

## 4.4 NOISE

This section discusses baseline noise conditions and noise impacts resulting from implementation of the 65<sup>th</sup> Street Redevelopment Plan. Mitigation measures are recommended to reduce potentially significant project impacts. This section also presents a discussion of noise fundamentals, the existing noise environment in the project vicinity, and applicable federal, state and local noise regulations.

### 4.4.1 SETTING

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing.

Environmental noise is typically measured in A-weighted decibels (dBA). A dBA is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels. In general, A-weighting of environmental sound consists of evaluating all of the frequencies of a sound, taking into account the fact that human hearing is less sensitive at low frequencies and extremely high frequencies than in the frequency mid-range (much like a bell shaped curve - an A-weighted curve). In practice, the level of a sound source is measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Environmental noise within an urbanized area typically fluctuates over time. Table 4.4-1 lists several examples of the noise levels associated with common situations. This time-varying characteristic of environmental noise is described using statistical noise descriptors. Descriptors used include Leq, L<sub>dn</sub>, CNEL, L50, and L<sub>max</sub> and are described below. These statistical noise descriptors are often used in noise policies and regulations in order to set limits on environmental noise.

Leq: the average A-weighted noise level measured over a given period of time

L<sub>dn</sub>: 24-hour day and night noise measurement which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.  
CNEL: (Community Noise Equivalent Level): 24-hour day and night noise measurement which adds a 5 dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. and a 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.

L50: the A-weighted noise level that is equaled or exceeded 50 percent of the stated time period.

L<sub>max</sub>: the A-weighted maximum noise level for a given period of time.

**Table 4.4-1  
Typical Noise Levels**

<b>Common Outdoor Activities</b>	<b>Noise Level (dBA)</b>	<b>Common Indoor Activities</b>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. October 1998.

**EFFECTS OF NOISE ON PEOPLE**

The effects of noise on people can be placed in three categories:

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

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 9 dBA per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

## **EXISTING NOISE SOURCES**

The major sources of noise in the Project Area include surface traffic on local streets, Highway 50, the Union Pacific Rail Line (UPRR), and, to a lesser extent, operation of the light rail transit (LRT) system. Stationary noise sources, such as activity at industrial and commercial facilities, also contribute to the existing noise environment. The UPRR is located along the Elvas Avenue down through the Project Area where it crosses Power Inn Road at the southern tip of the Project Area.

### ***Transportation Noise***

Noise levels attributable to existing and future roadway surface traffic in the Project Area were analyzed in the Sacramento General Plan Update EIR (“SGPU EIR”). The 65<sup>th</sup> Street Transit Village Plan EIR (“Transit Village Plan EIR”) recently updated information regarding noise for the northern part of the Project Area. The light rail corridor travels through the Project Area roughly parallel to and south of Folsom Boulevard.

Major roadways considered include U.S. Highway 50, Power Inn Road, Folsom Boulevard and 65<sup>th</sup> Street. Highway 50 is depressed between Stockton Boulevard and 65<sup>th</sup> Street and elevated in the remainder of the Project Area. Residential areas adjacent to Highway 50 and all major arterials are exposed to traffic noise above normally acceptable levels. Twenty-four hour noise measurements at Power Inn Road north of Cucamonga Avenue were measured in the SGPU EIR as 71 Ldn at 75 feet. Projected noise exposure at General Plan buildout from Highway 50 was estimated to be 78 Ldn at 150 feet between 59<sup>th</sup> Street and CSUS.

The City also monitored existing ambient noise for Project Area surface streets at a normalized distance of 75 feet from the center of the roadway (SGPU Exhibit AA-11). Projected noise levels at General Plan buildout, based on anticipated 2016 traffic volumes, were identified as 66 Ldn on Elvas between J Street and Folsom Boulevard, 70-71 Ldn on Folsom Boulevard between 61<sup>st</sup> Street

and Power Inn Road, 71 Ldn on 65<sup>th</sup> Street between Folsom Boulevard and Broadway, and 72 Ldn along Power Inn Road from Folsom Boulevard to 14<sup>th</sup> Avenue.

The UPRR is used exclusively for freight transportation, with an average of 18 to 20 trains traveling at speeds of approximately 40 mph per day. Train lengths can vary from approximately 80 to 120 cars per train. Existing wayside noise levels along the UPRR are estimated at approximately 77 dBA Ldn/CNEL at 50 feet from the track centerline, without the sounding of horns.

The light rail corridor travels through the Project Area roughly parallel to and south of Folsom Boulevard. Light rail service along this line serves the Sacramento-Folsom Corridor and currently operates seven days a week. During the weekdays, service at the University/65<sup>th</sup> Street Transit Station begins at approximately 4:50 a.m. and terminates at approximately 12:10 a.m. Service on the weekends begins approximately an hour later. Train headways, the elapse time between trains, average approximately 15 minutes during the daytime weekday service, and increase to approximately 30 minutes during the late evening, night and weekend hours, and speeds along the system average approximately 35 mph. Based on the modeling conducted for the Transit Village Plan EIR, existing wayside noise levels generated by LRT trains average approximately 60 dBA Ldn/CNEL at 50 feet, not including noise from signal bells at grade crossings. Signal bells used at grade crossings, such as the one used at the 65<sup>th</sup> Street crossing, typically generate intermittent noise levels of approximately 73 dBA at 50 feet, for 15 to 30 seconds.

Additional light rail system noise sources include the LRT power substation and the 65<sup>th</sup> Street Bus Transfer Station. Noise generated at the power substation is estimated at less than 45 dBA at 50 feet (Sacramento Regional Transit, 2001). Noise associated with transit centers typically includes exhaust and brake squeal from buses, the opening and closing of vehicle doors, and people talking. Noise associated with the transit station was estimated at approximately 63 dBA CNEL/Ldn at 50 feet.

The Transit Village Plan EIR predicted future traffic noise levels, based on plan buildout. At buildout, noise levels (CNEL/Ldn) at 50 feet the near travel lane centerline were identified as 63-69 on Elvas between J Street and Folsom Boulevard, 69-70 on Folsom Boulevard between 59th Street and 66<sup>th</sup> Street, and 69-71 on 65<sup>th</sup> Street between Elvas and Q Street. These numbers are consistent with the projections made in the SGPU EIR.

### ***Stationary Sources***

Stationary sources of noises such as ventilating equipment, pumps, and compressors; light industrial manufacturing facilities; auto dismantlers; automotive repair facilities; outdoor recreation facilities; and heating, ventilating, and air conditioning equipment are located throughout the Project Area but were not observed to generate noise atypical for their zoning.

### **SURROUNDING LAND USES AND RECEPTORS**

Noise sensitive receptors are generally considered to be human activities of land uses that may be subject to the stress of significant interference from noise, such as libraries, hospitals, or passive recreational areas. Land uses in the Project Area associated with sensitive receptors include residences and schools; the St. Francis private girl's high school is located in the northwest corner of the Project Area on M Street. The only park in the Project Area is Tahoe-Tallac Park, which is fully developed with three softball fields and a concession stand. The Project Area includes single family

residences with lower densities intermixed with existing industrial and commercial uses which are already being adversely affected by traffic and stationary noise under current conditions, as identified on Figure 4.4-1. Residential zoning is located in the northwest corner of the Project Area between Janet Way and Elvas, along Redding Avenue and San Joaquin, and at 17<sup>th</sup> Avenue and 73<sup>rd</sup> Street.

#### **4.4.2 PROPOSED REDEVELOPMENT ACTIVITIES**

The proposed Redevelopment Plan would provide tax increment financing to fund capital improvements, housing, economic development incentives, and financial incentives for rehabilitation and redevelopment. The potential traffic/circulation improvement projects could include, but are not limited to roadways, landscaping, street lights, pedestrian walkways, bridges, interchanges, curbs, gutters, sidewalks, parking, street widening, street lights, traffic signals, over or underpasses, utility undergrounding, bicycle paths, street medians, trails, and trolley crossings.

The potential sewer and drainage improvement projects could include, but are not limited to, monitoring systems, sewer parallels, drainage lines, sewer lines, sump improvements, detention basins, wastewater treatment facilities, flooding systems, flood control dikes, and sewer systems. The potential utility and communication improvement projects may include, but are not limited to, electrical distribution systems, natural gas distribution systems, cable TV and fiber optic communication systems, water distribution systems, and windbreaks.

Numerous infrastructure projects, consistent with those identified above, were approved as a part of, or as mitigation for the 65<sup>th</sup> Street/University Transit Village Plan (October 22, 2002). These projects were identified and assessed in the 65<sup>th</sup> Street Transit Village Project Draft EIR (December 2001), and outlined in the draft 65<sup>th</sup> Street/University Transit Village Infrastructure Needs Assessment, as well as the City's 2003-2006 Capital Improvement Program and the Transportation Programming Guide. The Redevelopment Plan may assist these projects, as approved by the City after site specific environmental review.

#### **4.4.3 NOISE REGULATIONS, PLANS AND POLICIES**

##### **CITY OF SACRAMENTO HEALTH AND SAFETY ELEMENT**

The City of Sacramento's noise policies and guidelines are contained in the General Plan Health and Safety Element. This Element establishes noise exposure standards for different land uses (Table 4.4-2). The normally acceptable exterior noise level for office buildings/business and commercial land uses is 65 dB, Ldn or less, with a conditionally acceptable range up to 80 dB, Ldn or less. The normally acceptable exterior noise level for residential uses is 60 dB, Ldn or less, with a conditionally acceptable range up to 70 dB, Ldn or less. In instances where attainment of the "normally acceptable" exterior noise level is not possible with best available noise reduction measures, the Noise Element allows an exterior noise level exceeding the acceptable Ldn, up to the conditionally acceptable range, provided that noise level reduction measures have been implemented and that interior noise level standards are achieved.

The Element also contains specific goals and policies governing noise sources and receptors to provide for noise and land use compatibility. The goals and policies pertinent to redevelopment activities in the Project Area are summarized below.

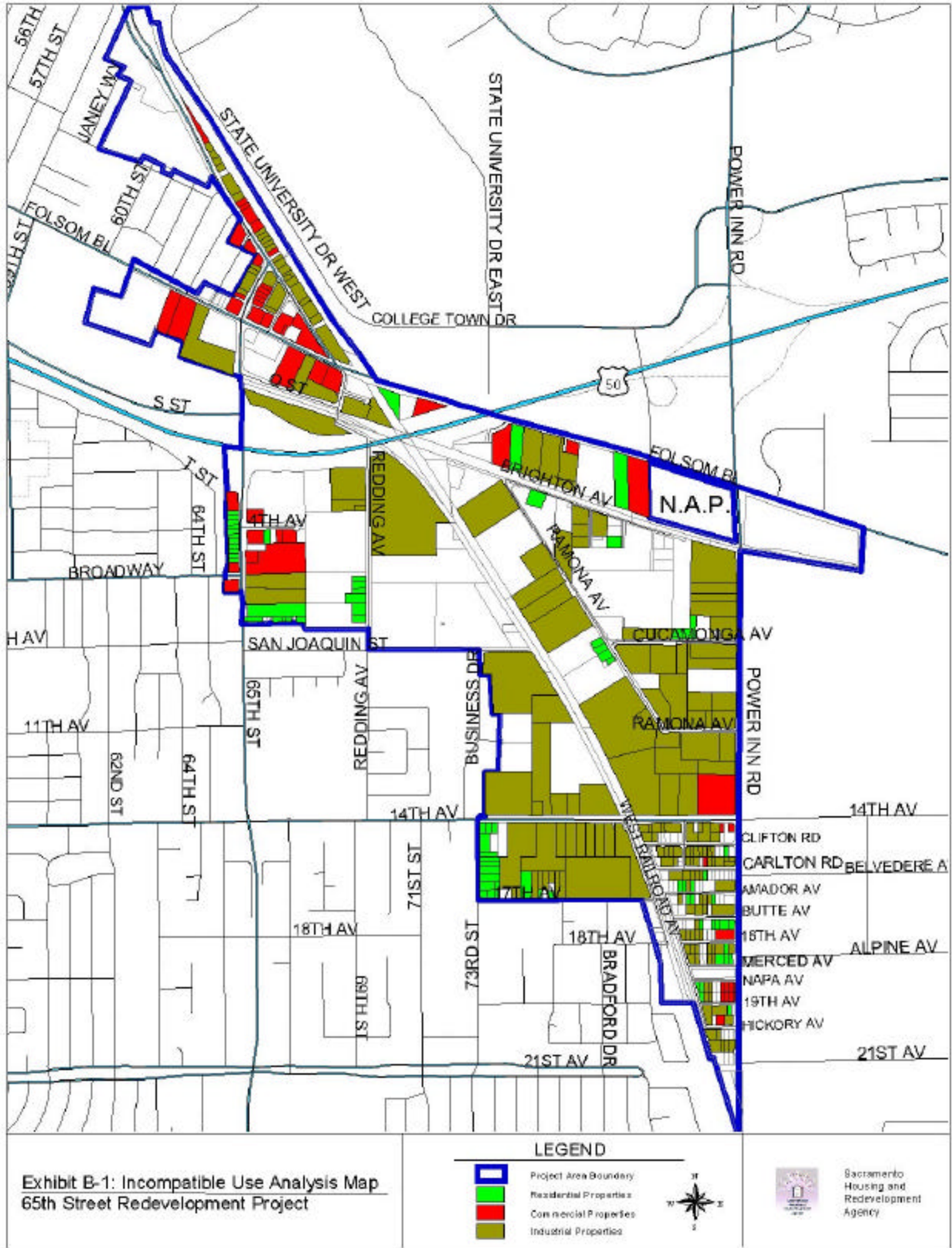


Figure 4.4-1  
Incompatible Land Uses

Goal A: Future development should be compatible with the projected year 2016 noise environment.

- Goal A Policy: Require an acoustical report for any project that would be exposed to noise levels in excess of those shown as normally acceptable (in Table 4.4-2).
- Goal A Policy: Require mitigation measures to reduce noise exposure to normally acceptable levels, except where such measures are not feasible.
- Goal A Policy: Eliminate or minimize the noise impacts of future developments on existing land uses in Sacramento.
- Goal C Policy: Review projects that may have noise generation potential to determine what impact they may have on existing uses. Additional acoustical analysis may be necessary to mitigate identified impacts.
- Goal C Policy: Enforce the City of Sacramento noise ordinance as the method to control noise from sources other than transportation sources.
- Goal D: Reduce noise levels in areas where noise exposure presently exceeds the standards established.

**Table 4.4-2  
City of Sacramento Noise Standards for Various Land Uses**

Land Use Compatibility for Community Noise Environments in Sacramento							
Land Use Category	Exterior Community Noise Exposure, in L <sub>dn</sub> or CNEL, dB						
	#55 dB	55-60	60-65	65-70	70-75	75-80	80-85
Residential							
Transient lodging (motels, hotels)							
Churches, hospitals, schools, and libraries							
Amphitheatres, concert halls, auditoriums							
Outdoor spectator sports, sports arena							
Playgrounds, neighborhood parks							
Golf courses, riding stables, water recreation, cemeteries							
Office buildings, business commercial and professional							
Industrial, manufacturing, utilities, and agriculture							
<b>Key</b>	Normally acceptable					Conditionally acceptable	
	Normally unacceptable					Clearly unacceptable	

Source: City of Sacramento General Plan, Health and Safety Element, Section 8-27, adapted

- Goal D Policy: Enforce the provisions of Sections 27-150 and 27-151 of the State Motor Vehicle Code, which requires all vehicles to be equipped with a properly maintained muffler and that exhaust systems not be modified.
- Goal D Policy: Encourage the incorporation of the latest noise control technology in all projects.

A listing of all policies, along with detailed descriptions of each policy, can be found in the Health and Safety Element of the City's General Plan

### **CITY OF SACRAMENTO NOISE CONTROL ORDINANCE**

The City of Sacramento Noise Control Ordinance sets limits for exterior noise levels on designated agricultural and residential property. The ordinance states that noise shall not exceed 55 dBA during any cumulative 30-minute period in any hour during the day (7:00 a.m. to 10:00 p.m.), and 50 dBA during any cumulative 30-minute period in any hour during the night (10:00 p.m. to 7:00 a.m.). The ordinance sets somewhat higher noise limits for noise of shorter duration; however, noise shall never exceed 75 dBA in the day and 70 dBA at night.

Construction activities are conditionally exempt from the Noise Ordinance. Construction activities are exempt from the noise standard from 7:00 a.m. to 6:00 p.m. Monday through Saturday, and from 9:00 a.m. to 6:00 p.m. on Sunday. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday, and from 9:00 a.m. to 6:00 p.m. on Sunday are exempt from the noise control ordinance, provided that the operation of an internal combustion engine is equipped with suitable exhaust and intake silencers which are in good working order.

### **STATE OF CALIFORNIA NOISE INSULATION STANDARDS**

California Noise Insulation Standards (Cal. Admin. Code Title 24, Chapter 2-35) apply to all multi-family dwellings built in the state. Single-family residences are exempt from these regulations. The regulations require that all multi-family dwelling with exterior noise exposures greater than 60 dBA CNEL must be insulated such that the interior noise level will not exceed 45 dBA CNEL. These requirements apply to all roadway, rail and airport noise sources.

## **4.4.4 ENVIRONMENTAL IMPACTS**

### **METHODOLOGY**

To assess the significance of potential noise impacts, both the absolute level of anticipated noise levels and change in noise levels associated with implementation of the Redevelopment Plan were assessed. For noise sources such as surface traffic, a three dBA change in noise is generally perceived as being a barely perceptible change. A five dBA change is considered to be a distinctly perceptible change and a ten dBA change is perceived as a doubling of sound level. These factors and others relating to the duration and frequency of noise were considered when evaluating the significance of change in sound level. In general, an increase of five dBA is considered to be significant.

Impacts were considered significant if redevelopment activities would directly or indirectly result in:

- a) exposure of existing or planned land uses to noise that would conflict with local planning guidelines or noise ordinance criteria, or
- b) a substantial permanent increase (greater than 3 dBA) in ambient noise levels at noise-sensitive land uses.

### **THRESHOLDS OF SIGNIFICANCE**

The CEQA Guidelines define a significant adverse impact on the environment as an impact that would:

- a) expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- b) cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- c) cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

### ***Community Ambient Noise Degradation***

In addition to the criteria discussed above, another consideration in defining impact significance is based on the degradation of the existing noise environment. Ambient noise degradation is considered “generally not significant” if no noise-sensitive sites are located in the area, or if increases in community noise level with implementation of the project are expected to be 3 dBA or less at noise-sensitive locations, and the proposed project will not result in violations of local ordinances or standards. Noise-sensitive sites include residences, motels, hotels, public meeting rooms, auditoriums, schools, churches, libraries, hospitals, amphitheaters, parks, and other areas where low noise levels are essential.

The “significance” of a change in noise levels is somewhat subjective. However, both Caltrans and the Federal Highway Administration have published general criteria, applicable to roadway noise that can also be used to define noise impacts associated with other community noise increases. In general, if the increase in noise exposure level is greater than 3 dBA, the significance of impact will depend on the ambient noise level and the presence of noise-sensitive uses. Noise impacts can be considered “potentially significant” if increases in noise exposure levels are expected to be no greater than 5 dBA with implementation of the project. Noise impacts can be considered “generally significant” if a project causes noise standards or ordinances to be exceeded, or increases community noise levels by 6 to 10 dBA in urban areas, or increases noise levels by 10 dBA or more in rural areas.

**IMPACTS OF THE PROPOSED PROJECT**

**Impact 4.4-1: Construction Noise at Sensitive Receptors**

Construction activities related to public and private projects undertaken as a result of the Redevelopment Plan could result in an increase in ambient noise levels during construction. This would be a short-term significant impact.

Preliminary ground work activities would involve excavation, grading, earth movement, stockpiling, and haul-vehicle travel. Construction activities such as foundation laying, road building, building construction and finishing operations would generate noise at construction sites, and construction equipment would generate vehicular noise both on and off a site. Construction-related material haul would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Construction equipment and activities would likely have more of an intrusive and disturbing effect on nearby sensitive receptors than actually raise time-averaged noise levels. Typical noise levels associated with construction equipment is shown in Table 4.4-3.

**Table 4.4-3  
Noise Levels of Typical Construction Equipment**

<i>Equipment Type</i>	<i>Typical Equipment Level (dBA)</i>
Air Compressor	81
Backhoe	85
Concrete Pump	82
Concrete Breaker	82
Truck Crane	88
Dozer	87
Generator	78
Loader	84
Paver	88
Pneumatic Tools	85
Water Pump	76
Power Hand Saw	78
Shovel	82
Trucks	88
Pile Driver	90

Source: Bolt, Beranek and Newman, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, U.S. EPA, 1971.

Assuming a maximum noise level of 88 dBA,  $L_{eq}$ , (no pile driving or rock drilling is anticipated in this suburban Project Area) at about 50 feet from the source for standard construction equipment, and a noise attenuation of about six dBA for every doubling of the distance, noise levels from construction activities would drop to about 60 dBA,  $L_{eq}$ , (the maximum normally acceptable noise level in residential areas) at about 1,500 feet from the source. This worst-case estimate assumes that sound waves travel undisturbed from the source to the receptor over ground that has poor sound absorptive properties; local terrain characteristics, such as earth berms that provide a shielding effect by blocking the line of sight to noise sources, and soft vegetation-covered earth with good sound absorptive tendencies, would reduce noise propagation. Under a worst-case scenario, then, noise-

sensitive land uses or activities within about 1,500 feet of Project Area construction sites could be exposed to noise levels above the recommended standards during the construction period.

The construction schedules for individual projects carried out in furtherance of the Redevelopment Plan would vary from project to project. The duration of construction noise effects and the impacts would differ for each type of construction (new building construction, rehabilitation, public infrastructure, etc.) and project location. Noise from construction activities in the Project Area would have the potential to raise ambient noise levels above recommended standards and to have an intrusive and disturbing noise effect at nearby sensitive receptor locations. However, construction noise would be short-term and compliance with the City’s Noise Ordinance for construction activities as defined on page 4.4-8 would limit construction activities to certain hours, resulting in a ***less than significant*** impact.

***Mitigation Measures***

None required.

**Impact 4.4-2: Increased Ambient Noise Levels at Noise-Sensitive Land Uses**

Implementation of the Redevelopment Plan will eliminate barriers to development in the Project Area by providing funding for infrastructure improvements and development assistance. This would allow development to occur consistent with the adopted General Plan and any specific plans such as the Transit Village Plan. By removing existing barriers to development, the Redevelopment Plan will stimulate increased population and employment growth in the Project Area. It would also help to remove barriers to development of residential, commercial and industrial infill parcels, which would result in increased stationary noise at commercial and industrial sites, and increased traffic volumes along major roadways and local streets.

However, such growth would be consistent with existing General Plan land use designations and policies, and is therefore anticipated and addressed by existing plans, policies, and ordinances. Impacts of the plans, policies and ordinances have been reviewed in the SGPU EIR and the Transit Village Plan EIR, and the infrastructure projects identified as a part of the Redevelopment Project have been identified by the City as those necessary to meet the needs of those plans. The increase in trips along a particular roadway would depend on the number of additional trips generated (which would depend on the types of land uses developed), and the distribution of these trips on the area roadway network (which would depend on future land use patterns). Overall, however, the traffic noise generated by Project Area development either as a direct or indirect result of redevelopment activities would not exceed that projected by the SGPU EIR and the Transit Village Plan EIR.

The Transit Village Plan EIR measured existing noise levels in the area of the Transit Village Plan area, which represents the area of highest potential densities closest to Highway 50, LRT and UPRR in the Project Area. The EIR projected future noise based on the Federal Highway Administration’s traffic noise prediction model (FHWA-RD-77-108); the noise levels independently verified the noise assessments identified in the SGPU EIR for General Plan buildout. Based on the traffic modeling conducted, the Transit Village Plan would result in a maximum projected increase in traffic noise levels of approximately 2.3 dBA, or less, along Project Area roadways over existing conditions. Removing barriers to General Plan buildout in the Project Area would not result in a noticeable

increase in ambient noise levels (i.e., 3 dBA or greater) at nearby existing noise-sensitive land uses, and thus would be less than significant.

Stationary noise sources in the Project Area would produce noise levels primarily during the day and evening hours and less frequently at night as perceived at the closest noise-sensitive land uses. Noise typically associated with residential land uses includes adult and children voices and noise generated by lawn maintenance equipment. Noise levels generated by residential land uses typically average less than 50 dBA at 10 feet and would not be anticipated to result in a noticeable increase (e.g., 3 dBA or greater) in ambient noise levels.

Operational noise associated with non-residential land uses, including operation of building mechanical equipment, material loading and unloading activities, pneumatic equipment, and processing equipment could generate high noise levels depending on the type of equipment and when, how often and for what duration they are used. Such stationary noise has the potential to exceed the City's maximum acceptable interior and exterior noise thresholds at nearby existing and planned residential land uses.

General Plan policies require specific development projects be analyzed when proposed, in accordance with the California Environmental Quality Act (CEQA), to determine if projected noise levels at nearby receptors would comply with the City's noise control standards. Mitigation measures shall be required to reduce projected interior and exterior noise levels to within acceptable levels. Mitigation could include noise walls, dual-pane, noise-rated windows, use of mechanical air systems, and use of other building materials that would feasibly reduce interior noise levels to acceptable levels. All land uses proposed for development and operation within the Project Area must comply with the City's Noise Control Ordinance. Compliance with the City's noise control ordinance and implementation of any additional project-specific mitigation measures for the control of stationary source noise (based on future project-level analysis, in compliance with CEQA) would reduce stationary source noise impacts to less-than-significant levels.

Only a small percentage of the additional noise would be caused by traffic of projects engendered by the Redevelopment Plan, and cumulative traffic will increase noise levels by less than 3 dBA along Project Area roadways. Increases in ambient noise levels at noise sensitive land uses as a result of the Redevelopment Plan would be ***less than significant***.

### ***Mitigation Measures***

None required.

### **Impact 4.4-3: Cumulative Community Noise Impacts**

The contribution of redevelopment activities and General Plan development in furtherance of the Redevelopment Plan to cumulative community noise conditions would be secondary and incremental. Only a small percentage of the additional noise would be caused by traffic of projects engendered by the Redevelopment Plan, and cumulative General Plan traffic will increase noise levels less than 3 dBA along Project Area roadways. Any new stationary sources must be mitigated per General Plan policies and the City's Noise Control Ordinance, and updated zoning provides logical buffers between new residential and industrial land uses. The proposed 65<sup>th</sup> Street South Area Plan would remove industrial and heavy commercial uses from the Project Area west of the

UPRR, buffering residential uses from the industrial/heavy commercial portions of the Project Area with the UPRR levee. The Redevelopment Plan would upgrade existing properties to current standards, and encourage the recycling of existing non-conforming uses to conforming uses. Cumulative community impacts as a result of Redevelopment Plan implementation are considered ***less than significant***.

### ***Mitigation Measures***

None required.

### **Impact 4.4-4: Expose Existing or Planned Land Uses to Operational Noise That Would Conflict With Local Planning Guidelines or Noise Ordinance Criteria**

Traffic noise levels adjacent to the major road segments within the Project Area currently exceed normally acceptable levels for sensitive receptors. Sensitive receptors along the heavily traveled major roadways and rail corridors are currently exposed to noise levels above the recommended standards. Additional traffic on these roadways would incrementally increase the magnitude of impact. Where such receptors already exist, the Redevelopment Plan could have a beneficial impact by providing funding for rehabilitation actions such as double paned windows and insulation that could mitigate existing interior noise levels, or by providing streetscape or roadway improvements that could reduce exterior ambient noise levels.

Redevelopment activities would also encourage infill single-family and mixed-use residential development on some parcels currently impacted by excessive ambient noise along 65<sup>th</sup> Street, LRT, Elvas and the UPRR. Modern construction methods typically provide a 25 to 30 dBA reduction between exterior and interior noise, which would normally reduce interior noise levels to less than 45 dBA without mitigation. However, in the conditionally acceptable and normally unacceptable areas, including within 1500 feet of Highway 50 and along the UPRR and LRT, an acoustical assessment would be required to ensure that interior dwelling unit noise levels of 45 dBA or less are maintained for new construction.

The SGPU Noise Element policies call for the analysis of specific projects to determine whether outdoor and indoor levels would comply with the Noise Element standards. However, this requirement is triggered only on discretionary projects, and most single family infill projects would be exempt from City entitlement review. Therefore, actions to encourage residential development in areas with existing and projected ambient noise levels above 60 dB are considered ***potentially significant***.

### ***Mitigation Measures***

**4.4-4** For all redevelopment funded residential projects within the Transit Village Plan Area, along 65<sup>th</sup> Street, LRT and the UPRR, the Redevelopment Agency shall ensure that adequate and appropriate sound barriers are provided or require an acoustical analysis to ensure existing construction methods are adequate to insure that interior noise levels of 45 dBA or less are maintained for future ambient noise levels. If necessary, appropriate noise insulation measures shall be identified and included in the construction documents to the satisfaction of the City Building Division.

### ***Significance after Mitigation***

Less than significant.

#### **4.4.5 REFERENCES**

- *Draft and Final Environmental Impact Report, City of Sacramento General Plan Update, City of Sacramento, Draft EIR is dated March 2, 1987 and Final EIR is dated September 30, 1987.*
- Sacramento City Code, City of Sacramento, <http://ordlink.com/codes/sacramento/index.htm>
- *65<sup>th</sup> Street Transit Village Project Draft Environmental Impact Report, City of Sacramento, December 2001.*