4
66.8	65.5	62.6	62.6
70.2	69	66	66
53	51.7	48.7	48.7
51.3	50.1	47.1	47.1

22-23 o'clock dB(A)	23-24 o'clock dB(A)
55	58
64.3	67.3
60.4	63.4
67.5	70.5
49	52
48.1	51.1
51	54
55.9	58.9
45.9	48.9
49.2	52.2
47.6	50.6
56.2	59.2
49.3	52.3
52.6	55.6
69.6	72.6
60.8	63.8
64.2	67.2
46.9	49.9
45.3	48.3

Phase 8

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G		80.3	76.5	72.9
Site 1	G		79.6	75.8	72.2
Site 2	G		83.3	79.5	76
Site 3	G		82.8	79	75.4
Site 4	G		83.4	79.6	76.1
Site 5	G		65.6	61.8	58.2
Site A	G		82.1	78.3	74.7
Site B	G		83.5	79.7	76.1
Site C	G		83.3	79.5	75.9
Site D	G		66.6	62.8	59.2
Site E	G		65.8	62	58.4
Site F	G		76	72.2	68.6
Site G	G		76.2	72.4	68.9
Site H	G		77.8	74	70.4
Site I	G		79.9	76.1	72.5
Site J	G		80.2	76.4	72.8
Site K	G		81	77.2	73.6
Site L	G		64.7	60.9	57.4
Site M	G		64.9	61.1	57.5

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
73.5	76.4	73.1	76.5
72.7	75.7	72.3	75.8
76.5	79.5	76.1	79.5
76	78.9	75.5	79
76.6	79.5	76.2	79.6
58.8	61.7	58.4	61.8
75.3	78.2	74.9	78.3
76.7	79.6	76.3	79.7
76.5	79.4	76.1	79.5
59.8	62.7	59.4	62.8
59	61.9	58.6	62
69.1	72.1	68.7	72.2
69.4	72.4	69	72.4
71	73.9	70.6	74
73.1	76	72.7	76.1
73.4	76.3	72.9	76.4
74.2	77.1	73.8	77.2
57.9	60.9	57.5	60.9
58.1	61	57.7	61.1

Hourly (ni/dB(A)	0-1 o'clock dB(A)	1-2 o'clock dB(A)
73.5	73.5	73.5
72.7	72.7	72.7
76.5	76.5	76.5
76	76	76
76.6	76.6	76.6
58.8	58.8	58.8
75.3	75.3	75.3
76.7	76.7	76.7
76.5	76.5	76.5
59.8	59.8	59.8
59	59	59
69.1	69.1	69.1
69.4	69.4	69.4
71	71	71
73.1	73.1	73.1
73.4	73.4	73.4
74.2	74.2	74.2
57.9	57.9	57.9
58.1	58.1	58.1

2-3 o'clock dB(A)	3-4 o'clock dB(A)	4-5 o'clock dB(A)	5-6 o'clock dB(A)
73.5	73.5	73.5	73.5
72.7	72.7	72.7	72.7
76.5	76.5	76.5	76.5
76	76	76	76
76.6	76.6	76.6	76.6
58.8	58.8	58.8	58.8
75.3	75.3	75.3	75.3
76.7	76.7	76.7	76.7
76.5	76.5	76.5	76.5
59.8	59.8	59.8	59.8
59	59	59	59
69.1	69.1	69.1	69.1
69.4	69.4	69.4	69.4
71	71	71	71
73.1	73.1	73.1	73.1
73.4	73.4	73.4	73.4
74.2	74.2	74.2	74.2
57.9	57.9	57.9	57.9
58.1	58.1	58.1	58.1

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
73.5	76.5	76.5	76.5
72.7	75.8	75.8	75.8
76.5	79.5	79.5	79.5
76	79	79	79
76.6	79.6	79.6	79.6
58.8	61.8	61.8	61.8
75.3	78.3	78.3	78.3
76.7	79.7	79.7	79.7
76.5	79.5	79.5	79.5
59.8	62.8	62.8	62.8
59	62	62	62
69.1	72.2	72.2	72.2
69.4	72.4	72.4	72.4
71	74	74	74
73.1	76.1	76.1	76.1
73.4	76.4	76.4	76.4
74.2	77.2	77.2	77.2
57.9	60.9	60.9	60.9
58.1	61.1	61.1	61.1

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
76.5	76.5	76.5	76.5
75.8	75.8	75.8	75.8
79.5	79.5	79.5	79.5
79	79	79	79
79.6	79.6	79.6	79.6
61.8	61.8	61.8	61.8
78.3	78.3	78.3	78.3
79.7	79.7	79.7	79.7
79.5	79.5	79.5	79.5
62.8	62.8	62.8	62.8
62	62	62	62
72.2	72.2	72.2	72.2
72.4	72.4	72.4	72.4
74	74	74	74
76.1	76.1	76.1	76.1
76.4	76.4	76.4	76.4
77.2	77.2	77.2	77.2
60.9	60.9	60.9	60.9
61.1	61.1	61.1	61.1

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
76.5	76.5	76.5	76.5
75.8	75.8	75.8	75.8
79.5	79.5	79.5	79.5
79	79	79	79
79.6	79.6	79.6	79.6
61.8	61.8	61.8	61.8
78.3	78.3	78.3	78.3
79.7	79.7	79.7	79.7
79.5	79.5	79.5	79.5
62.8	62.8	62.8	62.8
62	62	62	62
72.2	72.2	72.2	72.2
72.4	72.4	72.4	72.4
74	74	74	74
76.1	76.1	76.1	76.1
76.4	76.4	76.4	76.4
77.2	77.2	77.2	77.2
60.9	60.9	60.9	60.9
61.1	61.1	61.1	61.1

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
76.5	75.2	72.3	72.3
75.8	74.5	71.6	71.6
79.5	78.3	75.3	75.3
79	77.7	74.8	74.8
79.6	78.4	75.4	75.4
61.8	60.5	57.6	57.6
78.3	77	74.1	74.1
79.7	78.4	75.5	75.5
79.5	78.2	75.3	75.3
62.8	61.5	58.6	58.6
62	60.7	57.8	57.8
72.2	70.9	68	68
72.4	71.2	68.2	68.2
74	72.7	69.8	69.8
76.1	74.8	71.9	71.9
76.4	75.1	72.2	72.2
77.2	76	73	73
60.9	59.7	56.7	56.7
61.1	59.8	56.9	56.9

22-23 o'clock dB(A)	23-24 o'clock dB(A)
70.5	73.5
69.7	72.7
73.5	76.5
72.9	76
73.6	76.6
55.8	58.8
72.2	75.3
73.7	76.7
73.5	76.5
56.8	59.8
56	59
66.1	69.1
66.4	69.4
68	71
70	73.1
70.3	73.4
71.2	74.2
54.9	57.9
55.1	58.1

Construction Vibration Worksheets

Meridian Consultants LLC
Date:

(Project Name)
Construction Vibration Model
(Phase)

Rev: 11-12-2012

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	45	0.037	0.009	79
Jackhammer		1	0.035	45	0.014	0.004	71
Large bulldozer		1	0.089	45	0.037	0.009	79
Loaded trucks		1	0.076	45	0.031	0.008	78
Pile Drive (impact)		1	0.644	45	0.267	0.067	96
Vibratory Roller		1	0.210	45	0.087	0.022	87
Small bulldozer		1	0.003	45	0.001	0.000	50

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC
Date:

(Project Name)
Construction Vibration Model
(Phase)

Rev: 11/12/2012

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	70	0.019	0.005	74
Jackhammer		4	0.035	70	0.030	0.007	77
Large bulldozer		1	0.089	70	0.019	0.005	74
Loaded trucks		1	0.076	70	0.016	0.004	72
Pile Drive (impact)		1	0.644	70	0.137	0.034	91
Vibratory Roller		1	0.210	70	0.045	0.011	81
Small bulldozer		1	0.003	70	0.001	0.000	44

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC
Date:

(Project Name)
Construction Vibration Model
(Phase)

Rev: 11-12-2012

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	135	0.007	0.002	65
Jackhammer		4	0.035	135	0.011	0.003	69
Large bulldozer		1	0.089	135	0.007	0.002	65
Loaded trucks		1	0.076	135	0.006	0.002	64
Pile Drive (impact)		1	0.644	135	0.051	0.013	82
Vibratory Roller		1	0.210	135	0.017	0.004	72
Small bulldozer		1	0.003	135	0.000	0.000	36

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	30	0.068	0.017	85
Jackhammer		4	0.035	30	0.107	0.027	89
Large bulldozer		1	0.089	30	0.068	0.017	85
Loaded trucks		1	0.076	30	0.058	0.014	83
Pile Drive (impact)		1	0.644	30	0.490	0.122	102
Vibratory Roller		1	0.210	30	0.160	0.040	92
Small bulldozer		1	0.003	30	0.002	0.001	55

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Meridian Consultants LLC
Date:

(Project Name)
Construction Vibration Model
(Phase)

Rev: 11-12-2012

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	75	0.017	0.004	73
Jackhammer		4	0.035	75	0.027	0.007	77
Large bulldozer		1	0.089	75	0.017	0.004	73
Loaded trucks		1	0.076	75	0.015	0.004	71
Pile Drive (impact)		1	0.644	75	0.124	0.031	90
Vibratory Roller		1	0.210	75	0.040	0.010	80
Small bulldozer		1	0.003	75	0.001	0.000	43

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	40	0.044	0.011	81
Jackhammer		4	0.035	40	0.069	0.017	85
Large bulldozer		1	0.089	40	0.044	0.011	81
Loaded trucks		1	0.076	40	0.038	0.009	79
Pile Drive (impact)		1	0.644	40	0.318	0.080	98
Vibratory Roller		1	0.210	40	0.104	0.026	88
Small bulldozer		1	0.003	40	0.001	0.000	51

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	355	0.002	0.000	52
Jackhammer		4	0.035	355	0.003	0.001	56
Large bulldozer		1	0.089	355	0.002	0.000	52
Loaded trucks		1	0.076	355	0.001	0.000	51
Pile Drive (impact)		1	0.644	355	0.012	0.003	70
Vibratory Roller		1	0.210	355	0.004	0.001	60
Small bulldozer		1	0.003	355	0.000	0.000	23

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	380	0.002	0.000	51
Jackhammer		4	0.035	380	0.002	0.001	55
Large bulldozer		1	0.089	380	0.002	0.000	51
Loaded trucks		1	0.076	380	0.001	0.000	50
Pile Drive (impact)		1	0.644	380	0.011	0.003	69
Vibratory Roller		1	0.210	380	0.004	0.001	59
Small bulldozer		1	0.003	380	0.000	0.000	22

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	135	0.007	0.002	65
Jackhammer		4	0.035	135	0.011	0.003	69
Large bulldozer		1	0.089	135	0.007	0.002	65
Loaded trucks		1	0.076	135	0.006	0.002	64
Pile Drive (impact)		1	0.644	135	0.051	0.013	82
Vibratory Roller		1	0.210	135	0.017	0.004	72
Small bulldozer		1	0.003	135	0.000	0.000	36

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	200	0.004	0.001	60
Jackhammer		4	0.035	200	0.006	0.002	64
Large bulldozer		1	0.089	200	0.004	0.001	60
Loaded trucks		1	0.076	200	0.003	0.001	58
Pile Drive (impact)		1	0.644	200	0.028	0.007	77
Vibratory Roller		1	0.210	200	0.009	0.002	67
Small bulldozer		1	0.003	200	0.000	0.000	30

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	470	0.001	0.000	49
Jackhammer		4	0.035	470	0.002	0.000	53
Large bulldozer		1	0.089	470	0.001	0.000	49
Loaded trucks		1	0.076	470	0.001	0.000	47
Pile Drive (impact)		1	0.644	470	0.008	0.002	66
Vibratory Roller		1	0.210	470	0.003	0.001	56
Small bulldozer		1	0.003	470	0.000	0.000	19

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	50	0.031	0.008	78
Jackhammer		4	0.035	50	0.049	0.012	82
Large bulldozer		1	0.089	50	0.031	0.008	78
Loaded trucks		1	0.076	50	0.027	0.007	77
Pile Drive (impact)		1	0.644	50	0.228	0.057	95
Vibratory Roller		1	0.210	50	0.074	0.019	85
Small bulldozer		1	0.003	50	0.001	0.000	48

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	60	0.024	0.006	76
Jackhammer		4	0.035	60	0.038	0.009	79
Large bulldozer		1	0.089	60	0.024	0.006	76
Loaded trucks		1	0.076	60	0.020	0.005	74
Pile Drive (impact)		1	0.644	60	0.173	0.043	93
Vibratory Roller		1	0.210	60	0.056	0.014	83
Small bulldozer		1	0.003	60	0.001	0.000	46

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	1225	0.000	0.000	36
Jackhammer		4	0.035	1225	0.000	0.000	40
Large bulldozer		1	0.089	1225	0.000	0.000	36
Loaded trucks		1	0.076	1225	0.000	0.000	35
Pile Drive (impact)		1	0.644	1225	0.002	0.000	53
Vibratory Roller		1	0.210	1225	0.001	0.000	44
Small bulldozer		1	0.003	1225	0.000	0.000	7

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	2600	0.000	0.000	26
Jackhammer		4	0.035	2600	0.000	0.000	30
Large bulldozer		1	0.089	2600	0.000	0.000	26
Loaded trucks		1	0.076	2600	0.000	0.000	25
Pile Drive (impact)		1	0.644	2600	0.001	0.000	44
Vibratory Roller		1	0.210	2600	0.000	0.000	34
Small bulldozer		1	0.003	2600	0.000	0.000	-3

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment**

Operational Noise Worksheets

MSF Stationary Source

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)	
Kelso Elementary	G		38.4	37.2	36
Site 1	G		37.1	35.9	34.7
Site 2	G		57.6	56.4	55.1
Site 3	G		46.8	45.6	44.4
Site 4	G		31.8	30.6	29.4
Site 5	G		33.6	32.5	31.2
Site A	G		38	36.8	35.6
Site B	G		45.2	44.1	42.8
Site C	G		33.7	32.5	31.2
Site D	G		34.6	33.4	32.2
Site E	G		27	25.9	24.6
Site F	G		35.3	34.1	32.8
Site G	G		38.4	37.3	36
Site H	G		44.4	43.2	42
Site I	G		64.9	63.7	62.5
Site J	G		38.9	37.7	36.5
Site K	G		35.5	34.3	33.1
Site L	G		39.8	38.7	37.4
Site M	G		36.8	35.6	34.3

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
28.2	37.2	31.6	37.2
26.9	35.9	30.3	35.9
47.3	56.4	50.7	56.4
36.6	45.6	40	45.6
21.6	30.6	25	30.6
23.4	32.5	26.8	32.5
27.8	36.8	31.2	36.8
35	44.1	38.4	44.1
23.4	32.5	26.8	32.5
24.4	33.4	27.8	33.4
16.8	25.9	20.2	25.9
25	34.1	28.4	34.1
28.2	37.3	31.6	37.3
34.2	43.2	37.6	43.2
54.7	63.7	58.1	63.7
28.7	37.7	32.1	37.7
25.3	34.3	28.7	34.3
29.6	38.7	33	38.7
26.6	35.6	29.9	35.6

6-7 o'clock dB(A)	7-8 o'clock dB(A)	8-9 o'clock dB(A)	9-10 o'clock dB(A)
37.2	37.2	37.2	37.2
35.9	35.9	35.9	35.9
56.4	56.4	56.4	56.4
45.6	45.6	45.6	45.6
30.6	30.6	30.6	30.6
32.5	32.5	32.5	32.5
36.8	36.8	36.8	36.8
44.1	44.1	44.1	44.1
32.5	32.5	32.5	32.5
33.4	33.4	33.4	33.4
25.9	25.9	25.9	25.9
34.1	34.1	34.1	34.1
37.3	37.3	37.3	37.3
43.2	43.2	43.2	43.2
63.7	63.7	63.7	63.7
37.7	37.7	37.7	37.7
34.3	34.3	34.3	34.3
38.7	38.7	38.7	38.7
35.6	35.6	35.6	35.6

10-11 o'clock dB(A)	11-12 o'clock dB(A)	12-13 o'clock dB(A)	13-14 o'clock dB(A)
37.2	37.2	37.2	37.2
35.9	35.9	35.9	35.9
56.4	56.4	56.4	56.4
45.6	45.6	45.6	45.6
30.6	30.6	30.6	30.6
32.5	32.5	32.5	32.5
36.8	36.8	36.8	36.8
44.1	44.1	44.1	44.1
32.5	32.5	32.5	32.5
33.4	33.4	33.4	33.4
25.9	25.9	25.9	25.9
34.1	34.1	34.1	34.1
37.3	37.3	37.3	37.3
43.2	43.2	43.2	43.2
63.7	63.7	63.7	63.7
37.7	37.7	37.7	37.7
34.3	34.3	34.3	34.3
38.7	38.7	38.7	38.7
35.6	35.6	35.6	35.6

14-15 o'clock dB(A)	15-16 o'clock dB(A)	16-17 o'clock dB(A)	17-18 o'clock dB(A)
37.2	37.2	37.2	37.2
35.9	35.9	35.9	35.9
56.4	56.4	56.4	56.4
45.6	45.6	45.6	45.6
30.6	30.6	30.6	30.6
32.5	32.5	32.5	32.5
36.8	36.8	36.8	36.8
44.1	44.1	44.1	44.1
32.5	32.5	32.5	32.5
33.4	33.4	33.4	33.4
25.9	25.9	25.9	25.9
34.1	34.1	34.1	34.1
37.3	37.3	37.3	37.3
43.2	43.2	43.2	43.2
63.7	63.7	63.7	63.7
37.7	37.7	37.7	37.7
34.3	34.3	34.3	34.3
38.7	38.7	38.7	38.7
35.6	35.6	35.6	35.6

18-19 o'clock dB(A)	19-20 o'clock dB(A)	20-21 o'clock dB(A)	21-22 o'clock dB(A)
37.2	37.2	37.2	37.2
35.9	35.9	35.9	35.9
56.4	56.4	56.4	56.4
45.6	45.6	45.6	45.6
30.6	30.6	30.6	30.6
32.5	32.5	32.5	32.5
36.8	36.8	36.8	36.8
44.1	44.1	44.1	44.1
32.5	32.5	32.5	32.5
33.4	33.4	33.4	33.4
25.9	25.9	25.9	25.9
34.1	34.1	34.1	34.1
37.3	37.3	37.3	37.3
43.2	43.2	43.2	43.2
63.7	63.7	63.7	63.7
37.7	37.7	37.7	37.7
34.3	34.3	34.3	34.3
38.7	38.7	38.7	38.7
35.6	35.6	35.6	35.6

Monorail

Receiver	Fl	CNEL/dB(A)	Hourly (daytime/dB(A	Hourly (nightim/dB(A
Kelso Elementary	G	53.2		
Site 1	G	58.3		
Site 2	G	53.2		
Site 3	G	54.1		
Site 4	G	51.6		
Site 5	G	46.3		
Site A	G	54.3		
Site B	G	53.5		
Site C	G	51.8		
Site D	G	44.7		
Site E	G	45.1		
Site F	G	51.8		
Site G	G	53.5		
Site H	G	53.6		
Site I	G	51.4		

Site J	G	52.7
Site K	G	60.4
Site L	G	45.7
Site M	G	43.9

Ld/dB(A)	Le/dB(A)	Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)
	47.6	47.4	46.6	47.6	46.8
	52.7	52.5	51.6	52.7	51.8
	47.7	47.4	46.6	47.7	46.8
	48.6	48.3	47.5	48.6	47.7
	46	45.7	44.9	46	45.1
	40.7	40.5	39.7	40.7	39.9
	48.7	48.5	47.7	48.7	47.9
	48	47.7	46.9	48	47.1
	46.3	46	45.2	46.3	45.4
	39.1	38.9	38.1	39.1	38.3
	39.6	39.3	38.5	39.6	38.7
	46.3	46	45.2	46.3	45.4
	47.9	47.7	46.9	47.9	47.1
	48.1	47.8	47	48.1	47.2
	45.9	45.6	44.8	45.9	45

47.2	46.9	46.1	47.2	46.3
54.8	54.6	53.7	54.8	54
40.1	39.9	39.1	40.1	39.3
38.3	38.1	37.3	38.3	37.5

Hourly (da/dB(A)	Hourly (ni/dB(A)	Source	Source type
47.6	46.6	Guideway SB (Monor Guideway NB (Monor	Railway Railway
52.7	51.6	Guideway SB (Monor Guideway NB (Monor	Railway Railway
47.7	46.6	Guideway SB (Monor Guideway NB (Monor	Railway Railway
48.6	47.5	Guideway SB (Monor Guideway NB (Monor	Railway Railway
46	44.9	Guideway SB (Monor Guideway NB (Monor	Railway Railway
40.7	39.7	Guideway SB (Monor Guideway NB (Monor	Railway Railway
48.7	47.7	Guideway SB (Monor Guideway NB (Monor	Railway Railway
48	46.9	Guideway SB (Monor Guideway NB (Monor	Railway Railway
46.3	45.2	Guideway SB (Monor Guideway NB (Monor	Railway Railway
39.1	38.1	Guideway SB (Monor Guideway NB (Monor	Railway Railway
39.6	38.5	Guideway SB (Monor Guideway NB (Monor	Railway Railway
46.3	45.2	Guideway SB (Monor Guideway NB (Monor	Railway Railway
47.9	46.9	Guideway SB (Monor Guideway NB (Monor	Railway Railway
48.1	47	Guideway SB (Monor Guideway NB (Monor	Railway Railway
45.9	44.8	Guideway SB (Monor	Railway

		Guideway NB (Monor Railway
47.2	46.1	Guideway SB (Monor Railway
		Guideway NB (Monor Railway
54.8	53.7	Guideway SB (Monor Railway
		Guideway NB (Monor Railway
40.1	39.1	Guideway SB (Monor Railway
		Guideway NB (Monor Railway
38.3	37.3	Guideway SB (Monor Railway
		Guideway NB (Monor Railway

Tr. lane	CNEL dB(A)	Ld dB(A)	Le dB(A)	Ln dB(A)	
		49.7	44.1	43.9	43
		50.6	45.1	44.8	44
		53.7	48.1	47.9	47
		56.4	50.8	50.6	49.8
		50.5	45	44.7	43.9
		49.9	44.3	44.1	43.2
		51.6	46	45.8	45
		50.6	45	44.8	44
		48.4	42.8	42.6	41.7
		48.7	43.2	42.9	42.1
		40	34.4	34.2	33.4
		45.1	39.6	39.3	38.5
		51.9	46.4	46.1	45.3
		50.5	45	44.7	43.9
		51	45.4	45.2	44.4
		50	44.4	44.1	43.3
		48.2	42.6	42.4	41.6
		49.4	43.8	43.6	42.7
		40.8	35.3	35	34.2
		42.4	36.9	36.6	35.8
		43.8	38.2	38	37.2
		39.4	33.8	33.5	32.7
		50.9	45.4	45.1	44.3
		44.6	39	38.8	37.9
		52.2	46.6	46.3	45.5
		47.7	42.2	41.9	41.1
		51.8	46.3	46	45.2
		48.9	43.4	43.1	42.3
		49.7	44.2	43.9	43.1

46.6	41	40.8	39.9
49.6	44	43.8	43
49.8	44.2	44	43.2
57.8	52.2	52	51.2
56.9	51.3	51.1	50.3
42.3	36.7	36.5	35.6
43.1	37.5	37.2	36.4
39.6	34	33.8	33
41.9	36.3	36.1	35.3

Ldaytime dB(A)	Lnighttime dB(A)	A dB	Hourly (da dB(A)	Hourly (ni dB(A)
44.1	43.3	0	44.1	43
45.1	44.2	0	45.1	44
48.1	47.3	0	48.1	47
50.8	50	0	50.8	49.8
45	44.1	0	45	43.9
44.3	43.4	0	44.3	43.2
46	45.2	0	46	45
45	44.2	0	45	44
42.8	41.9	0	42.8	41.7
43.2	42.3	0	43.2	42.1
34.4	33.6	0	34.4	33.4
39.6	38.7	0	39.6	38.5
46.4	45.5	0	46.4	45.3
45	44.1	0	45	43.9
45.4	44.6	0	45.4	44.4
44.4	43.5	0	44.4	43.3
42.6	41.8	0	42.6	41.6
43.8	43	0	43.8	42.7
35.3	34.4	0	35.3	34.2
36.9	36	0	36.9	35.8
38.2	37.4	0	38.2	37.2
33.8	32.9	0	33.8	32.7
45.4	44.5	0	45.4	44.3
39	38.1	0	39	37.9
46.6	45.7	0	46.6	45.5
42.2	41.3	0	42.2	41.1
46.3	45.4	0	46.3	45.2
43.4	42.5	0	43.4	42.3
44.2	43.3	0	44.2	43.1

41	40.1	0	41	39.9
44	43.2	0	44	43
44.2	43.4	0	44.2	43.2
52.2	51.4	0	52.2	51.2
51.3	50.5	0	51.3	50.3
36.7	35.8	0	36.7	35.6
37.5	36.6	0	37.5	36.4
34	33.2	0	34	33
36.3	35.5	0	36.3	35.3

Rubber-Tired Guideway

Receiver	Fl	CNEL/dB(A)	Ld/dB(A)	Le/dB(A)
Kelso Elementary	G		44.1	38.5	38.2
Site 1	G		54.5	48.9	48.7
Site 2	G		43.1	37.6	37.3
Site 3	G		46	40.4	40.2
Site 4	G		40.6	35	34.8
Site 5	G		33.3	27.7	27.5
Site A	G		43.1	37.5	37.3
Site B	G		44.1	38.6	38.3
Site C	G		40.5	35	34.7
Site D	G		36.5	30.9	30.7
Site E	G		33.1	27.5	27.2
Site F	G		43.4	37.8	37.6
Site G	G		46.4	40.9	40.6
Site H	G		47	41.5	41.2
Site I	G		44.1	38.6	38.3

Site J	G	39.6	34	33.8
Site K	G	54.9	49.3	49.1
Site L	G	39.5	33.9	33.7
Site M	G	37.2	31.6	31.4

Ln/dB(A)	Ldaytime/dB(A)	Lnighttime/dB(A)	Hourly (da/dB(A)
37.4	38.5	37.6	38.5
47.9	48.9	48.1	48.9
36.5	37.6	36.7	37.6
39.3	40.4	39.5	40.4
34	35	34.2	35
26.6	27.7	26.9	27.7
36.5	37.5	36.7	37.5
37.5	38.6	37.7	38.6
33.9	35	34.1	35
29.8	30.9	30	30.9
26.4	27.5	26.6	27.5
36.8	37.8	37	37.8
39.8	40.9	40	40.9
40.4	41.5	40.6	41.5
37.5	38.6	37.7	38.6

33	34	33.2	34
48.3	49.3	48.5	49.3
32.9	33.9	33.1	33.9
30.5	31.6	30.8	31.6

Hourly (ni/dB(A)	Source	Source type
37.4	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
47.9	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
36.5	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
39.3	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
34	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
26.6	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
36.5	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
37.5	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
33.9	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
29.8	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
26.4	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
36.8	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
39.8	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
40.4	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
37.5	Guideway SB (Rubber Tired)	Railway

	Guideway NB (Rubber Tired)	Railway
33	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
48.3	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
32.9	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway
30.5	Guideway SB (Rubber Tired)	Railway
	Guideway NB (Rubber Tired)	Railway

Tr. lane	CNEL dB(A)	Ld dB(A)	Le dB(A)	
		40.3	34.7	34.5
		41.7	36.1	35.9
		50	44.4	44.2
		52.6	47	46.8
		40.6	35.1	34.8
		39.6	34	33.7
		43.2	37.7	37.4
		42.7	37.1	36.9
		37.7	32.1	31.8
		37.5	32	31.7
		28	22.4	22.2
		31.8	26.2	26
		40.6	35	34.8
		39.5	34	33.7
		41.4	35.8	35.5
		40.9	35.3	35.1
		37.4	31.9	31.6
		37.6	32	31.8
		33.5	27.9	27.6
		33.5	27.9	27.6
		30.8	25.2	25
		29.2	23.6	23.3
		42.5	36.9	36.7
		36.3	30.7	30.5
		45.3	39.7	39.4
		40.1	34.6	34.3
		45.5	40	39.7
		41.6	36.1	35.8
		43	37.4	37.2

37.8	32.2	32
37	31.4	31.2
36.2	30.6	30.3
52.3	46.7	46.5
51.4	45.9	45.6
35.7	30.1	29.9
37.2	31.6	31.3
32.8	27.3	27
35.2	29.6	29.4

Ln dB(A)	Ldaytime dB(A)	Lnighttime dB(A)	A dB
33.7	34.7	33.9	0
35	36.1	35.3	0
43.3	44.4	43.6	0
46	47	46.2	0
34	35.1	34.2	0
32.9	34	33.1	0
36.6	37.7	36.8	0
36	37.1	36.3	0
31	32.1	31.2	0
30.9	32	31.1	0
21.3	22.4	21.6	0
25.1	26.2	25.3	0
34	35	34.2	0
32.9	34	33.1	0
34.7	35.8	34.9	0
34.3	35.3	34.5	0
30.8	31.9	31	0
31	32	31.2	0
26.8	27.9	27	0
26.8	27.9	27	0
24.1	25.2	24.4	0
22.5	23.6	22.7	0
35.8	36.9	36.1	0
29.6	30.7	29.9	0
38.6	39.7	38.8	0
33.5	34.6	33.7	0
38.9	40	39.1	0
35	36.1	35.2	0
36.3	37.4	36.5	0

31.2	32.2	31.4	0
30.4	31.4	30.6	0
29.5	30.6	29.7	0
45.7	46.7	45.9	0
44.8	45.9	45	0
29.1	30.1	29.3	0
30.5	31.6	30.7	0
26.2	27.3	26.4	0
28.6	29.6	28.8	0

Hourly (da dB(A)	Hourly (ni dB(A)
34.7	33.7
36.1	35
44.4	43.3
47	46
35.1	34
34	32.9
37.7	36.6
37.1	36
32.1	31
32	30.9
22.4	21.3
26.2	25.1
35	34
34	32.9
35.8	34.7
35.3	34.3
31.9	30.8
32	31
27.9	26.8
27.9	26.8
25.2	24.1
23.6	22.5
36.9	35.8
30.7	29.6
39.7	38.6
34.6	33.5
40	38.9
36.1	35
37.4	36.3

32.2	31.2
31.4	30.4
30.6	29.5
46.7	45.7
45.9	44.8
30.1	29.1
31.6	30.5
27.3	26.2
29.6	28.6