October 18, 2021

Ms. Michelle Fox
COZAD & FOX, INC.
151 South Girard Street
Hemet, CA 92544

Subject: 2nd Street Improvement Project Noise Impact Study, City of Beaumont, CA

Dear Ms. Fox:

Introduction

RK ENGINEERING GROUP, INC. (RK) is pleased to provide this focused noise impact study for the proposed 2nd Street Improvement Project, in the City of Beaumont.

The project consists of extending 2nd Street, from the westerly boundary of the Home Depot shopping center to Pennsylvania Avenue. The improvements include extending 2nd Street approximately 1,622 linear feet from the current terminus at the westerly boundary of First Street Self and RV Storage, to Pennsylvania Avenue to add 4 new travel lanes. Also, this project entails widening approximately 846 linear feet of 2nd Street from its current terminus to the westerly boundary of the Home Depot shopping center. The project will require construction of a new storm drain facility and may require improvements to existing drainage.

The extension of 2nd Street is consistent with the City's General Plan Roadway Classification Map. However, the General Plan classifies 2nd Street as a Major Highway (Raised Median), but the project is only proposing to build the roadway to meet the Secondary Streets classification.

The project location map is shown in Exhibit A.

The purpose of this study is to evaluate the construction and operational noise levels of the project as it pertains to the City of Beaumont Noise Standards and California Environmental

Quality Act (CEQA). Future roadway noise level contours are provided and impacts to the surrounding noise sensitive land uses are evaluated.

Existing Setting

The proposed roadway is bounded by existing commercial uses to the south (easterly portion) and vacant land uses to the north and south (westerly portion). The land uses immediately surrounding the proposed roadway are designated for General Commercial in the City of Beaumont General Plan Update Land Use Designation Map and zoned for Community Commercial in the City of Beaumont Zoning Map.

The nearest sensitive receptors to the project are residential land uses located south of 1st Street, approximately 550 feet from the centerline of proposed roadway to the south.

The City of Beaumont General Plan shows the project site currently experiences noise levels that range from 70 dBA CNEL to 65 dBA CNEL. The nearest residential homes, south of 1st Street currently experience noise levels ranging from approximately 65 dBA CNEL to 60 dBA CNEL.[1]

As shown in the General Plan, existing noise levels near the site are primarily influenced by the I-10 Freeway.

Noise Standards

To assess the potential noise impacts from the project, the noise standards established in the City of Beaumont General Plan and the City of Beaumont Municipal Code are referenced.

General Plan Noise Standards:

The City of Beaumont General Plan, Chapter 10: Noise Control, establishes noise standards to minimize the community's exposure to excessive noise. CNEL noise standards are the common metric that are used by the State of California and the City of Beaumont for

[1] Beaumont General Plan. Page 258. Figure 10.1 Existing Noise Contours from Transportation. Second Reading December 1, 2020.

assessing noise/land use compatibility. Table 1 shows the maximum outdoor noise levels (CNEL) in residential areas for the City of Beaumont.

Table 1
City of Beaumont Exterior Noise Standards

Land Use	Maximum Outdoor Noise Levels
Residential	65 dB(A) CNEL

Source: Page 261, Chapter 10 – Noise, Beaumont General Plan, dated December 2020.

Municipal Code

The City of Beaumont Municipal Code Noise Ordinance, requires that a project shall not create loud, unnecessary, or unusual noise that disturbs the peace or quiet of any neighborhood, or that causes discomfort or annoyance to any person of normal sensitiveness. The City of Beaumont Municipal Code (BMC) Chapter 9.02 establishes City-wide standards regulating noise for residential zones, public places, and motor vehicles.

For purposes of this analysis, the Municipal Code is mainly used to assess construction noise impacts from the project, as described below.

Construction Noise Standards:

The Beaumont Municipal Code Noise Ordinance, Section 9.02.100 – Exemptions, exempts the construction noise emanating from the following sources:

- Maintenance and repair of public properties by a governmental agency.
- Utility and street repairs, street sweepers, garbage services, emergency response warning noises, emergency generators and fire alarm systems are exempt from this Chapter.

Section 9.02.110(F) provides special provisions for construction activities, including as follows:

- Whenever a construction site is within one-quarter of a mile of an occupied residence or residences, no construction activities shall be undertaken between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September and between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May. Exceptions to these standards shall be allowed only with the written consent of the building official.

- Sound levels shall not at any time exceed 55 dB(A) for intervals of more than 15 minutes per hour as measured in the interior of the nearest occupied residence or school.

Traffic Noise Modeling

Traffic noise from vehicular traffic was projected using a version of the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the key input parameters. The following outlines the key adjustments made to the computer model for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic (ADT) Volumes, Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

The following outlines key adjustments to the computer model for the project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

Table 2 indicates the roadway parameters utilized for this study.

Table 2
Roadway Parameters[1]

Roadway	Segment	Classification	Lanes	Speed Limit	Typical ADT[2]	Site
2nd Street	Pennsylvania Avenue to Home Deport Shopping Center	Secondary	4	35	25,000	Hard

[1] Source: City of Beaumont's 2nd Street Improvements Project Preliminary Design Report, by Cozad & Fox, Inc., dated January 20, 2021.
[2] Typical ADT for a Secondary Street has been referenced from the previous City of Beaumont General Plan 2007.

Table 3 indicates the vehicle distribution and truck mix utilized for all roadways in this study area.

Table 3
Vehicle Mix[1]

Motor-Vehicle Type	Daily % of Traffic Flow	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)
Automobiles	97.42	73.6	13.6	10.22
Medium Trucks	1.84	0.9	0.04	0.9
Heavy Trucks	0.74	0.35	0.04	0.35

[1] Vehicle mix is based on County of Riverside Department of Environmental Health, "Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures", April 15, 2015.

Traffic Noise Levels

Table 4 shows the modeled future traffic related CNEL noise levels calculated at 550 feet from the centerline of roadway segments adjacent to the site. The distances to the 55, 60, 65, and 70 dBA CNEL noise contours are also shown.

The traffic noise levels do not take into account the effect of any noise barriers or topography that may reduce traffic noise levels. The roadway noise levels provide a baseline of the future estimated traffic noise levels.

Table 4
Future Traffic Noise Levels

Roadway[1]	Segment	CNEL at 550ft. (dBA)	Distance to Contour (Ft)[2]			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
2nd Street	Pennsylvania Avenue to Home Depot Shopping Center	57.6	31	99	314	992

[1] Noise levels calculated from centerline of subject roadway.
[2] Refer to Appendix B for estimated noise level calculations.

Exhibit B shows the future roadway noise contours from the proposed extension.

Roadway noise calculation worksheets are provided in Appendix B.

The nearest sensitive receptors (residential uses south of 1st Street) are present at approximately 550 feet south of the centerline of the proposed roadway extension. Roadway noise levels from proposed roadway extension are expected to be approximately 57.6 dBA CNEL at the nearest residential property.

As shown in Exhibit B, no sensitive noise receptors are present within 60 dBA contour of the project.

The project will not significantly increase baseline future noise levels at the residential homes south of 1st Street. As shown on the Future Noise Contours map in the City's General Plan, areas immediately south of 1st Street are expected experience noise levels up to 65 dBA CNEL[2]. Hence, the contribution of project noise would not be perceptible as it would result in less than 1 dBA change in future conditions. Therefore, the incremental change in noise as a result of the project is less than significant at the nearest sensitive noise receptors.

[2] Beaumont General Plan. Page 259. Figure 10.2 Future Noise Contours from Transportation. Second Reading December 1, 2020.

Recommendations

Based upon this review, the following recommendations are provided to reduce noise impacts:

1. Construction activity should not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September and between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May. Exceptions to these standards shall be allowed only with the written consent of the building official.

2. During construction, the contractor should ensure all construction equipment is equipped with appropriate noise attenuating devices and equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

3. Idling equipment should be limited to 5 minutes and turned off when not in use.

Conclusion

Based upon this review, the proposed 2nd Street Improvement project is not expected to result the generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

If you have any questions regarding this study, or would like further review, please do not hesitate to contact us at (949) 474-0809.

Sincerely,
RK ENGINEERING GROUP, INC.

Bryan Estrada, AICP, PTP
Principal

Darshan Shivaiah, M.S
Environmental Specialist

Attachments
rk16674.doc
JN:1515-2020-05

Exhibits

Exhibit A

Location Map

Legend:

= Proposed 2nd Street Improvement

N

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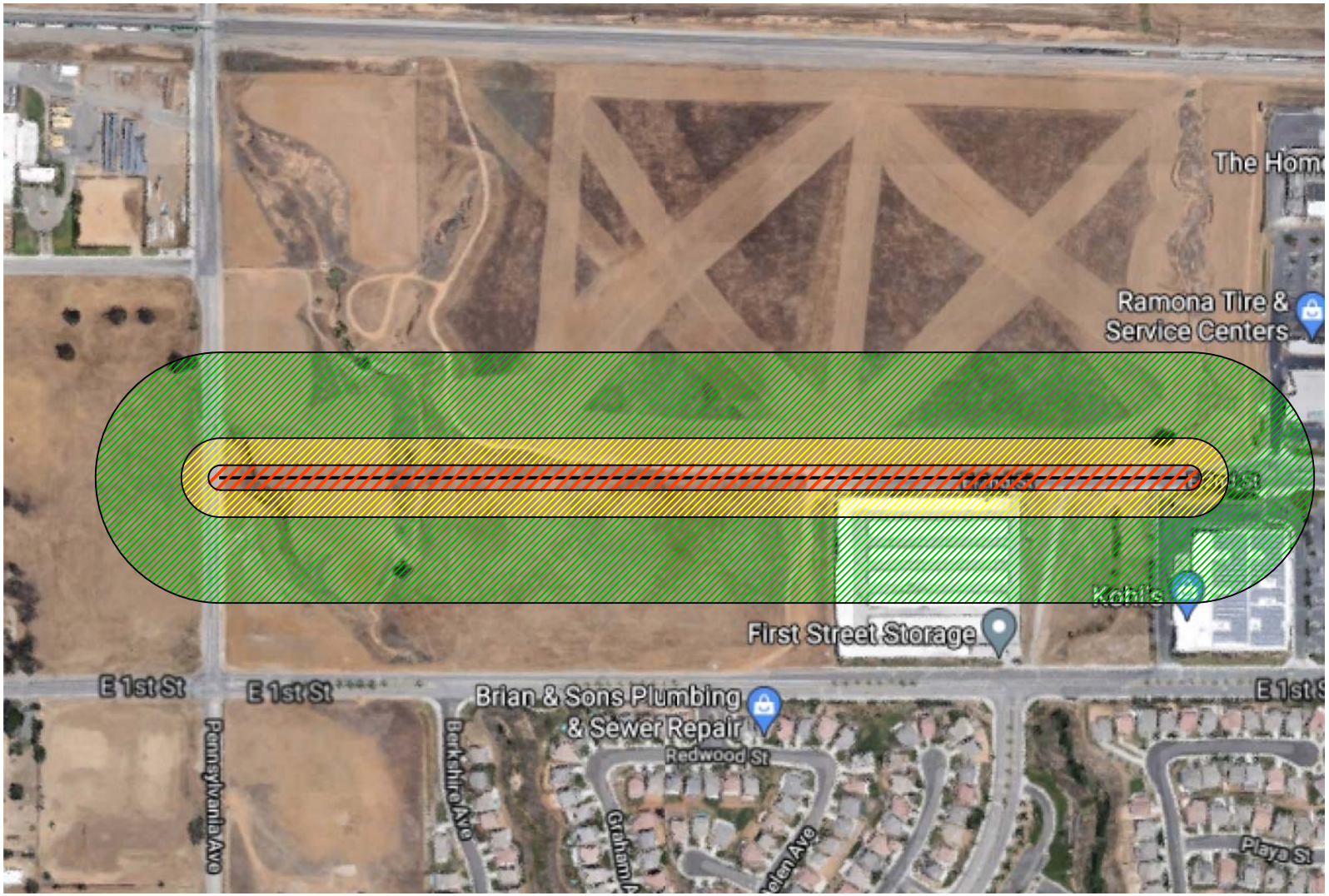
Exhibit B

Roadway Noise Contours



Legend:

= 70 dBA CNEL and Above

= 65 dBA to 70 dBA CNEL

= 60 dBA to 65 dBA CNEL

N

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Appendices

Appendix A

City of Beaumont
Noise Standards

Chapter 9.02 - NOISE CONTROL

Footnotes:
*--- (**1**) ---*
***Editor's note—** Ord. No. 1067, § 1(Exh. A), adopted Jan. 19, 2016 , amended Ch. 9.02 in its entirety to read as herein set out. Former Ch. 9.02, §§ 9.02.010—9.02.110, pertained to similar subject matter, and derived from Ord. No. 914, § 1, adopted July 3, 2007; Ord. 997, adopted May 3, 2011.*

9.02.010 - Purpose.

The purpose of this Chapter is to establish criteria and standards for the regulation of noise levels within the City and to implement the noise provisions contained in the City's General Plan.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.020 - Findings.

It is hereby found and declared that:

A. The making, creation or maintenance of excessive, unnecessary, unnatural or unusually loud noises which are prolonged, unusual and unnatural in their time, place and use, affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City; and

B. The necessity for the provisions and prohibitions hereinafter contained and enacted is hereby declared as a matter of legislative determination and public policy. It is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the City.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.030 - Definitions.

"Ambient noise" shall mean the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding any intrusive noise.

"Capital improvement" shall mean major construction, acquisition or maintenance/repair projects. Examples of capital improvements include street improvements, park development and construction of public buildings or structures, treatment plants. Structures include lighting, sewer and water pipelines and other related utility structures including treatment plants, gas, electric and other infrastructure, landscaping and drainage facilities and all other public infrastructure. "Acquisitions" include the acquisition of land or interest in land. Major maintenance/repairs may include street resurfacing and modifications to public buildings and structures.

"Commercial purpose" shall mean the use, operation or maintenance of any sound-amplifying equipment for the purpose of advertising any business, goods or services and/or for the purpose of advertising or attracting the attention of the public to or soliciting patronage for any performance, entertainment, exhibition or event, or for the purpose of demonstrating any such sound equipment.

"Cumulative time period" shall mean a period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (dB)" shall mean a measurement unit of sound pressure level which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Governmental agency" shall mean the United States (federal government), the State of California, the County of Riverside, the City of Beaumont, the school district and any special district within Riverside County or any combination of these agencies.

"Impact noise" shall mean the sound produced by the impact or collision of one moving object or mass with a second object or mass that is stationary or moving.

"Intrusive noise" shall mean a sound which intrudes over and above the existing ambient noise level at a given location.

"Motor-driven vehicle" shall include, but not be limited to, any automobile, truck, van, bus, motorcycle, minibike, go-cart or other self-propelled vehicle, on or off road, and aircraft.

"Noise" shall mean any sound that is loud or disturbing or that interferes with one's ability to hear some other sound.

"Noise level" shall mean the "A" weighted sound pressure level in decibels audible to humans obtained by using a sound level meter. The unit of noise level measurement shall be designated as dB(A).

"Person" shall mean a person, firm, association, partnership, joint venture, corporation or any entity, public or private in nature.

"Public property" shall mean property that is owned by any governmental agency as indicated in this section or held by the public, including, but not limited to, parks, streets, sidewalks, and alleys.

"Simple tone noise" shall mean a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

"Sound pressure level of a sound, in decibels" shall mean 20 times the logarithm to the base ten of the ratio of the pressure of this sound to the reference pressure, which reference pressure shall be explicitly stated.

As used in Section 9.02.110(H), "public nuisance'' is defined by Civil Code Section 3479.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.040 - Noise level measurement criteria.

A. Any noise level measurement, made pursuant to the provisions of this Chapter, shall be determined by using a sound level meter that meets the minimum requirements of the American National Standard Institute for sound level meters, or by using an instrument with associated recording and analyzing equipment that will provide equivalent data.
B. The factors which shall be considered in determining whether a violation of the provisions of this section exists shall include, but not be limited to, the following:

1. The sound level of the objectionable noise;
2. The sound level of the ambient noise;
3. The proximity of the noise to residential sleeping facilities;
4. The nature and zoning of the area within which the noise emanates;
5. The number of persons affected by the noise source;
6. The time of day or night the noise occurs;
7. The duration of the noise and its tonal, informational or musical content;
8. Whether the noise is produced by a commercial or noncommercial activity.

C. The above factors shall be considered in addition to the noise levels set forth in this section in determining a violation. However, noises do not necessarily need to exceed those noise level limits to be considered unnecessary or unusual so as to cause discomfort or annoyance to persons in the area.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.050 - Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Decibels	Time	Zone Use
45 dB(A)	10:00 p.m. — 7:00 a.m.	Residential
55 dB(A)	7:00 a.m. — 10:00 p.m.	Residential
50 dB(A)	10:00 p.m. — 7:00 a.m.	Industrial and Commercial
75 dB(A)	7:00 a.m. — 10:00 p:m.	Industrial and Commercial

Actual decibel measurements exceeding the levels set forth hereinabove at the times and within the zones corresponding thereto shall be employed as the "base ambient noise level" referred to in this Chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.060 - Exterior noise level measurement.

Except as otherwise specifically provided herein, all reference to "exterior noise" or "exterior noise levels" as used in this Chapter shall be as measured at any point relative to the closest point of the source of the noise at the property line of the complaining party. Measurements will not be made during extraordinary times, such as during the movement of a nearby train or airplane.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.070 - Maximum residential noise levels.

No noise level shall exceed the following for the duration periods specified:

Noise Level Exceeded	Maximum Duration Period
5 dB(A) above BANL	15 minutes any hour
10 dB(A) above BANL	5 minutes any hour
15 dB(A) above BANL	1 minute any hour
20 dB(A) above BANL	Not permitted

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.080 - Maximum interior noise levels.

A. No person shall operate or cause to be operated, any source of sound which causes the noise level, when measured inside another dwelling unit, school or hospital, to exceed:

Decibels	Time	Land Use
35 dB(A)	10:00 p.m. — 7:00 a.m.	Residential
45 dB(A)	7:00 a.m. — 10:00 p.m.	Residential
45 dB(A)	7:00 a.m. — 10:00 p.m. (while school is in session)	School
45 dB(A)	Anytime	Hospital

B. No person shall operate or cause to be operated, any source of sound which causes the noise level, when measured inside another dwelling unit, school or hospital, to exceed:

Noise Level Exceeded	Maximum Duration Period

5 dB(A) above interior BANL	5 minutes any hour
10 dB(A) above interior BANL	1 minutes any hour
Over 10 dB(A) above interior BANL	Not permitted

C. If the measured interior ambient noise level exceeds that permissible within the first two noise limit categories in this section, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to reflect the interior ambient noise level. In the event the interior ambient noise level exceeds the third noise limit category, the maximum allowable interior noise level under said category shall be increased to reflect the maximum interior ambient noise level.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.090 - Maximum nonresidential noise levels.

Any provision contained herein to the contrary notwithstanding, no exterior noise level shall exceed the base ambient noise levels (BANL) for nonresidential land uses set forth in any development agreement applicable to such development or as otherwise specifically set forth in any development standard which is by its terms enforceable by the City against the noise maker.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.100 - Exemptions.

Sound emanating from the following sources is exempt from the provisions of this Chapter:

A. Capital improvement projects of a governmental agency.
B. Maintenance and repair of public properties by a governmental agency.
C. Utility and street repairs, street sweepers, garbage services, emergency response warning noises, emergency generators and fire alarm systems are exempt from this Chapter.
D. Other public/governmental services or operations including, but not limited to trains and railway or airplanes and helicopter machinery, equipment or vehicles.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.110 - Special provisions.

A. *Sound Performances and Special Events.* Sound performances and special events not exceeding 95 dB measured at a distance of 50 feet from the loudest source are exempt from this Chapter when approval therefore has been obtained from the appropriate governmental entity.
B. *Vehicle Horns.* Vehicle horns, back-up warning devices, or other devices primarily intended to create a loud noise for warning purposes, shall be used only when the vehicle is in a situation where life, health or

property are endangered or as required by law.

C. *Alarm System.* An audible alarm system affixed to a motor vehicle shall be equipped with an automatic shutoff, which shuts off the alarm within a maximum of 15 minutes from the time of activation. Such alarm may not emit a sound similar to the sound emitted by sirens in use on emergency vehicles or to those used for civil defense purposes. For purposes of this section, any variable tone, as opposed to one steady pitch, shall be considered similar to the sound emitted by an emergency vehicle siren. The Police Department is authorized to abate the nuisance of an audible alarm system affixed to a motor vehicle, which sounds beyond 15 minutes by using any means necessary to disconnect the vehicle alarm. The expense of disconnecting the alarm shall be a lien against the motor vehicle and shall be the personal obligation of the owner thereof.

D. *Radios, Televisions, Stereos, Speakers, etc.* It shall be unlawful for any person, without special permit or as may otherwise be provided in this Chapter, to play, use, operate or permit to be played, used or operated, any radio, television, musical instrument, stereo equipment, or other machine or device used for producing, reproducing or amplifying sound at such sound levels as to cause the sound level to exceed 40 dB(A) as measured within the residence of any complaining person.

E. *Animals, Fowl, etc.* It shall be unlawful to keep or harbor any animal which emits, between the hours of 11:00 p.m. and 7:00 a.m., any unreasonable sound or cry which disturbs or may disturb the peace and comfort or repose of a reasonable person of normal sensitiveness who resides in the neighborhood or area in which such animal is located or kept. For barking dog, see limitations set forth in Section 6.04.080. This provision shall not apply to farm animals within any zone in which such farm animals are permitted under the Municipal Code.

F. *Construction, Landscape, Maintenance or Repair.*

1. It shall be unlawful for any person to engage in or permit the generation of noise related to landscape maintenance, construction including erection, excavation, demolition, alteration or repair of any structure or improvement, at such sound levels, as measured at the property line of the nearest adjacent occupied property, as to be in excess of the sound levels permitted under this Chapter, at other times than between the hours of 7:00 a.m. and 6:00 p.m. The person engaged in such activity is hereby permitted to exceed sound levels otherwise set forth in this Chapter for the duration of the activity during the above described hours for purposes of construction. However, nothing contained herein shall permit any person to cause sound levels to at any time exceed 55 dB(A) for intervals of more than 15 minutes per hour as measured in the interior of the nearest occupied residence or school.
2. Whenever a construction site is within one-quarter of a mile of an occupied residence or residences, no construction activities shall be undertaken between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September and between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May. Exceptions to these standards shall be allowed only with the written consent of the building official.
3. Construction related noise as defined in subsection (F)(1) and (2) above may take place outside the time period set forth therein and above the relative sound levels in case of urgent necessity in the interest of public health and safety, and then only with the prior permission of the building inspector.

Such permit may be granted for a period not to exceed three days or until the emergency ends, whichever is less. The permit may be renewed for periods of three days while the emergency continues.

4. Unless exempted by this Chapter, if the building official should determine that the public health and safety will not be impaired by the construction related noise, the building inspector may issue a permit for construction within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work. The building official may place such conditions on the issuance of the permit that are appropriate to maintain the public health and safety, as determined by the building official.

G. *Machinery, Equipment, Fans and Air Conditioning.* It shall be unlawful for any person to operate, cause to operate or permit the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus or similar mechanical device, including but not limited to the use of any steam shovel, pneumatic hammer, derrick, steam or electric hoist, blower or power fan, or any internal combustion engine, the operation of which causes noise due to the explosion of operating gases or fluids, or other appliance, in any manner so as to create any noise which would cause the noise level at the property line of the property upon which the equipment or machinery is operated to exceed the base ambient noise level by five dB(A).

H. *Motor Driven Vehicles.* It shall be unlawful for any person to operate any motor driven vehicle within the City that, due to the nature of the operation of the vehicle, or due to the operating condition of the vehicle, or due to any modification made to the vehicle, in such manner as to exceed noise levels set forth in Section 9.02.050 hereof.

1. Exhaust. It shall be unlawful for any person to discharge into the open air the exhaust of any steam engine, stationary internal combustion engine, motorboat or motor driven vehicle except through a muffler or other device which will effectively prevent loud or explosive noises there from.
2. No person shall use or operate a stereo system, radio, electronic music device, television or similar device in a vehicle on a public street which is audible to a person of normal hearing sensitivity, more than 50 feet from said vehicle.

I. Notwithstanding any other provisions of this Chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or creates a public nuisance. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

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

8. The time of the day and night the noise occurs;
9. Whether the noise is recurrent, intermittent, or constant;
10. The duration of the noise; and
11. Whether the noise is produced by a commercial or noncommercial activity.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.120 - Exception permits.

If the applicant can show to the City manager or designee, that a diligent investigation of available noise abatement techniques indicates that immediate compliance with the requirements of this Chapter would be impractical or unreasonable, a permit to allow exception from the provisions contained in this Chapter may be issued, with appropriate conditions to minimize the public detriment caused by such exceptions. Any such permit shall be of as short duration as possible, but in no case for longer than six months. These permits are renewable upon a showing of good cause, and shall be conditioned by a schedule for compliance and details of compliance methods in appropriate cases.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.130 - Application between zones.

In applying the regulations set forth in this Chapter, each source of noise shall be subject only to such regulation as shall apply to the zone, including any designated truck route, within which it is located. A use lying adjacent to a zone with a more restrictive noise requirement hereunder shall not be required to conform to that more restrictive requirement. For purposes of this subsection, "zone" shall be as utilized in Title 17 of the Beaumont Municipal Code.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.140 - Penalty for violation.

In the discretion of the Enforcement Officer, any person violating the provisions of this Chapter may be issued an Administrative Citation pursuant to Beaumont Municipal Code Chapter 1.17 or shall be guilty of an infraction pursuant to Beaumont Municipal Code Chapter 1.16. In either case, the amount of the fine shall be the appropriate amount set forth in Section 1.16.030 of this Code. Each such violation shall be deemed a separate offense as specified in Section 1.16.040.

Notwithstanding the foregoing, a first offense may be charged and prosecuted as a misdemeanor, punishable by a fine of $1,000.00, or six months in jail, or both

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.150 - Additional remedy—Injunction.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provision hereof and which causes discomfort or annoyance to reasonable persons of normal sensitiveness or which endangers the comfort, repose, health or peace of residents in the area shall be deemed,

and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

9.02.160 - No mandatory duty created.

No section of this Chapter shall impose a mandatory duty on the City, or on any officer, official, agent, employee, board, council, or commission of the City. Instead, if any section purports to impose a mandatory duty of enforcement, that section shall be deemed to invest the City, and the appropriate officer, official, agent, employee, board, council, or commission with discretion to enforce the section or not to enforce it. A police officer, for example, shall have the discretion to quiet a nuisance without applying standards detailed herein.

(Ord. No. 1067, § 1(Exh. A), 1-19-2016)

Chapter 10:
NOISE

The City of Beaumont understands the value of low noise levels to a high quality of life for people living and working in the community. Vehicle traffic is the main source of noise in Beaumont, exposing residents to potentially unwelcome and unhealthy noise levels. However, noise also results from other sources, including railroads, construction, residences, and businesses. This chapter identifies noise issues in the community and sensitive noise environments recommended for protection. Additionally, it identifies land use policies that minimize the community's exposure to excessive noise and identifies proactive solutions to addressing existing and foreseeable noise problems. Topics covered in this chapter include: transportation noise, stationary noise, noise standards and land use compatibility. This chapter also includes related goals and policies.

STATUTORY REQUIREMENTS

This Noise Element has been prepared to comply with State General Plan law. California law mandates the development of a Noise Element as part of the General Plan (CGC Section 65302(f)). The Noise Element should also be consistent with guidelines contained within the California Health and Safety Code Section 56050.1. In accordance with these regulations, this Element addresses noise sources and identifies ways to reduce impacts and exposure of sensitive receptors to high levels of noise.

CITY OF BEAUMONT NOISE REGULATIONS

The City's Municipal Code (Title 9, Chapter 9.02) includes detailed noise regulations intended to protect the welfare of its residents from excessive, unnecessary, or unusually loud noises by any and all sources in the community. The noise regulations in this chapter establish criteria and standards for the regulation of noise levels within the City.

SETTING THE SCENE

Noise is best defined as unwanted sound. Tolerance of noise depends on its character and its interference with daily activities. At excessive levels, people typically perceive noise as being intrusive, annoying, and undesirable. Excessive levels of noise can interfere with sleep, work, quality of life, and in the worst cases, even cause physiological or psychological damage.

Beaumont generally enjoys a quiet noise environment. Vehicle traffic is the primary source of noise. The highest noise levels in the City occur along high-volume roadways and rail corridors. Stationary sources of noise are limited, as the majority of Beaumont consists of residential housing, interspersed with commercial, public/institutional uses, and open space. Commercial land uses located along arterial roadways and new construction also contribute to stationary noise sources in the city. Other noise generators in Beaumont include industrial operations, construction activities, special event noise, commercial activities that include live music, and lawnmowers and leaf blowers, which can create substantial noise problems.

Sensitive receptors to noise include residential dwellings, hotels, hospitals, nursing homes, educational facilities, libraries, and biological open space. These are areas in which occupants tend to be more impacted by noise than others. The level and intensity of noise can interfere with human activities, including talking, studying, and sleeping. Additionally, people that live and/or work in sensitive receptors are more susceptible to the negative impacts of pollution, including toxic chemicals, diesel fuel exhaust, and particulate matter. Animal species and their habitats may also be affected by noise, especially during their breeding season.

Noise reduction at the source is the most effective noise mitigation measure. Many potential noise impacts can be addressed through the design of our buildings, public spaces, and roads. Strategies to reduce noise can be incorporated inside and outside of buildings, including the use of mufflers on stationary equipment, alternative facility siting, noise barriers, and reduction of traffic speeds.

TRANSPORTATION NOISE

Noise sources in the Planning Area fall into five basic categories: freeways, aircraft over flights, traffic from local streets, noise from railroad operations, and stationary sources. The predominant sources of noise in Beaumont are motor vehicles on roadways, mainly I-10 and SR-60, and trains on the Union Pacific railroad.

TRAFFIC NOISE

The principal noise source in Beaumont, as in most communities, is motor vehicles. The roadway system in the City includes a range of facilities: regional freeways, major highways, and other arterial, collector, and local streets. Regional freeways and highways in the City include I-10, SR-60, and State Route 79 (SR-79). Major roadways within Beaumont include 6th Street, Oak Valley Parkway/14th Street, Beaumont Avenue, Highland Springs Avenue, Brookside Avenue, and Potrero Boulevard.

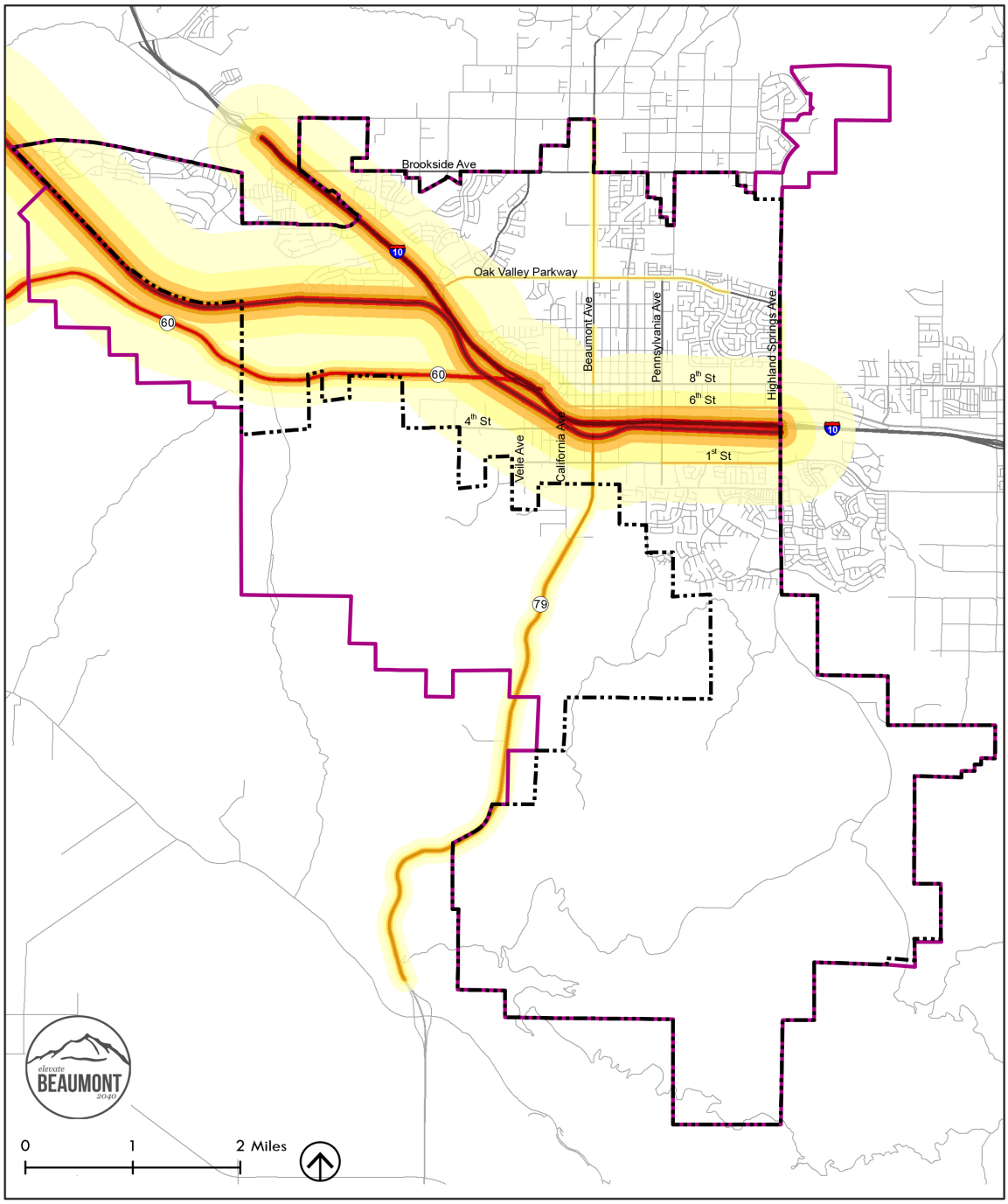
Noise generated by current traffic levels in Beaumont are shown in Figure 10-1. As shown, the I-10 which carries the most traffic through the City, and the Union Pacific railroad corridor are the greatest contributors to noise within the City. Other roadways in and around Beaumont that carry sufficient traffic to produce audible noise at a substantial distance include SR-60, SR-79, Beaumont Avenue, and Oak Valley Parkway.

Additionally, freight rail service along the Union Pacific Railroad lines located south of and parallel to Oak Valley Parkway and I-10 are also responsible for generating substantial noise levels. According to the Federal Railroad Administration, the Union Pacific Railroad carries up to 17 daytime trains (6 a.m. to 6 p.m.) and 17 nighttime trains (6 p.m. to 6 a.m.) on a daily basis (Federal Railroad Administration 2018b). The railroad is also a potential source of ground-borne vibration and noise.

In addition to roadway noise, air traffic periodically contributes to the noise environment. There are no airports in the City of Beaumont. However, the Banning Municipal Airport is located approximately five miles east of the City's eastern boundary. Therefore, aircraft noise may intermittently affect noise-sensitive receptors in the City, but noise levels will be outside of all identified 55 dBA, 60 dBA, and 65 dBA airport noise contours (City of Banning 2007).

Future development of noise-sensitive land uses, such as homes, schools, hospitals, and recreational areas, may be exposed to unacceptable noise levels if located near major noise generators. As Beaumont and the region grow, traffic on local roadways is expected to increase, raising noise levels and the ambient noise near roadways. Future traffic noise levels are shown in Figure 10.2. Predictions are based on estimated increases in traffic due to General Plan buildout projections.

Figure 10.1 Existing Noise Contours from Transportation



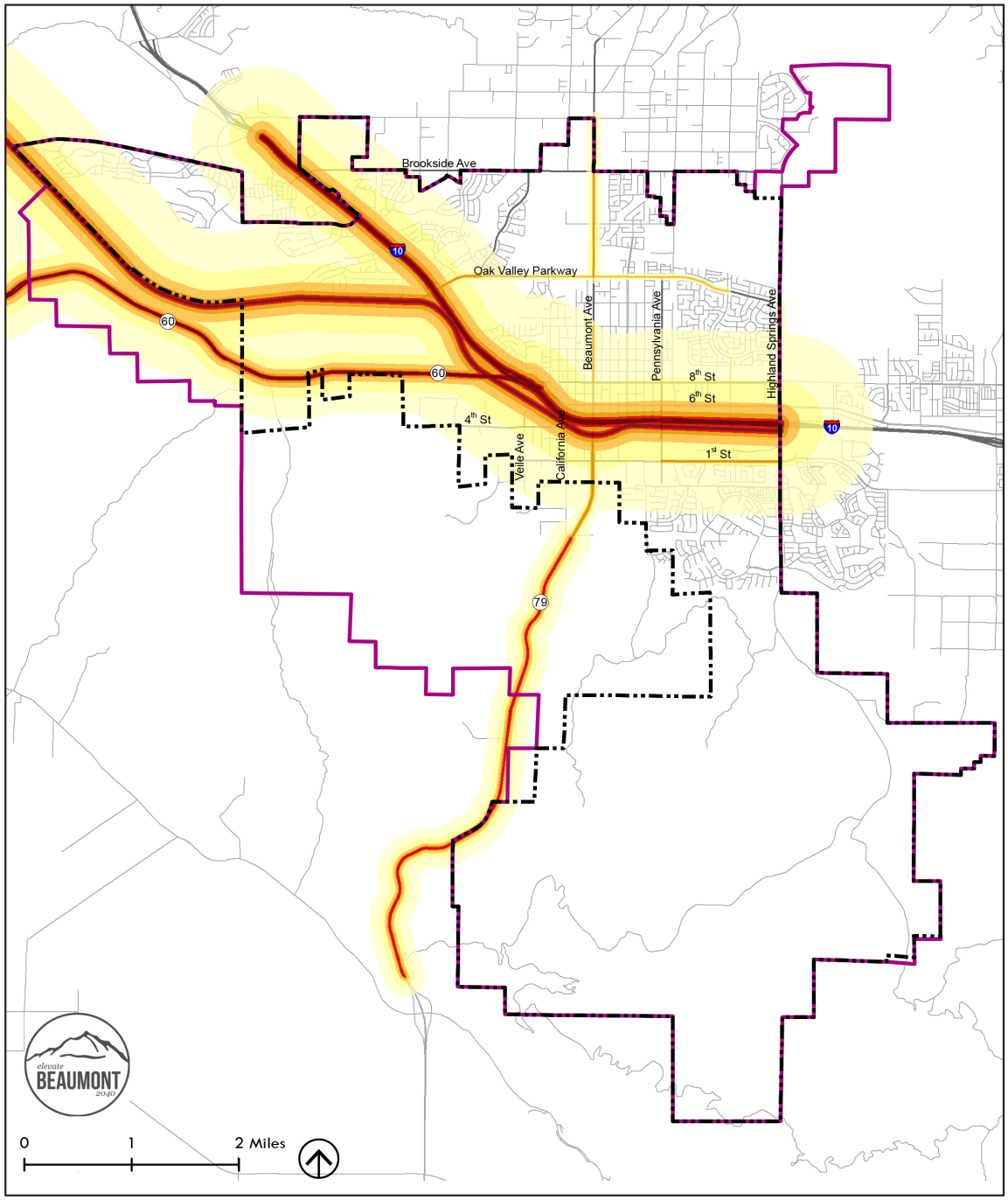
City of Beaumont General Plan Update, 2018 & Riverside County, 2017.

EXISTING NOISE CONTOURS

City Boundary
Sphere of Influence

60 dbA
65 dbA
70 dbA
75 dbA
80 dbA
85 dbA

Figure 10.2 Future Noise Contours from Transportation



City of Beaumont General Plan Update, 2018 & Riverside County, 2017.

FUTURE NOISE CONTOURS

City Boundary
Sphere of Influence

60 dbA
65 dbA
70 dbA
75 dbA
80 dbA
85 dbA

STATIONARY NOISE

Stationary noise generators in Beaumont include industrial operations, construction activities, special event noise, and commercial activities that include live music, and lawnmowers and leaf blowers, which can create substantial noise problems. Loading and materials transfer areas, outdoor materials warehousing operations, and other acoustically unscreened operations may also create issues of noise impact and use compatibility. Certain types of construction activities, such as pile driving, can be temporary but also significant sources of ground-borne vibration.

The operation of mechanical equipment is another important source of potentially significant noise. This category includes refrigerator units, chillers, and heating/air conditioner equipment associated with commercial centers. Noise from roof-mounted equipment is especially effective at penetrating into bordering neighborhoods and impacting sensitive receptors. The continual drone associated with fans and compressors can degrade the enjoyment of the outdoors and negatively affect the quality of life for nearby residents.

NOISE STANDARDS + LAND USE COMPATIBILITY

Noise is problematic when it disrupts or interrupts activities associated with a given land use. Uses that are most affected by noise include residences, schools, hospitals, religious meeting spaces, and recreation areas. Conflicts between noise sources and noise-sensitive land uses occur when noise-sensitive land uses are permitted in areas with high ambient noise levels. These conflicts can be avoided through consideration of noise sources and the future noise environment when making land use planning and development decisions. Table 10.1 presents ambient noise level standards by land use and time of day. Table 10.2 presents the maximum duration period for noise level exceeded permitted in residential zones.

Table 10.1 Noise Standards by Land Use

Land Use	Decibels	Time
Residential	45 db(A)	10:00 pm – 7:00 am
Residential	55 db(A)	7:00 am – 10:00 pm
Industrial and Commercial	50 db(A)	10:00 pm – 7:00 am
Industrial and Commercial	75 db(A)	7:00 am – 10:00 pm

Table 10.2 Maximum Residential Noise

Noise Level Exceeded	Decibels
5 db(A) above BANL	15 minutes any hour
10 db(A) above BANL	5 minutes any hour
15 db(A) above BANL	1 minute any hour
20 db(A) above BANL	Not permitted

CITY OF BEAUMONT MUNICIPAL CODE

The City of Beaumont Municipal Code (BMC) Chapter 9.02 establishes City-wide standards regulating noise for residential zones, public places, and motor vehicles. BMC Chapter 9.02.110 states that no construction activities may occur within one-quarter mile from an occupied residential dwelling between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September, and between the hours of 6:00 p.m. and 7:00 a.m. between the months of October through May, unless such activities are permitted under written consent of the City's Building Official.

The applicable base ambient noise level (BANL) for outdoor noise levels in residential areas is 55 dBA from 7:00 a.m. to 10:00 p.m., and 45 dBA from 10:00 p.m. to 7:00 a.m. The standard used for maximum outdoor noise levels in residential areas in California, and the City specifically, is a CNEL of 65 dBA.

The regulations and policies discussed above are intended to protect the community from excessive noise and vibration to ensure quality of life for residents and workers in the City. The City is responsible for the continued enforcement of federal, state, and local regulations pertaining to noise generation and impacts, and for implementing Noise Element policies and applicable regulations of the BMC to ensure continued protection of the community from excessive noise and vibration in future growth and development.

Switchfoot performing live in Beaumont during the Summer Concert Series.

GOALS + POLICIES

The following section includes goals and policies for the Noise Element. Goals and policies are followed by implementation actions.

Goal 10.1: A City where noise exposure is minimized for those living and working in the community.

Policies:

10.1.1 Protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment.

10.1.2 Adopt, maintain, and enforce planning guidelines that establish the acceptable noise standards identified in Table 10.1 and 10.2.

10.1.3 Protect noise-sensitive uses, such as residences, schools, health care facilities, hotels, libraries, parks and places of worship, from excessive noise levels through land use adjacency, building design, and noise ordinance enforcement.

10.1.4 Incorporate noise considerations into land use planning decisions. Require the inclusion of noise mitigation measures, as may be necessary to meet standards, in the design of new development projects in the City.

10.1.5 Require projects involving new development or modifications to existing development to implement measures, where necessary, to reduce noise levels to at least the normally compatible range. Design measures should focus on architectural features and building design and construction, rather than site design features, such as excessive setbacks, berms, and sound walls, to maintain compatibility with adjacent and surrounding uses.

10.1.6 Encourage reduction of stationary noise impacts from commercial and industrial land uses, activities, events, and businesses on noise-sensitive land uses.

10.1.7 Limit delivery or service hours for stores and businesses with loading areas, docks, or trash bins that front, side, border, or gain access on driveways next to residential and other noise sensitive areas, such as residences, schools, hospitals, religious meeting spaces, and recreation areas.

10.1.8 Promote the effective enforcement of Federal, State, and City noise standards by all appropriate City departments.

Goal 10.2: A City with minimal mobile source-generated noise levels.

Policies:

10.2.1 Work with Caltrans and the Federal Highway Administration to reduce noise impacts to sensitive receptors along I-10, SR-60 and SR-70.

10.2.2 Regulate traffic flow to enforce speed limits to reduce traffic noise. Periodically evaluate and enforce established truck and bus routes to avoid noise impacts on sensitive receptors.

10.2.3 Prohibit truck routes through neighborhoods with sensitive receptors, where feasible.

10.2.4 Reduce the impacts of roadway noise on noise-sensitive receptors where roadway noise exceeds the normally compatible range.

10.2.5 Require the use of traffic calming measures such as reduced speed limits or roadway design features to reduce noise levels where roadway noise exceeds the normally compatible range.

10.2.6 Encourage the use of noise-reducing paving materials, such as open-grade or rubberized asphalt, for public and private road surfacing projects in proximity to existing and proposed residential land uses.

10.2.7 Consider the noise effects of City purchases and or leases of vehicles and other noise generating equipment. Take reasonable and feasible actions to reduce the noise generated from City-owned or leased vehicles and equipment, where possible.

10.2.8 Ensure that noise and vibration from existing rail lines is considered during the land use planning and site development processes.

10.2.9 If Metrolink or other passenger rail service is initiated, work with the rail service providers to address noise and vibration considerations adjacent to the rail corridor.

IMPLEMENTATION

Table 10.3 Noise Programs

	DESCRIPTION	PRIORITY	TIME FRAME	RESPONSIBILITY
NOISE REGULATIONS				
N1	**Update the City's Noise Ordinance.** Provide development standards and project design guidelines that include a variety of mitigation measures that can be applied to meet City standards for projects exceeding the City's noise standards.	High	Short	Planning, Building and Safety
N2	**Requirement for Acoustical Studies.** Amend development application requirements so that projects that could result in noise environments above normally acceptable noise ranges or all new development complete acoustical studies prepared by qualified professionals to ensure that the noise levels are at acceptable levels, per the Municipal Code.	High	Short	Planning
N3	**Project Design Guidelines.** Integrate project design guidelines that integrate features into new developments that minimize impacts associated with the operation of air conditioning and heating equipment, on-site traffic, and use of parking, loading, and trash storage facilities.	High	Short	Planning
MOBILE NOISE SOURCES				
N4	**Freeway Noise Reduction.** Work collaboratively with Caltrans and the Federal Highway Administration to install measures that mitigate noise impacts along freeways.	Medium	Long	Public Works
N5	**Traffic Noise Assessment.** Periodically review and assess the sources of noise and vibration, strategies for mitigating impacts, and specific actions that can be applied.	High	Ongoing	Public Works
STATIONARY NOISE SOURCES				
N6	**Construction Noise Limits.** Review the hours of allowed construction activity to ensure they effectively lead to compliance within the limits (maximum noise levels, hours and days of allowed activity) established in the City's noise regulations.	High	Short	Planning, Building and Safety

	DESCRIPTION	PRIORITY	TIME FRAME	RESPONSIBILITY
N7	**Stationary Equipment.** Enforce requirements that all stationary construction equipment shall be operated with closed engine doors, equipped with properly operating and maintained mufflers, and placed so that emitted noise is directed away from the nearest sensitive receptors.	High	Short	Planning, Building and Safety, Code Enforcement
N8	**Equipment Staging Areas.** Require that equipment staging shall be in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors.	High	Short	Planning, Building and Safety
N9	**Additional Noise Attenuation Techniques.** Require that temporary sound barriers are installed and maintained between the construction site and the sensitive receptors during the clearing, earth moving, grading, and foundation/ conditioning phases of construction. Temporary sound barriers shall consist of sound blankets affixed to construction fencing along all sides of the construction site boundary facing potentially sensitive receptors.	High	Short	Planning
N10	**Vehicle and Equipment Idling.** Establish requirements that construction vehicles and equipment are not left idling for longer than five minutes when not in use.	High	Short	Planning, Building and Safety, Code Enforcement

Appendix B

Roadway Noise Calculations

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT:	Second Street Improvements	JOB #:	1515-2020-05
ROADWAY:	Second Street.	DATE:	8-Jun-21
LOCATION:	City of Beaumont	ENGINEER:	D. Shivaiah

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	25,000	
SPEED =	35	
PK HR % =	10	
NEAR LANE/FAR LANE DIST	62	
ROAD ELEVATION =	0.0	
GRADE =	0.0	%
PK HR VOL =	2,500	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		550
DIST C/L TO WALL =		550
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVER =		0
PAD ELEVATION =		0.0
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	10	
MEDIUM TRUCKS =	10	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	10	

WALL INFORMATION

HTH WALL=	0.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.736	0.136	0.102	0.9742
MEDIUM TRUCKS	0.009	0.000	0.009	0.0184
HEAVY TRUCKS	0.035	0.000	0.035	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	549.13	- -
MEDIUM TRUCKS	4.0	549.13	- -
HEAVY TRUCKS	8.0	549.13	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	57.8	55.6	54.3	48.3	56.7	57.4
MEDIUM TRUCKS	50.2	29.0	21.5	30.2	36.4	36.4
HEAVY TRUCKS	51.5	36.1	22.7	37.4	43.6	43.6
NOISE LEVELS (dBA)	59.3	55.7	54.3	48.7	57.0	57.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	57.8	55.6	54.3	48.3	56.7	57.4
MEDIUM TRUCKS	50.2	29.0	21.5	30.2	36.4	36.4
HEAVY TRUCKS	51.5	36.1	22.7	37.4	43.6	43.6
NOISE LEVELS (dBA)	59.3	55.7	54.3	48.7	57.0	57.6

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	31	99	314	992
LDN	27	87	274	865