



*An Employee-Owned Company*

April 15, 2025

Mr. John Stack  
VP, Development Manager  
Kingsbarn Realty Capital  
2500 Sand Hill Road, Suite 320  
Menlo Park, CA 94025

Reference: Noise Analysis for the Kingsbarn Escondido Project (RECON Number 10483)

Dear Mr. Stack:

The purpose of this report is to assess potential noise impacts from construction and operation of the Kingsbarn Project (project). Impacts are assessed in accordance with standards established in the City of Escondido General Plan (General Plan) and Escondido Municipal Code (Municipal Code).

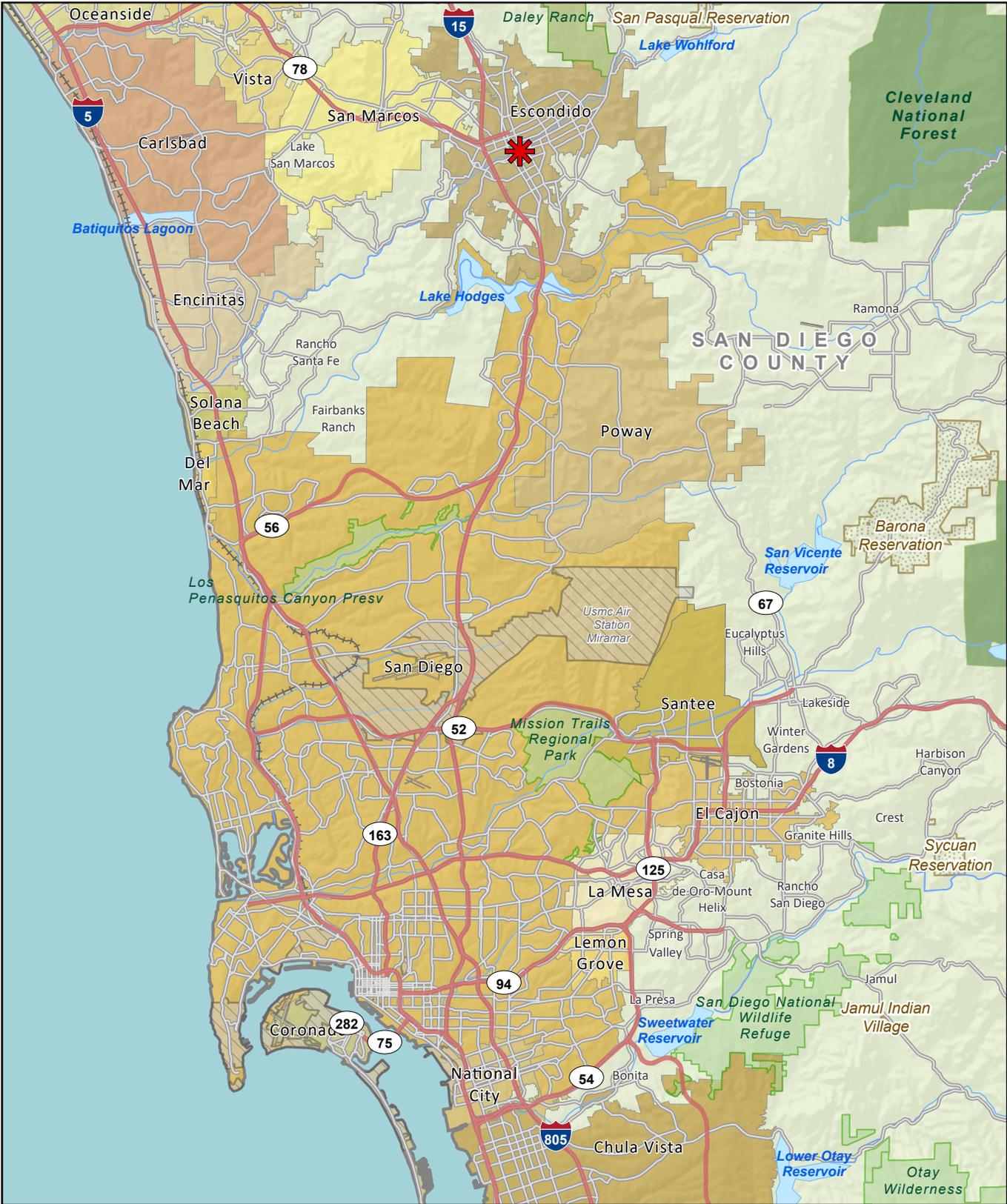
## 1.0 Introduction

### 1.1 Project Description

The project site is located at 137 West Valley Parkway in the city of Escondido, California (assessor parcel number 229-421-26-00). The 1.04-acre project site consists of a developed parking lot. Surrounding land uses include West Valley Parkway followed by Escondido City Hall to the north and northwest, commercial uses to the east, northeast, and southwest, John Paul the Great Catholic University to the south, and the Civic Center to the west. The regional location of the project site is shown in Figure 1 and an aerial photograph of the project site is shown in Figure 2.

The project would construct a 5-story, 128-unit multi-family residential building. The first level would consist of a parking and residential amenities including the lobby, offices, mailboxes, and bicycle parking. Level two would consist of 29 dwelling units and shared community spaces including a pool, barbeque/dining area, lounge, fitness center, co-working area, and lawn and game area. Levels three through five would consist of 33 dwelling units per each floor. Parking would consist of 114 total spaces including 5 accessible spaces, 1 van accessible space, 20 compact spaces, and 88 standard spaces. In addition, of the 114 spaces, 46 would be electric vehicle ready and 11 would be electric vehicle supply equipment spaces. The project would also include 8 short-term bicycle parking spaces and 8 long-term bicycle parking spaces. Grading would consist of excavating 1,400 cubic yards. Construction of the project is anticipated to take approximately 18 months. Figure 3a shows the proposed site plan and Figure 3b shows the second floor site plan with the proposed community spaces.

The project site's General Plan designation is Downtown Specific Plan. The Downtown Specific Plan is planned to accommodate up to 5,275 residential units. The project site is located within the Historic District of the Downtown Specific Plan which allows for 78 dwelling units (75 dwelling units per one acre). The project would include a Specific Plan Amendment to the Downtown Specific Plan to remove the ground-floor retail component and increase the allowed building height from 60 feet to 65 feet and the number of stories from 4 to 5. In addition, the project would utilize the City's Density Transfer Program to transfer 50 units to the project site from underutilized sites within the Downtown Specific Plan.



 Project Location



 Project Boundary

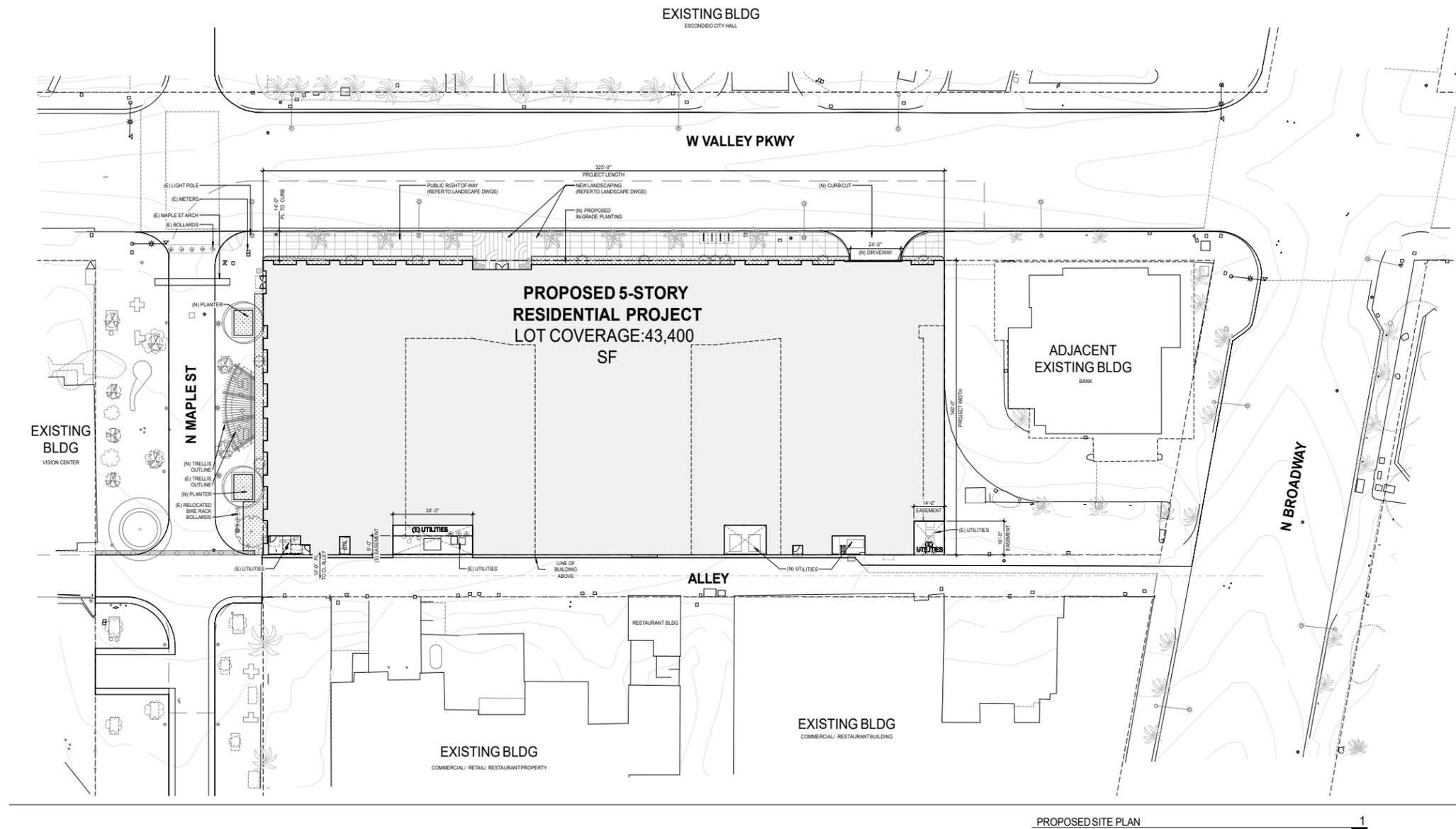
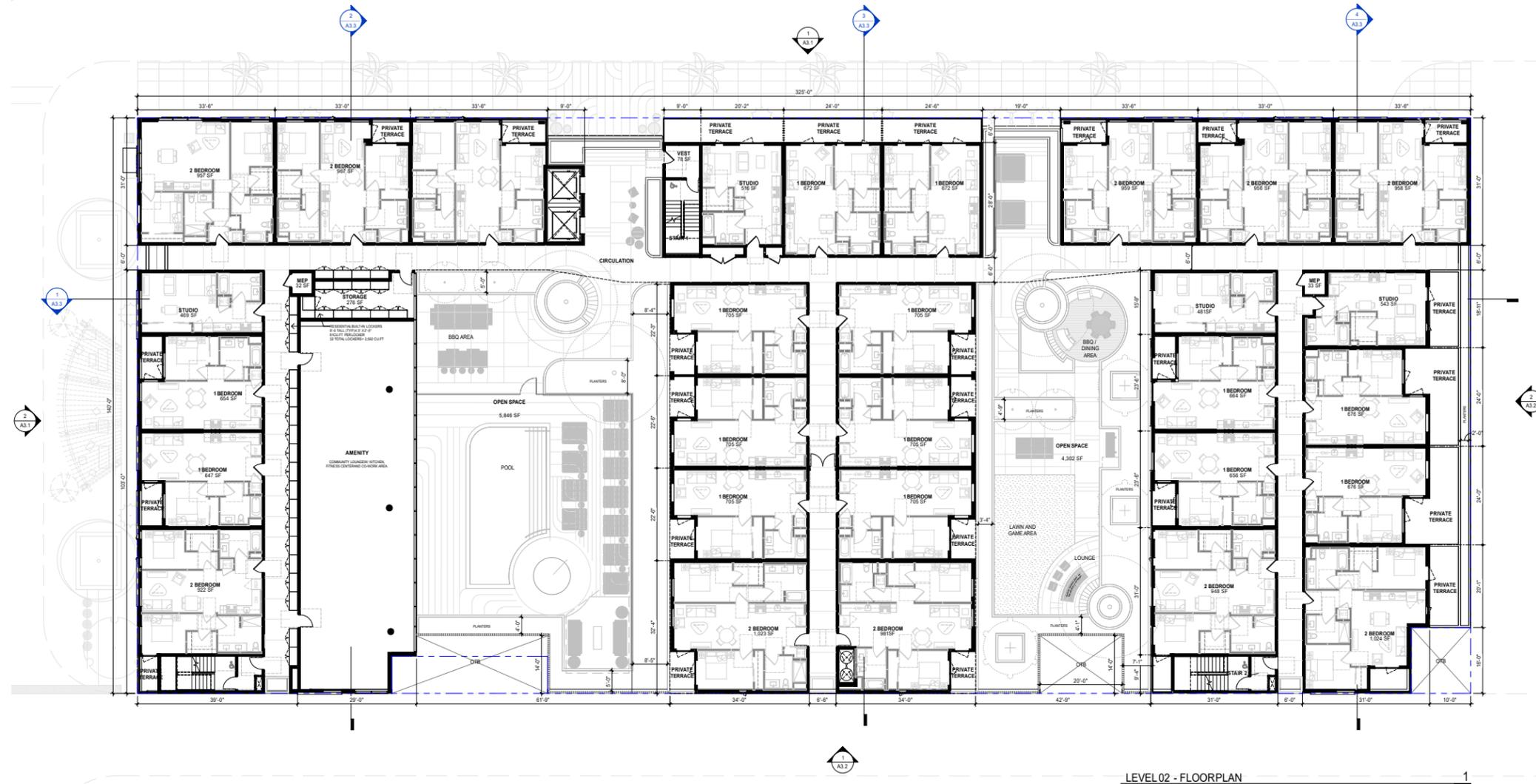


FIGURE 3a  
Site Plan



LEVEL 02 - FLOORPLAN

PLAN LEGEND

	NON-RATED WALL
	1-HR WALL
	2-HR WALL
	3-HR WALL
	4-HR WALL
	STRUCTURAL ELEMENT
	DOOR TAG
	WALL TAG
	WINDOW TAG
	STOREFRONT TAG
	KEYNOTE
	FIXTURE TAG
	REVISION TAG
	FIRE EXTINGUISHER CABINET

NOTES:  
 1. WALL LEGEND GRAPHICALLY DEPICTS FIRE RATING IN HOURS. REFER TO WALL TAGS FOR EXACT ASSEMBLY AS SEVERAL WALL TYPES HAVE THE SAME HOUR RATING.  
 2. ALL EXTERIOR WALLS SHALL COMPLY WITH CBC TABLE 601A.602 FOR THE FIRE-RESISTANT RATING REQUIREMENTS.  
 3. ALL OPENINGS SHALL COMPLY WITH CBC TABLE 716.1(2) & 716.1(3) FOR THE FIRE-RESISTANT RATING REQUIREMENTS.



## 1.2 Fundamentals of Noise

Sound levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease.

Additionally, in technical terms, sound levels are described as either a "sound power level" or a "sound pressure level," which while commonly confused are two distinct characteristics of sound. Both share the same unit of measure, the dB. However, sound power, expressed as  $L_{pw}$ , is the energy converted into sound by the source. The  $L_{pw}$  is used to estimate how far a noise will travel and to predict the sound levels at various distances from the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers such as an eardrum or microphone and is the sound pressure level. Noise measurement instruments only measure sound pressure, and noise level limits used in standards are generally sound pressure levels.

The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-scale, which approximates the frequency response of the average young ear when listening to most ordinary everyday sounds, was devised. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Therefore, the "A-weighted" noise scale is used for measurements and standards involving the human perception of noise. Noise levels using A-weighted measurements are designated with the notation dB(A). The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this study are the one-hour equivalent noise level ( $L_{eq}$ ), the community noise equivalent level (CNEL), and the day night equivalent level ( $L_{dn}$ ). The CNEL is a 24-hour equivalent sound level. The CNEL calculation applies an additional 5 dB(A) penalty to noise occurring during evening hours, between 7:00 p.m. and 10:00 p.m., and an additional 10 dB(A) penalty is added to noise occurring during the night, between 10:00 p.m. and 7:00 a.m. These increases for certain times are intended to account for the added sensitivity of humans to noise during the evening and night. Similar to the CNEL, the  $L_{dn}$  is a 24-hour equivalent level that applies an additional 10 dB(A) penalty to noise occurring during the night.

Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance.

Traffic noise is not a single, stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB(A) for each doubling of distance.

The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water) receives no additional ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dB(A) per doubling of distance. Thus, a point source over a soft site would attenuate at 7.5 dB(A) per doubling of distance.

Human perception of noise has no simple correlation with acoustical energy. A change in noise levels is generally perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise (California Department of Transportation 2013).

2.0 Applicable Standards

2.1 General Plan

The General Plan Community Protection Element establishes noise and land use compatibility standards and outlines goals and policies to achieve these standards. New projects in the City are required to meet the noise exposure compatibility guidelines listed in Table 1. As shown, multi-family land uses are “normally acceptable” with noise levels up to 65 CNEL, “conditionally acceptable” with noise levels from 60 to 70 CNEL, “normally unacceptable” with noise levels from 70 to 75 CNEL, and clearly unacceptable” with noise levels above 75 CNEL. These noise level standards are applied at multi-family recreation areas and are not normally applied to balconies or patios.

Table 1 Noise/Land Use Compatibility Guide						
	Community Noise Exposure (CNEL)					
	55	60	65	70	75	80
Residential – Single-family, Duplex, Mobile Home	Green	Green				
			Blue	Blue		
				Yellow		Red
Residential – Multi-Family, Residential Mixed Use	Green	Green	Green			
			Blue	Blue		
				Yellow		Red
Transient Lodging, Motels, Hotels	Green	Green	Green			
			Blue	Blue		
				Yellow	Yellow	Red
Schools, Libraries, Churches, Hospitals, Nursing Homes	Green	Green	Green			
			Blue	Blue		
				Yellow	Yellow	Red
Auditoriums, Concert Halls, Amphitheaters	Blue	Blue	Blue			
			Yellow	Yellow	Yellow	Yellow
Sports Arenas, Outdoor Spectator Sports	Blue	Blue	Blue			
				Yellow	Yellow	Yellow
Playgrounds, Parks	Green	Green	Green	Green		
				Yellow	Yellow	
					Red	Red
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Green	Green	Green	Green		
				Yellow	Yellow	
						Red
Office Buildings, Business Commercial, Professional	Green	Green	Green			
				Blue	Blue	
					Yellow	Yellow
Industrial, Manufacturing, Utilities, Agriculture	Green	Green	Green	Green		
				Blue	Blue	
						Yellow

Table 1 Noise/Land Use Compatibility Guide	
	<p><b>Normally Acceptable:</b>  Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.</p>
	<p><b>Conditionally Acceptable:</b>  New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will usually suffice.</p>
	<p><b>Normally Unacceptable:</b>  New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.</p>
	<p><b>Clearly Unacceptable:</b>  New construction or development should generally not be undertaken.</p>
<p>SOURCE: City of Escondido 2012.</p>	

The General Plan Community Protection Element also contains the following noise policies relevant to the project:

- Noise Policy 5.1: Require development to meet acceptable exterior noise level standards as established in Figure VI-2 [Table 1], and use the future noise contour map (FigureVI-17 [of the General Plan]) as a guide for evaluating the compatibility of new noise sensitive uses with projected noise levels.
- Noise Policy 5.2: Apply a CNEL of 60 dB or less for single-family uses and 65 dB CNEL or less for multifamily uses as goals where outdoor use is a major consideration (back yards and single-family housing developments, and recreation areas in multi-family housing developments), and recognize that such levels may not necessarily be achievable in all residential areas.
- Noise Policy 5.3: Require noise attenuation for outdoor spaces in all developments where projected incremental exterior noise levels exceed those shown in [Table 2, Exterior Incremental Noise Impact Standards for Noise-Sensitive Land Uses].

Table 2 Exterior Incremental Environmental Noise Impact Standards for Noise-Sensitive Uses			
Residences and Buildings Where People Normally Sleep <sup>1</sup>		Institutional Land Uses with Primarily Daytime and Evening Uses <sup>2</sup>	
Existing CNEL	Allowable Noise Increment [dB(A)]	Existing Peak Noise Level [dB(A) L <sub>eq</sub> ]	Allowable Noise Increment [dB(A)]
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

SOURCE: City of Escondido 2012.  
NOTE: Noise levels are measured at the property line of the noise-sensitive area.  
CNEL = community noise equivalent level; dB(A) = A-weighted decibel; L<sub>eq</sub> = average noise level  
<sup>1</sup>This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.  
<sup>2</sup>This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

- Noise Policy 5.4: Require noise attenuation for new noise-sensitive receptors, which include residential, daycare facilities, schools, churches, transient lodging, hotels, motels, hospitals, healthcare facilities, and libraries, if the projected interior noise standard of 45 CNEL is exceeded.
- Noise Policy 5.5 Require construction projects and new development to ensure acceptable vibration levels at nearby noise-sensitive uses based on Federal Transit Administrator criteria.
- Noise Policy 5.6: Require the preparation of noise studies, as deemed necessary by the Planning Department, to analyze potential noise impacts associated with new development which could significantly alter existing noise levels in accordance with provisions outlined in Figure VI-14 [of the General Plan].
- Noise Policy 5.7: Encourage use of site and building design, noise barriers, and construction methods as outlined in Figure VI-15 [of the General Plan] to minimize impacts on and from new development.
- Noise Policy 5.8: Require that mixed use and multi-family residential developments demonstrate that the design of the structure will adequately isolate noise between adjacent uses (orientation, window insulation, separation of common walls, floors, and ceilings, etc.).
- Noise Policy 5.9: Require new mixed use developments to locate loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noise sources away from the residential portion of the development, when physically feasible. Use construction standards to reduce noise between uses.
- Noise Policy 5.10: Require development projects that are subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

## 2.2 Municipal Code

### 2.2.1 Operation

Section 17-229 of the Municipal Code establishes property line noise level limits for on-site generated noise. These noise level limits are summarized in Table 3.

Table 3 Municipal Code Noise Level Limits		
Zone	Time	Applicable One-Hour Average Noise Level Limit [dB(A) $L_{eq}$ ]
Residential Zones	7:00 a.m. – 10:00 p.m.	50
	10:00 p.m. – 7:00 a.m.	45
Multi-Residential Zones	7:00 a.m. – 10:00 p.m.	55
	10:00 p.m. – 7:00 a.m.	50
Commercial Zones	7:00 a.m. – 10:00 p.m.	60
	10:00 p.m. – 7:00 a.m.	55
Light/Industrial/Industrial Park Zones	Anytime	70*
General Industrial Zones	Anytime	75*

SOURCE: Municipal Code Section 17-229.  
 dB(A) = A-weighted decibel;  $L_{eq}$  = average noise level  
 \*The sound level limit at a location on a boundary between two land use classifications is the limit applicable to the receiving land use; provided, however, that the one-hour average sound level limit applicable to extractive industries including but not limited to borrow pits and mines, shall be 75 decibels (dB) at the property line regardless of the zone where the extractive industry is actually located.  
 Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located.

### 2.2.2 Construction

Sections 17-234 and 17-238 of the Municipal Code establishes construction noise limits. It states:

**§17-234 Construction Equipment.** Except for emergency work, it shall be unlawful for any person, including the City of Escondido, to operate construction equipment as follows:

- a) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site, except on Monday through Friday during a week between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m., and provided that the operation of such construction equipment complies with the requirements of subsection (d) of this section.
- b) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site on Sundays and on days designated by the president, governor or city council as public holidays.
- c) A person may operate construction equipment at his/her residence or for the purpose of constructing or modifying a residence for himself/herself on Monday through Friday of a week between the hours of 7 a.m. and 6 p.m., and on Saturdays, Sundays, and holidays between the hours of 9 a.m. and 5 p.m.; provided, that

such operation of construction equipment is not carried on for profit or livelihood and complies with the requirements of subsection (d) of this section.

- d) No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of 75 dB at any time, unless a variance has been obtained in advance from the city manager.
- e) Persons engaged in construction for profit or as a business shall post signs at conspicuous places on a construction site, indicating hours of work as prescribed by this article or authorized by permit and the applicable noise level limits

**§17-238 Grading.**

- a) It shall be unlawful for any person, including the City of Escondido, to do any authorized grading at any construction site, except on Mondays through Fridays during a week between the hours of 7 a.m. and 6 p.m. and, provided a variance has been obtained in advance from the city manager, on Saturdays from 10 a.m. to 5 p.m.
- b) For the purpose of this section, "grading" shall include but not be limited to compacting, drilling, rock crushing or splitting, bulldozing, clearing, dredging, digging, filling and blasting.
- c) In addition, any equipment used for grading shall not be operated so as to cause noise in excess of a one hour sound level limit of 75 dB at any time when measured at or within the property lines of any property which is developed and used in whole or in part for residential purposes, unless a variance has been obtained in advance from the city manager.

**3.0 Existing Conditions**

Existing noise levels on and in the vicinity of the project site were measured on July 23, 2024, using one Larson-Davis Model LxT, Type 1 Integrating Sound Level Meter, serial number 3896. The following parameters were used:

Filter:	A-weighted
Response:	Slow
Interval Period	1 minute
Time History Period:	5 seconds

The meter was calibrated before measurements. The meter was set five feet above the ground level for each measurement. The weather was warm and sunny with a slight breeze during the measurement period.

Measurement 1 was located at the northern project boundary at the edge of the sidewalk, approximately 20 feet south of the edge of West Valley Parkway. The main source of noise was vehicle traffic on Valley Parkway. Secondary sources included activities and equipment at City Hall to the north. Traffic counts on southbound West Valley Parkway were conducted during the 15-minute measurement period. The average measured noise level was 68.7 dB(A)  $L_{eq}$ .

Measurement 2 was located at the western project boundary adjacent to Maple Street Plaza and approximately 110 feet south of the edge of Valley Parkway. The main source of noise was vehicle traffic on Valley Parkway. Secondary sources included pedestrian activities. Traffic counts on southbound West Valley Parkway were conducted during the 15-minute measurement period. The average measured noise level was 57.6 dB(A)  $L_{eq}$ .

Noise measurement results are summarized in Table 4 and traffic counts are provided in Table 5. The measurement locations are shown on Figure 4, and noise measurement data is provided in Attachment 1.

Table 4 Noise Measurement Summary				
Measurement	Location	Time	Measured Noise Level [dB(A) $L_{eq}$ ]	Main Noise Source
1	Northern project boundary	9:02 a.m. – 9:17 a.m.	68.7	Vehicle traffic on West Valley Parkway
2	Wesern proejct boundary	10:15 a.m. – 10:30 a.m.	57.6	Vehicle traffic on West Valley Parkway

dB(A)  $L_{eq}$  = A-weighted decibels one-hour equivalent noise level

Table 5 15-minute Traffic Counts							
Measurement	Roadway	Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
1	West Valley Parkway	Southbound	211	4	2	3	1
2	West Valley Parkway	Southbound	233	2	0	3	1

#### 4.0 Methodology

Noise level predictions and contour mapping were developed using noise modeling software, SoundPlan Essential, version 4.1 (Navcon Engineering 2018). SoundPLAN calculates noise propagation based on the International Organization for Standardization method (ISO 9613-2 – Acoustics, Attenuation of Sound during Propagation Outdoors). The model calculates noise levels at selected receiver locations using input parameter estimates such as total noise generated by each noise source; distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures. The model outputs can be developed as noise level contour maps or noise levels at specific receivers. In all cases, receivers were modeled at 5 feet above ground elevation, which represents the average height of the human ear.

#### 4.1 Construction Noise Analysis

Project construction noise would be generated by diesel engine-driven construction equipment used for demolition, site preparation and grading, building construction, loading, unloading, and placing materials and paving. Diesel engine-driven trucks also would bring materials to the site and remove the soils from excavation.

Construction equipment with a diesel engine typically generates maximum noise levels from 70 to 95 dB(A)  $L_{eq}$  at a distance of 50 feet (Federal Highway Administration [FHWA] 2006 and 2008; Federal Transit Authority 2006). During construction, equipment moves to different locations and goes through varying load cycles, and there are breaks for the operators and for non-equipment tasks, such as measurement. Table 6 summarizes typical construction equipment noise levels and duty cycles.

During excavation, grading, and paving operations, equipment moves to different locations and goes through varying load cycles, and there are breaks for the operators and for non-equipment tasks, such as measurement. Although maximum noise levels may be 70 to 95 dB(A) at a distance of 50 feet during most construction activities, hourly average noise levels from the grading phase of construction would be 82 dB(A)  $L_{eq}$  at 50 feet from the center of construction activity when assessing the loudest pieces of equipment—an excavator and loader—working simultaneously. Noise levels were modeled as an area source over the footprint of the project.



-  Project Boundary
-  Noise Measurement Location



Table 6 Typical Construction Equipment Noise Levels		
Equipment	Noise Level at 50 Feet [dB(A) $L_{eq}$ ]	Typical Duty Cycle
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Generator (25 kilovolt amps or less)	70	50%
Generator (more than 25 kilovolt amps)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
Impact Pile Driver (diesel or drop)	95	20%
In situ Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Roller	74	40%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%
Vibratory Pile Driver	95	20%

SOURCE: Federal Highway Administration 2006 and 2008; Federal Transit Authority 2006.  
dB(A)  $L_{eq}$  = A-weighted decibels average noise level

## 4.2 Traffic Noise Analysis

### 4.2.1 On-Site Noise Compatibility

The SoundPLAN program uses the FHWA Traffic Noise Model algorithms and reference levels to calculate traffic noise levels at selected receiver locations. The model uses various input parameters, such as projected hourly average traffic rates; vehicle mix, distribution, and speed; roadway lengths and gradients; distances between sources, barriers,

and receivers; and shielding provided by intervening terrain, barriers, and structures. Receivers, roadways, and barriers were input into the model using three-dimensional coordinates.

The main source of traffic noise at the project site is vehicle traffic on West Valley Parkway and secondary noise is vehicle traffic on Grand Avenue, Broadway, and Escondido Boulevard. For the purpose of the future traffic noise compatibility analysis, the noisiest condition is represented as the maximum level of service (LOS) C traffic volume. This condition represents a condition where the maximum number of vehicles are using the roadway at the maximum speed. LOS A and B categories allow full travel speed but do not have as many vehicles, while LOS E and F have a greater number of vehicles, but due to the traffic volume travel at reduced speeds, thus generating less noise. Roadway classifications and maximum LOS C volumes were obtained from the Environmental Impact Report (EIR) prepared for the City’s General Plan (City of Escondido 2012). It should be noted that the maximum LOS C volumes are greater than both the General Plan forecast volumes and the future year 2050 traffic projections provided by the San Diego Association of Governments (SANDAG) Transportation Forecast Information Center (SANDAG 2025). This is therefore a conservative analysis. Speeds were obtained from the SANDAG Transportation Forecast Information Center, and a standard vehicle classification mix of 93 percent automobiles, 3 percent medium trucks, 2 percent heavy trucks, 1 percent buses, and 1 percent motorcycles was modeled. Table 7 summarizes the modeled vehicle traffic parameters for the on-site compatibility analysis.

Table 7 Modeled Vehicle Traffic Parameters – On-Site Noise Compatibility								
Roadway	Classification	Maximum LOS C ADT	Vehicle Classification (percent)					Speed (mph)
			Automobiles	Medium Trucks	Heavy Trucks	Buses	Motorcycles	
West Valley Parkway	4-Lane Collector	30,400	93	3	2	1	1	35
Grand Avenue	4-Lane Collector	30,400	93	3	2	1	1	30
Broadway	4-Lane Major	32,900	93	3	2	1	1	35
Escondido Boulevard	4-Lane Collector	30,400	93	3	2	1	1	35

SOURCE: City of Escondido 2012, SANDAG 2025.  
LOS = level of service; ADT = average daily traffic; mph = miles per hour

#### 4.2.2 Off-Site Traffic Noise Increase

The project would contribute traffic to the local roadways. However, the project would not substantially alter the vehicle classifications mix on local or regional roadways, nor would the project alter the speed on an existing roadway or create a new roadway. Thus, the primary factor affecting off-site noise levels would be increased traffic volumes. While changes in noise levels would occur along any roadway where project-related traffic occurs, for noise assessment purposes, noise level increases are assumed to be greatest nearest the project site, as this location would represent the greatest concentration of project-related traffic. Based on the Local Mobility Analysis (LMA), the project would generate 6 weekday trips per unit for a total of 768 daily weekday trips (RICK 2025). The increase in off-site noise levels along West Valley Parkway were calculated using the FHWA RD-77-108 Traffic Noise Prediction Model and traffic volumes provided in the LMA prepared for the project (RICK 2025). Noise levels were modeled at 50 feet from the roadway centerline. Modeled traffic volumes without and with the project are summarized in Table 8.

Table 8 Modeled Vehicle Traffic Parameters – Off-Site Noise Increase				
Roadway	Traffic Volume (ADT)			Speed (mph)
	Existing	Near-Term	Near-Term + Project	
West Valley Parkway				
Broadway to Escondido Boulevard	15,522	16,657	16,886	35
Escondido Boulevard to Centre City Parkway	16,519	17,654	17,849	35
SOURCE: RICK 2025. ADT = average daily traffic; mph = miles per hour				

### 4.3 On-Site Noise Analysis

Operational noise sources on the project site are anticipated to be typical of any residential neighborhood, such as vehicles arriving and leaving, children at play, and landscape maintenance machinery. None of these noise sources associated with residential uses are anticipated to violate the Municipal Code or result in a substantial permanent increase in existing noise levels. The project would include heating, ventilation, and air conditioning (HVAC) units and boilers. Noise levels due to this mechanical equipment were modeled to determine if they have the potential to produce noise in excess of City limits.

The HVAC equipment for the residential units would be split unit condensers which were modeled on each private terrace. It is not known at this time which manufacturer, brand, or model of unit or units would be selected for use in the project. For the purposes of this analysis, to determine what general noise levels the residential HVAC units would generate, it was assumed that the HVAC units would be similar to a Trane unit with a sound power level of 72 dB(A) which is equivalent to a sound pressure level of approximately 40 dB(A)  $L_{eq}$  at 50 feet. The amenity space on the second floor would include two packaged HVAC units. The amenity space HVAC units were assumed to be similar to Carrier 7.5-ton units with a sound power level of 79 dB(A) each which is equivalent to a sound pressure level of approximately 47 dB(A)  $L_{eq}$  at 50 feet. The project would also include boilers in the ground-floor garage. The boiler was assumed to be similar to a 150 horsepower unit that generates a sound power level of 90.2 dB(A)  $L_{eq}$  which is equivalent to a sound pressure level of approximately 59 dB(A)  $L_{eq}$  at 50 feet. Noise specifications for the mechanical equipment are presented in Attachment 2. All HVAC units were modeled at full capacity during the daytime hours and 50 percent capacity during the nighttime hours. The boiler was modeled at full capacity during all hours.

### 5.0 Noise Impacts

#### 5.1 Construction Noise Analysis

Noise level limits for construction activities are established in Sections 17-234 and 17-238 of the Municipal Code. It states that no construction equipment shall exceed a one-hour average sound level limit of 75 dB(A)  $L_{eq}$ . In addition, Section 17-234 states that construction activities are only permitted between 7:00 a.m. and 6:00 p.m. Monday through Friday, and 9:00 a.m. and 5:00 p.m. on Saturdays. Section 17-238 states that grading activities are only permitted between 7:00 a.m. and 6:00 p.m. Monday through Friday, and provided a variance has been obtained in advance from the city manager, between 10:00 a.m. and 5:00 p.m. on Saturday.

The project site is bounded by commercial and institutional uses. The nearest sensitive land uses are the residential uses located approximately 450 feet northeast of the project site. Noise associated with the construction of the project was modeled at a series of 10 receivers located at the adjacent properties. The results are summarized in Table 9. Construction noise contours are shown in Figure 5. SoundPLAN data is contained in Attachment 3.



- Project Boundary
- Receivers

**Construction Noise**

- 60 dB(A)  $L_{eq}$
- 65 dB(A)  $L_{eq}$
- 70 dB(A)  $L_{eq}$
- 75 dB(A)  $L_{eq}$



FIGURE 5  
Construction Noise Contours

Table 9 Construction Noise Levels at Adjacent Receivers [dB(A) $L_{eq}$ ]		
Receiver	Land Use	Construction Noise Level
1	City Hall	69
2	City Hall	70
3	City Hall	68
4	Commercial	68
5	Commercial	68
6	Commercial	72
7	Commercial	75
8	Commercial	75
9	Commercial	69
10	Commercial	75
SOURCE: Attachment 3. dB(A) $L_{eq}$ = A-weighted decibels equivalent noise level.		

As shown in Table 9, construction noise levels are anticipated to range from 68 to 75 dB(A)  $L_{eq}$  at the adjacent properties. Although the existing adjacent uses would be exposed to construction noise levels that could be heard above ambient conditions, the exposure would be temporary. In accordance with Sections 17-234 and 17-238 of the Municipal Code, construction activities would not occur before 7:00 a.m. or after 6:00 p.m. on Mondays through Fridays, before 9:00 a.m. or after 5:00 p.m. on Saturdays, and would not occur any time on Sundays and holidays. As construction activities associated with the project would comply with requirements of the Municipal Code, impacts associated temporary increases in noise levels during construction would be less than significant.

## 5.2 Traffic Noise Analysis

### 5.2.1 On-site Noise Compatibility

Noise and land use compatibility is regulated by the Noise Element of the General Plan. Multi-family land uses are “normally acceptable” with noise levels up to 65 CNEL, “conditionally acceptable” with noise levels from 60 to 70 CNEL, “normally unacceptable” with noise levels from 70 to 75 CNEL, and clearly unacceptable” with noise levels above 75 CNEL. These noise level standards are applied at multi-family recreation areas and are not normally applied to balconies or patios.

Vehicle traffic noise level contours across the project site were calculated using SoundPLAN. These contours take into account shielding provided by the proposed buildings. Because the exterior use areas associated with the project are located on the second floor, noise contours were modeled at the second-floor elevation. Noise levels were also modeled at specific second-floor exterior use area receivers as well as at a series of first- through fifth-floor receivers located around the building façade. Vehicle traffic noise contours and receiver locations are shown in Figure 6. The results are summarized in Table 10. SoundPLAN data are provided in Attachment 4.

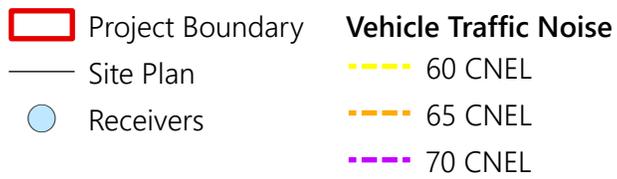
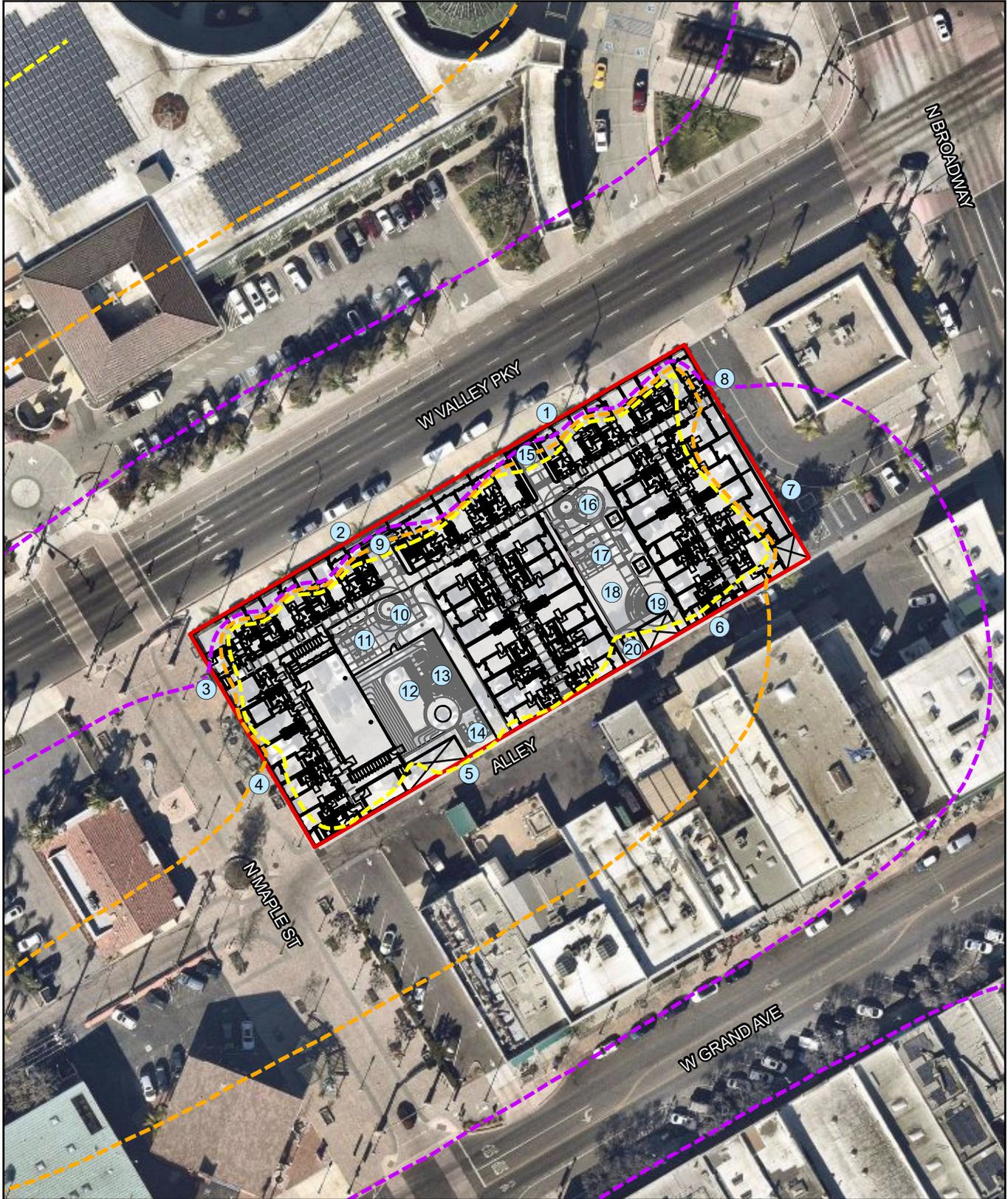


FIGURE 6  
Vehicle Traffic Noise Contours

Table 10 Vehicle Traffic Noise Levels (CNEL)						
Receiver	Location	1 <sup>st</sup> Floor	2 <sup>nd</sup> Floor	3 <sup>rd</sup> Floor	4 <sup>th</sup> Floor	5 <sup>th</sup> Floor
1	Northern Building Façade	75	74	73	72	71
2	Northern Building Façade	75	74	73	71	70
3	Western Building Façade	68	70	70	68	68
4	Western Building Façade	62	64	65	66	66
5	Southern Building Façade	59	60	61	62	63
6	Southern Building Façade	62	64	65	66	66
7	Eastern Building Façade	65	67	69	69	69
8	Eastern Building Façade	70	71	71	70	70
9	Seating Area	--	64	--	--	--
10	BBQ Area	--	53	--	--	--
11	BBQ Area	--	52	--	--	--
12	Pool	--	56	--	--	--
13	Pool	--	55	--	--	--
14	Pool	--	59	--	--	--
15	Seating Area	--	65	--	--	--
16	BBQ/Dining Area	--	51	--	--	--
17	Open Space	--	53	--	--	--
18	Lawn and Game Area	--	57	--	--	--
19	Lounge	--	58	--	--	--
20	Seating Area	--	61	--	--	--

SOURCE: Attachment 4.  
CNEL = community noise equivalent level

As discussed, the noise level standard of 65 CNEL is applied at the multi-family recreation areas. As shown in Table 10, exterior noise levels at the second-floor recreation areas (Receivers 9 through 20) would range from 52 to 65 CNEL. Noise levels would not exceed 65 CNEL and the project would be compatible with the City’s exterior noise level standards. Exterior noise impacts would be less than significant.

Interior noise levels can be reduced through standard construction techniques. When windows are closed, standard construction techniques provide various exterior-to-interior noise level reductions depending on the type of structure and window. According to the FHWA’s Highway Traffic Noise Analysis and Abatement Guidance, buildings with masonry façades and double-glazed windows can be estimated to provide a noise level reduction of 35 dB, while light-frame structures with double-glazed windows may provide noise level reductions of 20 to 25 dB (FHWA 2011).

The interior noise level standard for residential uses is 45 CNEL. As shown in Table 10, exterior noise levels at the building façade would be 75 CNEL or less. Because a standard 20 dB reduction provided by standard light-frame construction would not achieve interior noise levels of 45 CNEL or less, a more detailed evaluation of interior noise levels was conducted. The sound transmission class (STC) rating of windows, walls, and roofs is an integer value that rates how well a building component attenuates noise. The STC rating general reflects the decibel reduction that a building component can achieve. Because a noise reduction of up to 30 dB(A) is required to achieve interior noise levels of 45 CNEL or less, building components with an STC rating of up to 30 would be required. Standard walls and roofs typically have STC ratings greater than 40, and therefore would achieve the required noise reduction. In accordance with City General Plan Policy 5.4 (see Section 2.1), once floor plans and the locations of all window and door components are identified, a final interior noise assessment would be required prior to the issuance of building permits that identifies the exact building components necessary to reduce interior noise levels to the City’s standard of 45 CNEL. The preparation of an interior noise study and inclusion of identified window and door components shall

be a project condition of approval. Therefore, the project would not expose receivers to interior noise levels in excess of standards established in the General Plan, and impacts would be less than significant.

**5.2.2 Off-Site Vehicle Traffic Noise**

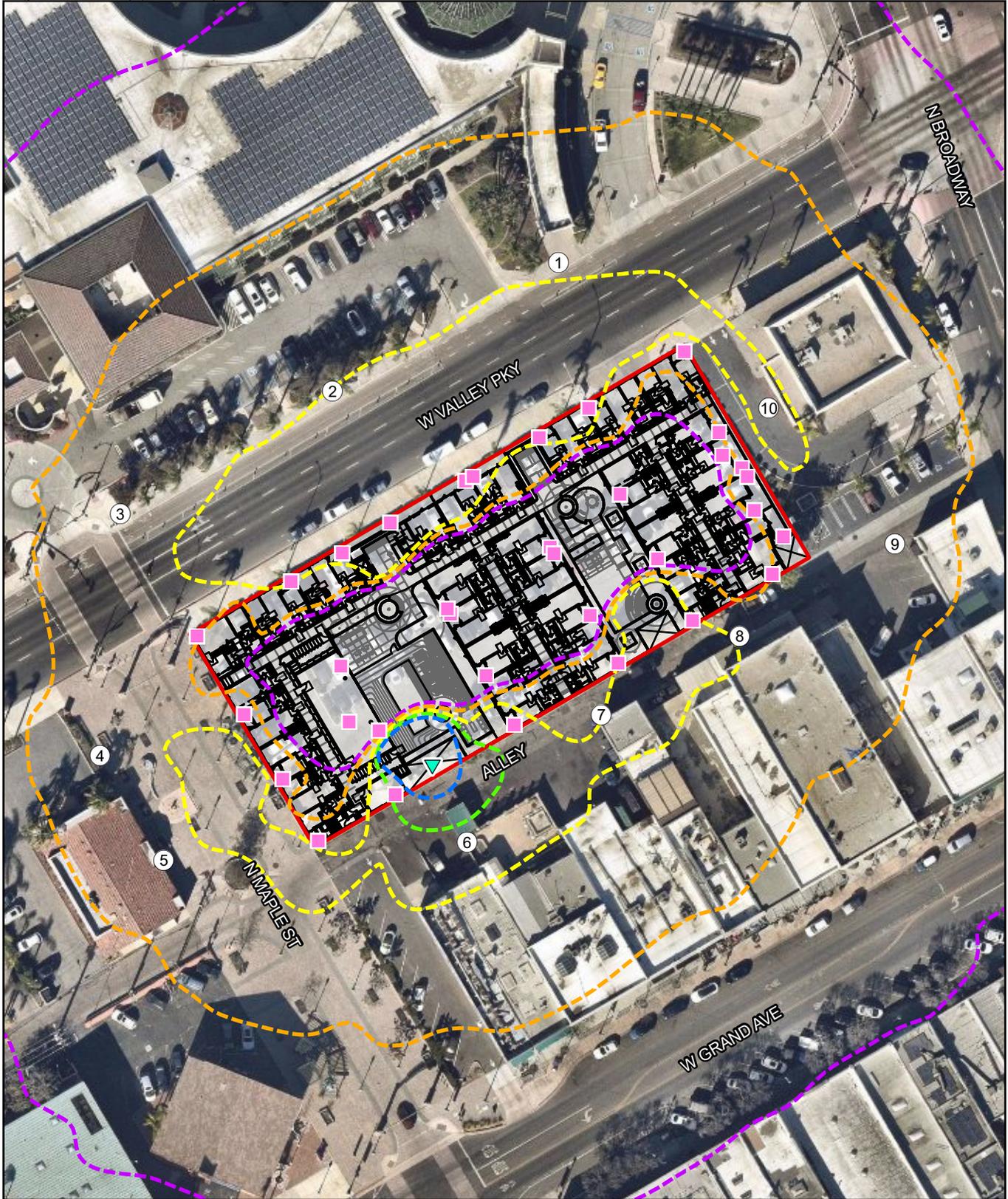
As discussed, the project would increase traffic on West Valley Parkway. The increase in off-site noise levels were calculated using the parameters summarized in Section 4.2.2. General Plan Noise Policy 5.3 requires noise attenuation for outdoor spaces in all developments where projected incremental exterior noise levels exceed those shown in Table 2 (see Section 2.1). The increase in off-site noise levels adjacent to West Valley Parkway are summarized in Table 11. Calculations are provided in Attachment 5.

Table 11 Off-Site Vehicle Traffic Noise Levels (CNEL)				
Roadway Segment	Existing CNEL	Near-Term CNEL	Near-Term + Project CNEL	Project Increase over Existing
West Valley Parkway				
Broadway to Escondido Boulevard	69.2	69.5	69.5	0.3
Escondido Boulevard to Centre City Parkway	69.4	69.7	69.8	0.4
SOURCE: Attachment 5. CNEL = community noise equivalent level				

As shown, the project would result in noise level increases of 0.4 dB or less. The project would not exceed the allowable noise level increases shown in Table 2. It should be noted that 3 dB is considered a barely perceptible change in noise levels; therefore, an increase of 0.4 dB or less would not be an audible change in noise levels. Operational roadway noise would not generate a substantial permanent increase in ambient noise levels for off-site noise sensitive land uses, and impacts would be less than significant.

**5.3 On-Site Noise Analysis**

The primary noise sources on-site would be HVAC equipment and boilers. Using the on-site noise source parameters discussed in Section 4.3, noise levels were modeled at a series of 10 receivers located at the adjacent uses. Modeled receivers and daytime and nighttime operational noise contours are shown in Figures 7a and 7b, respectively. Modeled data is included in Attachment 6. Operational noise levels are summarized in Table 12.

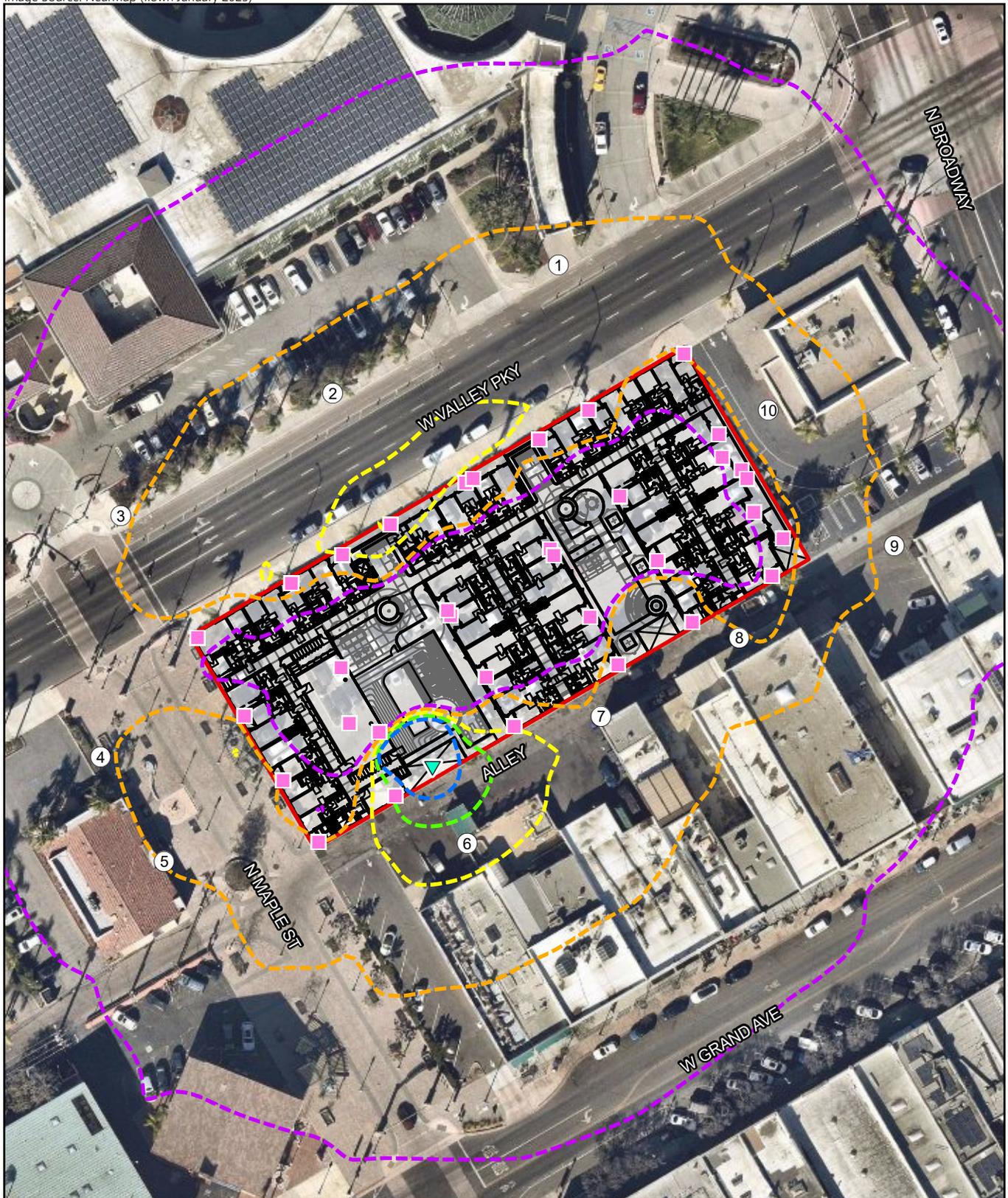


- Project Boundary
- Receivers
- Site Plan
- HVAC
- ▼ Boiler

- Daytime HVAC Noise**
- 40 dB(A)  $L_{eq}$
  - 45 dB(A)  $L_{eq}$
  - 50 dB(A)  $L_{eq}$
  - 55 dB(A)  $L_{eq}$
  - 60 dB(A)  $L_{eq}$



FIGURE 7a  
Daytime Operational  
Noise Contours



- Project Boundary
- Receivers
- Site Plan
- HVAC
- ▼ Boiler
- Nighttime HVAC Noise**
- 40 dB(A)  $L_{eq}$
- 45 dB(A)  $L_{eq}$
- 50 dB(A)  $L_{eq}$
- 55 dB(A)  $L_{eq}$
- 60 dB(A)  $L_{eq}$



FIGURE 7b  
Nighttime Operational  
Noise Contours

Table 12 Operational Noise Levels at Adjacent Receivers [dB(A) L <sub>eq</sub> ]			
Receiver	Land Use	HVAC Noise Level	
		Daytime	Nighttime
1	City Hall	49	46
2	City Hall	50	47
3	City Hall	48	45
4	Commercial	48	45
5	Commercial	48	45
6	Commercial	53	52
7	Commercial	49	47
8	Commercial	48	45
9	Commercial	47	44
10	Commercial	51	48

SOURCE: Attachment 6.  
 dB(A) L<sub>eq</sub> = A-weighted decibels equivalent noise level; HVAC = heating, ventilation, and air conditioning

As shown, daytime operational noise levels would range from 47 to 53 dB(A) L<sub>eq</sub> at the adjacent property lines and nighttime noise levels would range from 44 to 52 dB(A) L<sub>eq</sub>. Noise levels would not exceed the City’s daytime and nighttime commercial noise level limits of 60 and 55 dB(A) L<sub>eq</sub>, respectively (see Table 3). Therefore, operational noise would not generate a substantial permanent increase in ambient noise levels in excess of limits established in the Municipal Code, and impacts would be less than significant.

## 6.0 Conclusions

Noise impacts due to construction and operation of the project were assessed in accordance with standards established in the General Plan Noise Element and the Municipal Code. As discussed in this analysis, construction noise levels are anticipated to range from 68 to 75 dB(A) L<sub>eq</sub> at the adjacent properties. Although the existing adjacent uses would be exposed to construction noise levels that could be heard above ambient conditions, the exposure would be temporary. As construction activities associated with the project would comply with requirements of the Municipal Code, impacts associated with temporary increases in noise levels during construction would be less than significant.

The noise level standard of 65 CNEL is applied at the multi-family recreation areas. As shown in Table 10, exterior noise levels at the recreation areas would not exceed 65 CNEL and the project would be compatible with the City’s exterior noise level standards. Exterior noise impacts would be less than significant. The interior noise level standard for residential uses is 45 CNEL. As shown in Table 10, exterior noise levels at the building façade would be 75 CNEL or less. Because an exterior-to-interior noise level reduction of up to 30 dB is required to achieve the interior noise level standard of 45 CNEL, it is estimated that window and door components with an STC of 30 or greater would be required. In accordance with City General Plan Policy 5.4 (see Section 2.1), once floor plans and the locations of all window and door components are identified, a final interior noise assessment would be required prior to the issuance of building permits that identifies the exact building components necessary to reduce interior noise levels to the City’s standard of 45 CNEL. The preparation of an interior noise study and inclusion of identified window and door components shall be a project condition of approval. Therefore, the project would not expose receivers to interior noise levels in excess of standards established in the General Plan, and impacts would be less than significant.

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The project would contribute traffic to the local roadways. As calculated in this analysis, the project would result in noise level increases of 0.4 dB or less, which would not be an audible change in noise levels. Operational roadway noise would not generate a substantial permanent increase in ambient noise levels for off-site noise sensitive land uses, and impacts would be less than significant.

Daytime operational noise levels would range from 47 to 53 dB(A)  $L_{eq}$  at the adjacent property lines and nighttime noise levels would range from 44 to 52 dB(A)  $L_{eq}$ . Noise levels would not exceed the City's daytime and nighttime commercial noise level limits of 60 and 55 dB(A)  $L_{eq}$ , respectively. Therefore, operational noise would not generate a substantial permanent increase in ambient noise levels in excess of limits established in the Municipal Code, and impacts would be less than significant.

If you have any questions about the results of this analysis, please contact me at [jfleming@reconenvironmental.com](mailto:jfleming@reconenvironmental.com) or (619) 308-9333 extension 177.

Sincerely,



Jessica Fleming  
Senior Noise Analyst

JLF:sh

Attachments

## 7.0 References Cited

California Department of Transportation (Caltrans)  
2013 Technical Noise Supplement. November.

Escondido, City of  
2012 City of Escondido General Plan. Resolution 2012-52. May.

Federal Highway Administration (FHWA)  
2006 Roadway Construction Noise Model User's Guide. FHWA-HEP-05-054, SOT-VNTSC-FHWA-05-01. Final Report. January.

2008 Roadway Construction Noise Mode, V1.1. Washington, DC.

2011 Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025. December.

Federal Transit Administration (FTA)  
2006 Transit Noise and Vibration Impact Assessment. Washington, DC. May.

Navcon Engineering, Inc.  
2018 SoundPLAN Essential version 4.1.

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RICK

2025 Aspire Escondido Local Mobility Analysis (LMA). Prepared for Kingsbarn Real Estate Capital. Job No. 20040.-A. February 3.

San Diego Association of Governments (SANDAG)

2025 Transportation Forecast Information Center. ABM2+/2021 RP Traffic Volumes. Accessed March 28.

## ATTACHMENTS

# ATTACHMENT 1

Noise Measurement Data

**Summary**

File Name on Meter	LxT_Data.021.s
File Name on PC	LxT_0003896-20240723 090144-LxT_Data.021.ldbin
Serial Number	0003896
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

**Measurement**

Description	
Start	2024-07-23 09:01:44
Stop	2024-07-23 09:17:00
Duration	00:15:15.5
Run Time	00:15:15.5
Pause	00:00:00.0
Pre-Calibration	2024-07-23 08:54:34
Post-Calibration	None
Calibration Deviation	---

**Overall Settings**

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Linear		
Overload	144.2 dB		
	A	C	Z
Under Range Peak	100.1	97.1	102.1 dB
Under Range Limit	37.4	37.0	44.1 dB
Noise Floor	28.2	27.9	34.9 dB
	First	Second	Third

**Instrument Identification**

**Results**

LAeq	68.7 dB	
LAE	98.3 dB	
EA	754.077 µPa²h	
EA8	23.722 mPa²h	
EA40	118.610 mPa²h	
LApk (max)	2024-07-23 09:09:08	107.0 dB
LASmax	2024-07-23 09:09:08	87.9 dB
LASmin	2024-07-23 09:02:27	48.2 dB
SEA	-99.9 dB	

	Exceedance Counts	Duration
LAS > 60.0 dB	21	666.6 s
LAS > 70.0 dB	24	175.0 s
LApk > 135.0 dB	0	0.0 s
LApk > 137.0 dB	0	0.0 s
LApk > 140.0 dB	0	0.0 s

LCeq	76.2 dB
LAeq	68.7 dB
LCeq - LAeq	7.5 dB
LALeq	70.6 dB
LAeq	68.7 dB
LALeq - LAeq	1.9 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	68.7		76.2			
LS(max)	87.9	2024/07/23 9:09:08				
LS(min)	48.2	2024/07/23 9:02:27				
Lpk(max)	107.0	2024/07/23 9:09:08				

Overload Count	0
Overload Duration	0.0 s

**Dose Settings**

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

**Results**

Dose	-99.94	0.01 %
Projected Dose	-99.94	0.43 %
TWA (Projected)	-99.9	50.7 dB
TWA (t)	-99.9	25.8 dB
Lep (t)	53.7	53.7 dB

**Ln Percentiles**

LA 5.00	72.8 dB
LA 10.00	71.2 dB
LA 33.30	66.3 dB
LA 50.00	63.4 dB
LA 66.60	59.9 dB
LA 90.00	55.3 dB

**Summary**

File Name on Meter	LxT_Data.023.s
File Name on PC	LxT_0003896-20240723 101448-LxT_Data.023.ldbin
Serial Number	0003896
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

**Measurement**

Description	
Start	2024-07-23 10:14:48
Stop	2024-07-23 10:30:10
Duration	00:15:22.0
Run Time	00:15:22.0
Pause	00:00:00.0
Pre-Calibration	2024-07-23 10:14:32
Post-Calibration	None
Calibration Deviation	---

**Overall Settings**

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Linear		
Overload	144.2 dB		
	A	C	Z
Under Range Peak	100.2	97.2	102.2 dB
Under Range Limit	37.4	37.1	44.1 dB
Noise Floor	28.3	27.9	35.0 dB
	First	Second	Third

Instrument Identification

**Results**

LAeq	57.6 dB	
LAE	87.2 dB	
EA	58.951 µPa²h	
EA8	1.841 mPa²h	
EA40	9.207 mPa²h	
LApk (max)	2024-07-23 10:20:32	93.8 dB
LASmax	2024-07-23 10:20:32	74.5 dB
LASmin	2024-07-23 10:25:17	45.9 dB
SEA	-99.9 dB	

	Exceedance Counts	Duration
LAS > 60.0 dB	30	192.3 s
LAS > 70.0 dB	1	3.2 s
LApk > 135.0 dB	0	0.0 s
LApk > 137.0 dB	0	0.0 s
LApk > 140.0 dB	0	0.0 s

LCeq	70.1 dB
LAeq	57.6 dB
LCeq - LAeq	12.5 dB
LALeq	60.4 dB
LAeq	57.6 dB
LALeq - LAeq	2.8 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	57.6		70.1			
LS(max)	74.5	2024/07/23 10:20:32				
LS(min)	45.9	2024/07/23 10:25:17				
Lpk(max)	93.8	2024/07/23 10:20:32				

Overload Count	0
Overload Duration	0.0 s

**Dose Settings**

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

**Results**

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	42.7	42.7 dB

**Ln Percentiles**

LA 5.00	62.5 dB
LA 10.00	61.3 dB
LA 33.30	57.2 dB
LA 50.00	54.7 dB
LA 66.60	52.4 dB
LA 90.00	50.0 dB

## ATTACHMENT 2

### Mechanical Equipment Specifications



## Fan Performance

**Table 6. Standard motor & low static drive accessory sheave/fan speed (rpm)**

Tons	Unit Model Number	Fan Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Closed
5	WSC060ED	AK44x3/4"	N/A	720	791	861	931	1002	1072
6	WSC072ED	AK56x1"	N/A	558	612	665	718	772	825
7½	WSC090ED	AK57x1"	N/A	688	737	787	837	887	N/A
10	WSC120ED	AK105X1"	N/A	724	776	828	880	932	984

Note: Factory set at 3 turns open.

**Table 7. Standard motor & high static drive accessory sheave/fan speed (rpm)**

Tons	Unit Model Number	Fan Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Closed
6	WSC072ED	AK56x1"	N/A	968	1018	1068	1118	1169	1219
7½	WSC090ED	AK57x1"	1053	1091	1129	1166	1204	1242	N/A
10	WSC120ED	AK105X1"	1110	1159	1209	1258	1308	1357	N/A

Note: Factory set at 3 turns open.

**Table 8. Oversized motor & high static drive accessory sheave/fan speed (rpm)**

Tons	Unit Model Number	Fan Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Closed
7½	WSC090ED	AK85x1"	1186	1249	1311	1373	1436	N/A	N/A

Note: Factory set at 3 turns open.

**Table 9. Outdoor sound power level—dB (ref. 10—2 W)**

Tons	Unit Model Number	Octave Center Frequency								Overall dBA
		63	125	250	500	1000	2000	4000	8000	
5	T/YSC060ED	84	91	79	77	74	71	68	63	80
6	T/YSC072ED	83	90	86	82	79	75	70	63	85
7½	T/YSC090ED	83	90	86	83	80	75	71	64	85
8.5	T/YSC102ED	83	89	84	81	77	72	69	62	83
10	T/YSC120ED	83	86	80	77	73	69	66	60	79

Note: Tests follow ARI270-95.

**Table 10. Outdoor sound power level—dB (ref. 10—12 W)**

Tons	Unit Model Number	Octave Center Frequency								Overall dBA
		63	125	250	500	1000	2000	4000	8000	
5	WSC060ED	84	91	79	77	74	71	68	63	80
6	WSC072ED	83	90	86	82	79	75	70	63	85
7½	WSC090ED	83	90	86	83	80	75	71	64	85
10	WSC120ED	83	86	80	77	73	69	66	60	79

Note: Tests follow ARI270-95.

## ELECTRICAL DATA

38HDR UNIT SIZE	V-PH-Hz	VOLTAGE RANGE*		COMPRESSOR		OUTDOOR FAN MOTOR			MIN CKT AMPS	FUSE/CKT BKR AMPS
		Min	Max	RLA	LRA	FLA	NEC Hp	kW Out		
018-31	208/230-1-60	187	253	9.0	48.0	0.8	0.125	0.09	12.1	20
024-32	208/230-1-60	187	253	13.5	58.3	0.8	0.125	0.09	17.7	25
030-31	208/230-1-60	187	253	14.1	73.0	1.5	0.250	0.19	19.1	30
036-31	208/230-1-60	187	253	14.1	77.0	1.5	0.250	0.19	19.1	30
	208/230-3-60	187	253	9.2	71.0	1.5	0.250	0.19	13.0	20
	460-3-60	414	506	5.6	38.0	0.8	0.250	0.19	7.9	10
048-32	208/230-1-60	187	253	19.9	109.0	1.5	0.250	0.19	26.4	40
	208/230-3-60	187	253	13.1	83.1	1.5	0.250	0.19	17.9	25
	460-3-60	414	506	6.1	41.0	0.8	0.250	0.19	8.4	15
060-32	208/230-1-60	187	253	26.4	134.0	1.5	0.250	0.19	34.5	60
	208/230-3-60	187	253	16.0	110.0	1.5	0.250	0.19	21.5	30
	460-3-60	414	506	7.8	52.0	0.8	0.250	0.19	10.6	15

\* Permissible limits of the voltage range at which the unit will operate satisfactorily

FLA – Full Load Amps

HACR – Heating, Air Conditioning, Refrigeration

LRA – Locked Rotor Amps

NEC – National Electrical Code

RLA – Rated Load Amps (compressor)

NOTE: Control circuit is 24-V on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

Complies with 2007 requirements of ASHRAE Standards 90.1

38HDR

## A-WEIGHTED SOUND POWER (dBA)

Unit Size	Standard Rating (dBA)	Typical Octave Band Spectrum ( dBA ) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
018-31	68	52.0	57.5	60.5	63.5	60.5	57.5	46.5
024-32	69	57.5	61.5	63.0	61.0	60.0	56.0	45.0
030-31	72	56.5	63.0	65.0	66.0	64.0	62.5	57.0
036-31	72	65.0	61.5	63.5	65.0	64.5	61.0	54.5
048-32	72	58.5	61.0	64.0	67.5	66.0	64.0	57.0
060-32	72	63.0	61.5	64.0	66.5	66.0	64.5	55.5

NOTE: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI).

## CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE-VOLTAGE, SERIES	REQUIRED SUBCOOLING °F (°C)
018-31	12 (6.7)
024-32	12 (6.7)
030-31	12 (6.7)
036-31	12 (6.7)
048-32	12 (6.7)
060-32	12 (6.7)



## Product Data

# WeatherMaker® Single Packaged Rooftop

7.5 to 15 Nominal Tons

ecoblue™  technology



48/50FC\*\*08, 09, 12, 14, 16

48FC: Single-Package Gas Heating/Electric Cooling Rooftop Units  
50FC: Electric Cooling Rooftop Units with Optional Electric Heat  
with Puron® Refrigerant (R-410A) and EcoBlue Technology

**The New Carrier WeatherMaker® rooftop units (RTU) with EcoBlue™ Technology were designed by customers with integrated new technology to provide value added benefits never seen in this type of equipment before.**

New major design features include:

- Patented, industry’s first efficient indoor fan system using Vane Axial fan with electric commutated variable speed motor. As compared to today’s typically used belt drive with forward curve fans, system provides reliable operation with:
  - 75% fewer moving parts
  - No fan belts, pulleys, shaft, and shaft bearings
  - 40% more efficient than traditional belt drive forward curve fans
  - Slow ramp up capability for better sound and comfort control
  - Internal protection from phase reversal and phase loss situations
  - High external static capability
  - Slide out blower assembly design
- Reliable and highly safety protected 2 stage cooling with tandem scroll compressors technology, fully active evaporator coil, and mixed air temperature protection on all models
- New unit control board with intuitive indoor fan that uses simple dial and switch adjustments
- Reliable copper tube/aluminum fin condenser coil with 5/16 in. tubing to help reduce refrigerant charge and reduce weight versus prior designs

48/50FC WeatherMaker® units up to 15 tons are specifically designed to fit on Carrier roof curbs that were installed back to 1989, which makes replacement easy and eliminates the need for curb adapters, changing utility connections or supporting curb overhang situations.

2 speed staged air volume (SAV) indoor fan speed control helps deliver IEERs up to 15.0. All models are capable of either vertical or horizontal airflow without dedicated models or field install kits. The 16 size models require a field installed supply air kit.

With “no-strip” screw collars, handled access panels, and more, the unit is easy to install, easy to maintain, and easy to use. Your new 7.5 to 15 ton Carrier WeatherMaker rooftop unit (RTU) provides optimum comfort and control from a packaged rooftop.

Value-added features include:

- optional Humidi-MiZer® adaptive dehumidification system for improved part load humidity performance
- SystemVu™ intuitive intelligent controls option that provides:
  - Large full text — multi line display
  - USB Flash Port for data transfer
  - Built in iVu®, CCN and BACnet<sup>1</sup>
  - Read refrigerant pressures from display – no gauges
  - Quick LED Status — Run, Alert, Fault
  - Conventional thermostat or sensor capabilities
  - Historical component runtime and starts

1. BACnet is a trademark of ASHARE.

- Supply air tempering
- Navigator™ and Network Service Tool compatible
- single point gas and electrical connections
- 7.5 to 15 ton models use fixed TXV refrigerant metering devices
- Scroll compressors with internal line-break overload protection
- Units come with an easy access tool-less filter door. Filter track tilts out for filter removal and replacement. All filters are the same size in each unit

### Installation ease

All WeatherMaker units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected job-site complications. Lighter units make for easy replacement and aid in the structural approval process. Units have simple, fast plug-in connections to the standard integrated unit control board (UCB). Clearly labeled connections points to reduce installation time. Also, a large control box provides room to work and room to mount Carrier accessory controls.

### Easy to maintain

With the new EcoBlue Vane Axial fan system and direct drive ECM motor, there is no longer a need to adjust or replace belts or pulleys as in past designs. This frees up maintenance, installation and commissioning time.

Easy access handles by Carrier provide quick and easy access to all normally serviced components. Our “no-strip” screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit’s metal.

Sloped, corrosion resistant composite drain pan sheds water; and won’t rust.

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## Easy to use

The newly re-designed Unit Control Board by Carrier puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement. Carrier rooftops have high and low pressure switches, a new mixed air temperature switch, a filter drier, and 2-in. filters standard.

## EcoBlue™ Technology

Direct drive EcoBlue Technology indoor fan system uses Vane Axial fan design and electrically commutated motors.

This new Vane Axial design over past belt drive systems has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft. Full fan and motor assembly

also slides out for easier maintenance and service.

## Streamlined control and integration

Carrier controllers make connecting WeatherMaker® rooftops into existing building automation systems easy. The units are compatible with conventional thermostat controls or SystemVu™ controls for greater comfort, diagnostics and building network integration.

## Operating efficiency and flexibility

These 48/50FC packaged rooftops meet the Department of Energy (DOE) 2023 efficiency standard, as well as the latest ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 and IECC<sup>1</sup> (International Energy Conservation Code) minimum IEER efficiency requirements.

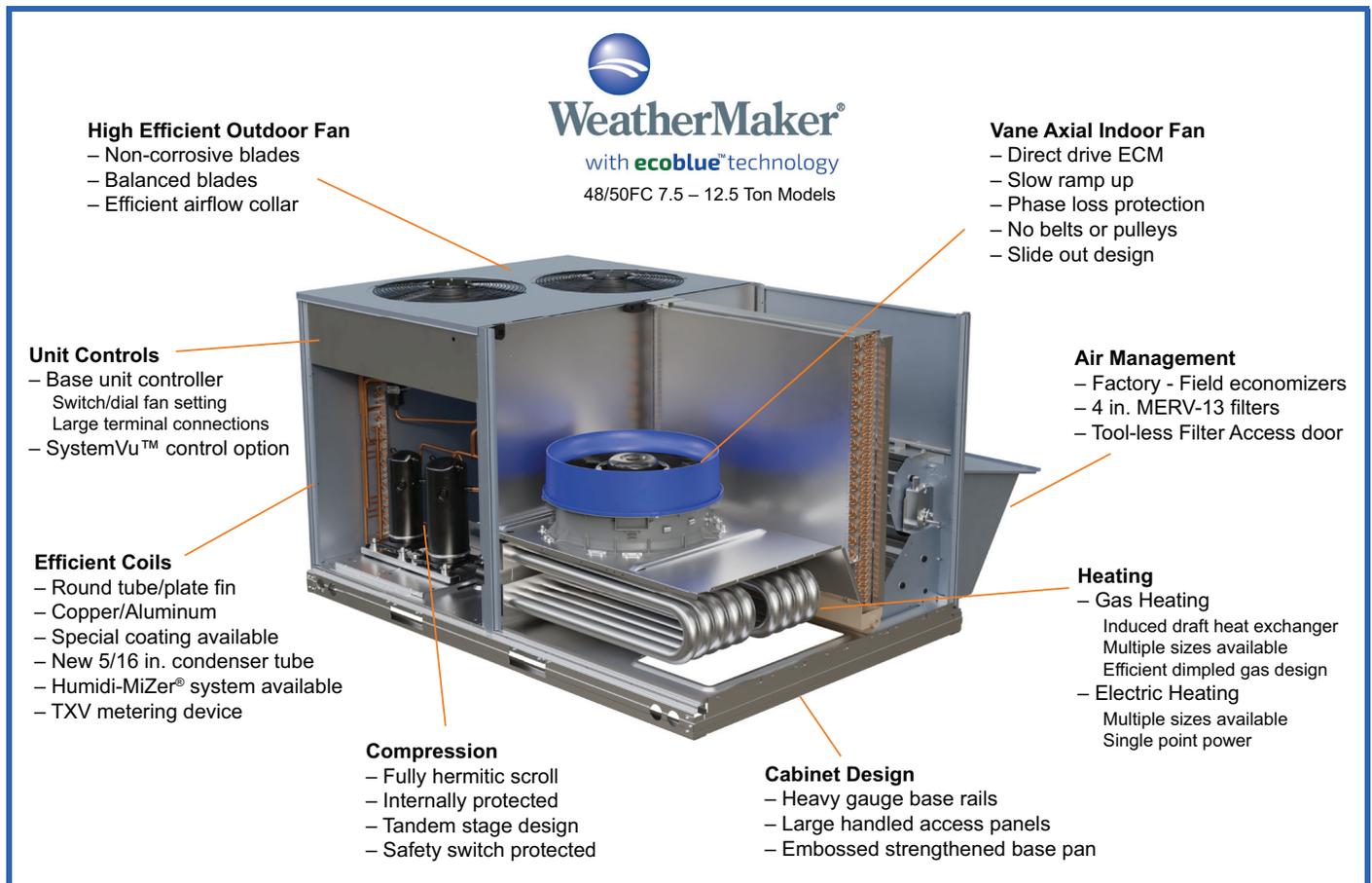
## Field convertible airflow

All WeatherMaker 7.5 to 15 ton units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected job-site. 15 ton models require a simple supply duct cover kit to field convert from factory vertical to horizontal.

## Comfort control

Carrier's patented Humidi-MiZer® adaptive dehumidification system is an all-inclusive factory-installed option on gas heating/electric cooling and electric cooling/electric heat models. This system provides reliable, flexible operation to meet indoor part load sensible and latent requirements as well as multiple gas heat and electric heat sized to fit an array of applications.

1. IECC is a registered trademark of the International Code Council, Inc.



## 48FC MODEL NUMBER NOMENCLATURE

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	4	8	F	C	D	M	0	8	A	2	A	5	-	0	A	0	A	0

### Unit Heat Type

48 - Gas Heat Packaged Rooftop

### Model Series - WeatherMaker®

FC - Standard Efficiency (EcoBlue™ Technology)

### Heat Options

D = Low Heat  
 E = Medium Heat  
 F = High Heat  
 S = Low Heat w/ Stainless Steel Exchanger  
 R = Medium Heat w/ Stainless Steel Exchanger  
 T = High Heat w/ Stainless Steel Exchanger

### Refrig. Systems Options

M = Two Stage Cooling/One Circuit Models  
 N = Two Stage Cooling/One Circuit Models with Humidi-MiZer® System

### Cooling Tons

08 = 7.5 tons  
 09 = 8.5 tons  
 12 = 10 tons  
 14 = 12.5 tons  
 16 = 15 tons

### Sensor Options

A = None  
 B = RA Smoke Detector  
 C = SA Smoke Detector  
 D = RA + SA Smoke Detector  
 E = CO<sub>2</sub>  
 F = RA Smoke Detector and CO<sub>2</sub>  
 G = SA Smoke Detector and CO<sub>2</sub>  
 H = RA + SA Smoke Detector and CO<sub>2</sub>  
 J = Condensate Overflow Switch  
 K = Condensate Overflow Switch + RA Smoke Detectors  
 L = Condensate Overflow Switch + RA and SA Smoke Detectors  
 M = Condensate Overflow Switch + SA Smoke Detector  
 N = Condensate Overflow Switch + CO<sub>2</sub>  
 P = Condensate Overflow Switch + RA Smoke Detector and CO<sub>2</sub>  
 Q = Condensate Overflow Switch + SA Smoke Detector and CO<sub>2</sub>  
 R = Condensate Overflow Switch + RA and SA Smoke Detector and CO<sub>2</sub>

### Indoor Fan Options

2 = Standard/Medium Static Option  
 3 = High Static Option  
 5 = Standard/Medium Static Option and Filter Status Switch  
 6 = High Static Option and Filter Status Switch

### Coil Options – RTPF (Outdoor – Indoor – Hail Guard)

A = Al/Cu – Al/Cu  
 B = Precoat Al/Cu – Al/Cu  
 C = E-coat Al/Cu – Al/Cu  
 D = E-coat Al/Cu – E-coat Al/Cu  
 E = Cu/Cu – Al/Cu  
 F = Cu/Cu – Cu/Cu  
 M = Al/Cu – Al/Cu – Louvered Hail Guard  
 N = Precoat Al/Cu – Al/Cu – Louvered Hail Guard  
 P = E-coat Al/Cu – Al/Cu – Louvered Hail Guard  
 Q = E-coat Al/Cu – E-coat Al/Cu – Louvered Hail Guard  
 R = Cu/Cu – Al/Cu – Louvered Hail Guard  
 S = Cu/Cu – Cu/Cu – Louvered Hail Guard

### Packaging Compliance

0 = Standard  
 1 = LTL

### Electrical Options

A = None  
 C = Non-Fused Disconnect  
 D = Thru-The-Base Connections  
 F = Non-Fused Disconnect and Thru-The-Base Connections  
 N = Phase Monitor/Protection  
 Q = Phase Monitor/Protection and Non-Fused Disconnect  
 R = Phase Monitor/Protection and Thru-The-Base Connections  
 T = Phase Monitor/Protection with Non-Fused Disconnect and Thru-The-Base Connections  
 1 = High SCCR (Short Circuit Current Rating) Protection  
 2 = High SCCR Protection and Thru-The-Base Connections

### Service Options

0 = None  
 1 = Unpowered Convenience Outlet  
 2 = Powered Convenience Outlet  
 3 = Hinged Access Panels  
 4 = Hinged Access Panels and Unpowered Convenience Outlet  
 5 = Hinged Access Panels and Powered Convenience Outlet  
 6 = 4" MERV 13 High Efficiency Filter Track  
 7 = Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
 8 = Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
 9 = Hinged Access Panels and 4" MERV 13 High Efficiency Filter Track  
 A = Hinged Access Panels, Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
 B = Hinged Access Panels, Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track

### Intake / Exhaust Options

A = None  
 B = Temperature Economizer w/ Barometric Relief  
 F = Enthalpy Economizer w/ Barometric Relief  
 U = Temperature Ultra Low Leak Economizer w/ Barometric Relief  
 W = Enthalpy Ultra Low Leak Economizer w/ Barometric Relief

### Base Unit Controls

0 = Electro-mechanical Controller  
 3 = SystemVu™ Controller  
 6 = Electro-mechanical Controller with W7220 Economizer Control. Can be used with EconoMi\$er X (w/ Fault Detection and Diagnostic)

### Design Revision

- = Factory Design Revision

### Voltage

1 = 575/3/60  
 5 = 208-230/3/60  
 6 = 460/3/60

# Model number nomenclature (cont)



## 50FC MODEL NUMBER NOMENCLATURE

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	5	0	F	C	-	M	0	8	A	2	A	5	-	0	A	0	A	0

### Unit Heat Type

50 – Cooling with Optional Electric Heat Packaged Rooftop

### Model Series - WeatherMaker®

FC – Standard Efficiency (EcoBlue™ Technology)

### Heat Size

- = No heat  
(Field Installed Available)

### Refrig. Systems Options

M = Two Stage Cooling, Single Circuit  
N = Two Stage Cooling, Single Circuit with Humidi-MiZer® system

### Cooling Tons

08 = 7.5 tons  
09 = 8.5 tons  
12 = 10.0 tons  
14 = 12.5 tons  
16 = 15 tons

### Sensor Options

A = None  
B = Return Air (RA) Smoke Detector  
C = Supply Air (SA) Smoke Detector  
D = RA + SA Smoke Detector  
E = CO<sub>2</sub> Sensor  
F = RA Smoke Detector and CO<sub>2</sub> Sensor  
G = SA Smoke Detector and CO<sub>2</sub> Sensor  
H = RA + SA Smoke Detector and CO<sub>2</sub> Sensor  
J = Condensate Overflow Switch  
K = Condensate Overflow Switch and RA Smoke Detector  
L = Condensate Overflow Switch and RA and SA Smoke Detectors  
M = Condensate Overflow Switch and SA Smoke Detector  
N = Condensate Overflow Switch + CO<sub>2</sub>  
P = Condensate Overflow Switch + RA Smoke Detector and CO<sub>2</sub>  
Q = Condensate Overflow Switch + SA Smoke Detector and CO<sub>2</sub>  
R = Condensate Overflow Switch + RA and SA Smoke Detector and CO<sub>2</sub>

### Indoor Fan Options

2 = Standard/Medium Static Motor – Vane Axial EcoBlue  
3 = High Static Motor – Vane Axial EcoBlue  
5 = Standard/Medium Static Motor – Vane Axial EcoBlue and Filter Status Switch  
6 = High Static Motor – Vane Axial EcoBlue and Filter Status Switch

### Coil Options – (Outdoor - Indoor - Hail Guard)

A = Al/Cu - Al/Cu  
B = Precoat Al/Cu - Al/Cu  
C = E-coat Al/Cu - Al/Cu  
D = E-coat Al/Cu - E-coat Al/Cu  
E = Cu/Cu - Al/Cu  
F = Cu/Cu - Cu/Cu  
M = Al/Cu - Al/Cu — Louvered Hail Guard  
N = Precoat Al/Cu - Al/Cu — Louvered Hail Guard  
P = E-coat Al/Cu - Al/Cu — Louvered Hail Guard  
Q = E-coat Al/Cu - E-coat Al/Cu — Louvered Hail Guard  
R = Cu/Cu - Al/Cu — Louvered Hail Guard  
S = Cu/Cu - Cu/Cu — Louvered Hail Guard

### Packaging & Seismic Compliance

0 = Standard  
1 = LTL

### Electrical Options

A = None  
C = Non-Fused Disconnect  
D = Thru-The-Base Connections  
F = Non-Fused Disconnect and Thru-The-Base Connections  
N = Phase Monitor/Protection  
Q = Phase Monitor/Protection and Non-Fused Disconnect  
R = Phase Monitor/Protection and Thru-The-Base Connections  
T = Phase Monitor/Protection with Non-Fused Disconnect and Thru-The-Base Connections  
1 = High SCCR (Short Circuit Current Rating) Protection  
2 = High SCCR Protection and Thru-The-Base Connections

### Service Options

0 = None  
1 = Unpowered Convenience Outlet  
2 = Powered Convenience Outlet  
3 = Hinged Panels  
4 = Hinged Panels and Unpowered Convenience Outlet  
5 = Hinged Access Panels and Powered Convenience Outlet  
6 = 4" MERV 13 High Efficiency Filter Track  
7 = Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
8 = Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
9 = Hinged Access Panels and 4" MERV 13 High Efficiency Filter Track  
A = Hinged Access Panels, Unpowered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track  
B = Hinged Access Panels, Powered Convenience Outlet and 4" MERV 13 High Efficiency Filter Track

### Intake / Exhaust Options

A = None  
B = Temperature Economizer w/ Barometric Relief  
F = Enthalpy Economizer w/ Barometric Relief  
U = Temperature Ultra Low Leak Economizer w/ Barometric Relief  
W = Enthalpy Ultra Low Leak Economizer w/ Barometric Relief

### Base Unit Controls

0 = Electro-mechanical Controller  
3 = SystemVu™ Controller  
6 = Electro-mechanical Controller with W7220 Economizer Control. Can be used with EconoMi\$er X (w/ Fault Detection and Diagnostic)

### Design Revision

- = Factory Design Revision

### Voltage

1 = 575/3/60  
5 = 208-230/3/60  
6 = 460/3/60

## 48FC AHRI RATINGS

48FC UNIT	COOLING STAGES	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER	IEER WITH 2-SPEED INDOOR FAN MOTOR	AHRI RATING CFM
48FC*M08	2	7.5	86.0	7.7	11.2	15.0	2650
48FC*M09	2	8.5	98.0	8.8	11.2	15.0	3400
48FC*M12	2	10.0	118.0	10.7	11.0	15.0	3500
48FC*M14	2	12.5	132.0	12.9	10.2	15.0	3750
48FC*M16	2	15.0	174.0	16.1	10.8	14.5	5250

### LEGEND

**AHRI** — Air-Conditioning, Heating and Refrigeration Institute  
**EER** — Energy Efficiency Ratio  
**IEER** — Integrated Energy Efficiency Ratio

### NOTES:

- Rated in accordance with AHRI Standards 340/360.
- Rating are based on:  
**Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.  
**IEER Standard:** A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
- All 48FC units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.
- 48FC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.



## 50FC AHRI RATINGS

50FC UNIT	COOLING STAGES	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER	IEER WITH 2-SPEED INDOOR FAN MOTOR	AHRI RATING CFM
50FC*M08	2	7.5	86.0	7.5	11.4	15.2	2650
50FC*M09	2	8.5	98.0	8.6	11.4	15.2	3400
50FC*M12	2	10.0	118.0	10.5	11.2	15.2	3500
50FC*M14	2	12.5	133.0	12.8	10.4	15.2	3750
50FC*M16	2	15.0	174.0	15.8	11.0	14.7	5250

### LEGEND

**AHRI** — Air-Conditioning, Heating and Refrigeration Institute  
**EER** — Energy Efficiency Ratio  
**IEER** — Integrated Energy Efficiency Ratio

### NOTES:

- Rated in accordance with AHRI Standards 340/360.
- Rating are based on:  
**Cooling Standard:** 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.  
**IEER Standard:** A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
- All 50FC units comply with ASHRAE 90.1-2019 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum IEER requirements.
- 50FC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.



# Capacity ratings (cont)



**SOUND RATINGS TABLE**

48/50FC UNIT	COOLING STAGES	OUTDOOR SOUND (dB) at 60 Hz								
		A-WEIGHTED	63	125	250	500	1000	2000	4000	8000
<b>M08</b>	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
<b>M09</b>	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
<b>M12</b>	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
<b>M14</b>	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
<b>M16</b>	2	87	87.0	85.2	84.6	84.9	82.8	78.4	75.3	72.9

**LEGEND**

**dB** — Decibel

**NOTES:**

1. Outdoor sound data is measured in accordance with AHRI.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

**Sound Level**

Table A2-20 summarizes predicted sound pressure levels for Model CB Boilers. Tables A2-21 through A2-25 give detailed octave band sound pressure levels for each boiler. These values are based on standard motors. Optional motor types and altitude conditions can increase sound levels.

**Units**

The units for the sound level tables are dBA (decibels, measured on the A-weighted scale) in reference to 0.0002 microbars (20 micro-Newtons per square meter). They are standardly referenced in specifying and reporting sound pressure levels on industrial equipment.

**Test Method**

The sound pressure levels in the above tables were obtained from tests in accordance with the "ABMA Test Code for the Measurement of Sound from Packages Boilers." In accordance with this code, the sound pressure levels reported were measured on the boiler centerline 4-1/2 feet vertically above the bottom of the base rails and 3 feet horizontally in front of the end of the blower motor or front surface of the electrical cabinet.

**Sound Level Meter**

The sound level meter used complies with ANSI S1.4, Type 1 (Precision). The readings are taken with the meter set for slow response.

**Table A2-20. Sound Pressure Level Summary (50 - 800 hp)**

BOILER HP	50	60	70	80	100	125A	125	150	200	250	300	350	400	500	600	700	750	800
HFO, dBA	79	79	79	79	81	82	83	83	83	88	88	89	83	83	83	85	87	88
LFO, dBA	78	78	78	78	79	79	81	82	81	86	86	85	80	82	82	82	83	84
HFG, dBA	77	77	78	78	78	79	81	80	82	84	86	86	82	82	82	85	86	87
LFG, dBA	72	73	74	75	75	75	78	77	78	81	82	83	80	81	81	82	83	84

**NOTES:**

- Boiler No. followed by an "a" designates hot water boilers furnished in a smaller vessel size with additional tubes in the upper portion of the vessel.
- Sound Pressure levels measured on boilers operating in various locations and expressed in dBA are as follows:

**ABBREVIATIONS:**

- HF = High Fire
- LF = Low Fire
- O = Oil
- G = Gas

**Table A2-21. Model CB Boiler Sound Pressure Level Details (40 hp)**

FIRING RATE FUEL	SOUND LEVEL dBA	OCTAVE BAND SOUND PRESSURE LEVELS IN dB RE .0002 MICROBAR									
		31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
40HP <sup>A</sup>											
LFG	76	73	75	72	74	76	70	67	68	64	57
LFO	77	73	75	75	76	75	72	67	66	66	58
HFG	79	81	78	74	80	78	71	69	68	64	58
HFO	79	72	77	77	81	78	73	69	66	66	58

**NOTE:**

- ABBREVIATIONS:  
HF = High Fire

- LF = Low Fire  
O = Oil  
G = Gas

A. The data shown above was taken on the 40 hp. Since the highest Sound Level is below 80 dBA, no additional 36" diameter Firetubes were tested. If Sound Level predictions are required for the 15 thru 30 hp, use the values shown for the 40 hp.

**Table A2-22. Model CB Boiler Sound Pressure Level Details (50 - 125 hp)**

FIRING RATE FUEL	SOUND LEVEL dBA	OCTAVE BAND SOUND PRESSURE LEVELS IN dB RE .0002 MICROBAR									
		31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
50 HP											
LFG	72	71	65	71	71	70	68	63	60	53	46
LFO	78	71	76	78	73	72	72	76	61	56	54
HFG	77	72	68	75	76	74	74	66	61	54	47
HFO	79	72	70	75	75	77	77	70	63	56	54
60 HP											
LFG	73	70	75	72	72	73	68	61	56	50	45
LFO	78	68	77	74	74	75	74	71	58	53	48
HFG	77	73	75	72	72	75	76	63	55	50	44
HFO	79	75	75	75	75	77	77	72	59	52	45
70 HP											
LFG	74	70	70	75	74	73	71	62	56	51	46
LFO	78	70	73	77	74	75	74	70	59	53	57
HFG	78	72	72	77	78	75	76	68	58	52	57
HFO	79	73	73	80	77	77	76	70	60	54	48
80 HP											
LFG	75	70	75	75	73	75	76	66	62	62	53
LFO	78	69	77	76	74	76	74	73	63	62	57
HFG	78	72	74	78	75	75	76	57	61	59	52
HFO	79	75	75	75	74	76	75	69	62	59	54
100 & 100A HP											
LFG	75	69	69	75	76	73	71	65	63	59	50
LFO	79	68	73	78	78	75	79	76	63	59	54
HFG	78	69	70	77	77	74	74	69	63	59	50
HFO	81	68	70	77	78	78	77	71	64	59	57
125A HP											
LFG	75	69	70	76	78	73	71	65	63	59	50
LFO	79	68	73	78	78	75	74	76	63	59	54
HFG	79	70	70	77	79	75	75	69	63	59	50
HFO	82	70	71	78	80	79	78	71	64	59	57

NOTES:

1. ABBREVIATIONS:

HF = High Fire

LF = Low Fire

O = Oil

G = Gas

2. Boiler HP followed by an "A" designates hot water boilers furnished in a smaller vessel size with additional tubes in the upper portion of the vessel.

**Table A2-23. Model CB Boiler Sound Pressure Level Details (125 - 200 hp)**

FIRING RATE FUEL	SOUND LEVEL dBA	OCTAVE BAND SOUND PRESSURE LEVELS IN dB RE .0002 MICROBAR									
		31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
125 HP											
LFG	78	76	70	78	80	80	73	65	58	56	51
LFO	81	80	75	82	82	81	77	74	67	63	60
HFG	81	79	73	87	78	80	76	71	64	57	51
HFO	83	78	78	89	79	82	81	77	64	70	58
150 & 175A HP											
LFG	77	75	70	78	76	77	72	67	63	58	55
LFO	82	76	68	80	78	79	75	71	66	60	58
HFG	80	71	72	82	76	80	76	71	64	58	52
HFO	83	70	71	83	79	82	77	73	65	60	55
200 HP											
LFG	78	74	74	78	79	79	72	65	58	54	50
LFO	81	76	74	79	77	81	75	71	62	60	55
HFG	82	77	76	82	79	81	78	72	62	55	50
HFO	83	76	76	81	78	82	79	73	66	59	53

NOTES:

1. ABBREVIATIONS:

HF = HighFire

LF = Low Fire

O = Oil

G = Gas

2. Boiler HP followed by an "A" designates hot water boilers furnished in a smaller vessel size with additional tubes in the upper portion of the vessel.

**Table A2-24. Model CB Boiler Sound Pressure Level Details (250 - 350 hp)**

FIRING RATE FUEL	SOUND LEVEL dBA	OCTAVE BAND SOUND PRESSURE LEVELS IN dB RE .0002 MICROBAR									
		31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
250 HP											
LFG	81	72	81	85	84	82	75	68	60	56	53
LFO	86	76	87	87	85	84	82	73	70	76	68
HFG	84	78	85	84	84	84	79	72	62	55	50
HFO	88	79	84	84	84	85	86	74	68	67	65
300 HP											
LFG	82	75	74	80	83	83	78	71	65	58	53
LFO	86	80	77	80	84	82	81	75	75	77	72
HFG	86	77	78	84	87	85	82	77	67	60	53
HFO	88	82	80	84	85	85	83	79	72	67	69
350 HP											
LFG	83	75	78	87	86	83	78	70	58	55	
LFO	85	82	79	84	84	84	84	70	66	66	
HFG	86	78	79	87	85	84	84	72	65	61	
HFO	89	82	82	85	85	86	86	79	68	68	

NOTE:

ABBREVIATIONS:

HF = High Fire

LF = Low Fire

O = Oil

G = Gas

**Table A2-25. Model CB Boiler Sound Pressure Level Details (400 - 800 hp)**

FIRING RATE FUEL	SOUND LEVEL dBA	OCTAVE BAND SOUND PRESSURE LEVELS IN dB RE .0002 MICROBAR									
		31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
400 HP											
LFG	80	70	79	85	87	78	70	66	61	55	50
LFO	80	74	83	86	87	78	71	67	63	58	50
HFG	82	73	84	87	89	80	74	70	64	57	50
HFO	83	75	85	87	89	80	75	71	73	58	52
500 HP											
LFG	81	78	83	87	87	78	73	66	62	58	54
LFO	82	77	83	87	87	81	75	70	63	59	55
HFG	82	79	87	87	84	79	76	70	63	57	55
HFO	83	77	87	87	84	81	77	71	62	58	55
600 HP											
LFG	81	78	83	87	87	79	73	66	62	58	54
LFO	82	77	83	87	87	81	75	70	63	59	55
HFG	82	79	87	87	84	79	76	70	63	57	55
HFO	83	77	87	87	84	81	77	71	62	58	55
700 HP											
LFG	82	80	87	91	87	80	75	70	66	62	56
LFO	82	79	88	90	87	81	76	72	67	63	57
HFG	85	80	90	89	89	82	77	76	66	64	57
HFO	85	81	90	91	89	82	80	77	68	65	57
750 HP											
LFG	83	82	89	93	87	81	76	71	67	63	
LFO	83	80	90	92	87	82	77	73	68	64	
HFG	86	81	91	90	89	83	79	89	68	66	
HFO	87	82	91	92	89	83	81	80	70	68	
800 HP											
LFG	84	83	90	94	87	82	77	73	68	64	
LFO	84	82	91	93	87	82	78	74	68	65	
HFG	87	82	92	91	89	83	81	82	70	68	
HFO	88	83	92	92	89	83	82	83	71	70	

NOTE:  
 ABBREVIATIONS:  
 HF = High Fire  
 LF = Low Fire  
 O = Oil  
 G = Gas

**Sound Pressure**

On large size boilers, the need for auxiliary equipment, and the necessary interconnecting piping, make it impractical (and sometimes impossible) to provide a boiler testing environment that is suitable for obtaining the data needed to develop Sound Pressure Power levels.

**Typical Values**

Sound pressure levels (dBA) for identical boilers will vary between boiler rooms. In addition, variations will occur between different people using different sound meters on the same boiler. And finally, no two boilers can be expected to give precisely the same sound levels. For these reasons, we can only predict, but not guarantee, sound levels (dBA).

**Octave Band**

When predicting sound pressures in octave bands (e.g., dB at 125 Hz), even greater variations between boilers, between sound meters, and between operators can be expected. These larger variations in the low and high frequencies make octave band levels a less reliable method of reporting than A-scale

sound levels. (Since A-scale sound levels are dominated by mid-frequency sounds, the A-scale sound levels between two boilers can be in reasonable agreement even though the low and high frequencies of octave band measurement do not closely correspond).

## ATTACHMENT 3

SoundPLAN Data – Construction Noise

10483 Kingsbarn Escondido  
SoundPLAN Data - Construction

Source name	Reference	Noise	Corrections		
		Level dB(A)	Cwall dB(A)	CI dB(A)	CT dB(A)
Construction	Lw/unit	113.9	-	-	-

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SoundPLAN Data - Construction

No.	Coordinates		Noise
	X	Y	Level
	(meters)		dB(A)
1	492290.17	3664864.54	68.7
2	492251.28	3664842.05	69.5
3	492214.76	3664820.62	67.5
4	492211.59	3664778.81	68.2
5	492222.70	3664760.82	68.3
6	492275.09	3664764.26	72.3
7	492298.11	3664786.49	75.3
8	492321.92	3664800.25	74.6
9	492348.64	3664816.39	69.0
10	492326.68	3664839.67	74.7

## **ATTACHMENT 4**

SoundPLAN Data – Vehicle Traffic Noise

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

Station km	Traffic values			day Veh/h	evening Veh/h	night Veh/h	Speed km/h	Control device	Constr. Speed km/h	Affect. veh. %	Road surface	Gradient Min / Max %
	ADT Veh/24h	Vehicles type	Vehicle name									
Valley Parkway Traffic direction: In entry direction												
0+000	30402	Total	-	1951	1013	439	-	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Automobiles	-	1814	942	408	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Medium trucks	-	59	30	13	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Heavy trucks	-	39	20	9	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Buses	-	20	10	4	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Motorcycles	-	20	10	4	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Auxiliary vehicle	-	-	-	-	-	none	-	-	Average (of DGAC and PCC)	0
0+517	-	-	-	-	-	-	-	-	-	-	-	-
Grand Avenue Traffic direction: In entry direction												
0+000	30402	Total	-	1951	1013	439	-	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Automobiles	-	1814	942	408	48	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Medium trucks	-	59	30	13	48	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Heavy trucks	-	39	20	9	48	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Buses	-	20	10	4	48	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Motorcycles	-	20	10	4	48	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Auxiliary vehicle	-	-	-	-	-	none	-	-	Average (of DGAC and PCC)	0
0+517	-	-	-	-	-	-	-	-	-	-	-	-
Broadway Traffic direction: In entry direction												
0+000	32898	Total	-	2111	1097	475	-	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Automobiles	-	1963	1020	442	56	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Medium trucks	-	63	33	14	56	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Heavy trucks	-	42	22	10	56	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Buses	-	21	11	5	56	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Motorcycles	-	21	11	5	56	none	-	-	Average (of DGAC and PCC)	0
0+000	32898	Auxiliary vehicle	-	-	-	-	-	none	-	-	Average (of DGAC and PCC)	0
0+352	-	-	-	-	-	-	-	-	-	-	-	-
Escondido Boulevard Traffic direction: In entry direction												
0+000	30402	Total	-	1951	1013	439	-	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Automobiles	-	1814	942	408	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Medium trucks	-	59	30	13	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Heavy trucks	-	39	20	9	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Buses	-	20	10	4	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Motorcycles	-	20	10	4	56	none	-	-	Average (of DGAC and PCC)	0
0+000	30402	Auxiliary vehicle	-	-	-	-	-	none	-	-	Average (of DGAC and PCC)	0
0+296	-	-	-	-	-	-	-	-	-	-	-	-

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

No.	Coordinates		Floor	Height (meters)	Day dB(A)	Noise Level		CNEL dB(A)
	X (meters)	Y (meters)				Evening dB(A)	Night dB(A)	
1	492288.32	3664838.61	1.FI	1.5	73.3	70.4	66.8	75.2
1	492288.32	3664838.61	2.FI	5	72.4	69.6	65.9	74.3
1	492288.32	3664838.61	3.FI	8.5	71.0	68.1	64.5	72.9
1	492288.32	3664838.61	4.FI	12	70.1	67.2	63.6	72.0
1	492288.32	3664838.61	5.FI	15.5	69.3	66.5	62.9	71.2
2	492252.86	3664817.71	1.FI	1.5	72.9	70.1	66.5	74.8
2	492252.86	3664817.71	2.FI	5	72.3	69.4	65.8	74.2
2	492252.86	3664817.71	3.FI	8.5	70.6	67.7	64.1	72.5
2	492252.86	3664817.71	4.FI	12	69.4	66.5	62.9	71.3
2	492252.86	3664817.71	5.FI	15.5	68.5	65.7	62.1	70.4
3	492229.85	3664790.46	1.FI	1.5	66.5	63.7	60.0	68.4
3	492229.85	3664790.46	2.FI	5	68.4	65.6	62.0	70.3
3	492229.85	3664790.46	3.FI	8.5	67.6	64.7	61.1	69.5
3	492229.85	3664790.46	4.FI	12	66.1	63.2	59.6	68.0
3	492229.85	3664790.46	5.FI	15.5	65.7	62.9	59.3	67.6
4	492239.11	3664774.05	1.FI	1.5	60.0	57.2	53.5	61.9
4	492239.11	3664774.05	2.FI	5	62.4	59.6	56.0	64.3
4	492239.11	3664774.05	3.FI	8.5	63.5	60.7	57.1	65.4
4	492239.11	3664774.05	4.FI	12	63.7	60.9	57.3	65.6
4	492239.11	3664774.05	5.FI	15.5	63.9	61.1	57.4	65.8
5	492275.35	3664776.17	1.FI	1.5	57.1	54.2	50.6	59.0
5	492275.35	3664776.17	2.FI	5	58.3	55.4	51.8	60.2
5	492275.35	3664776.17	3.FI	8.5	59.5	56.7	53.1	61.4
5	492275.35	3664776.17	4.FI	12	60.5	57.7	54.1	62.4
5	492275.35	3664776.17	5.FI	15.5	61.0	58.1	54.5	62.9
6	492318.48	3664801.83	1.FI	1.5	60.3	57.5	53.8	62.2
6	492318.48	3664801.83	2.FI	5	61.7	58.8	55.2	63.6
6	492318.48	3664801.83	3.FI	8.5	63.1	60.3	56.6	65.0
6	492318.48	3664801.83	4.FI	12	64.0	61.1	57.5	65.9
6	492318.48	3664801.83	5.FI	15.5	64.2	61.3	57.7	66.1
7	492330.65	3664825.65	1.FI	1.5	63.1	60.3	56.6	65.0
7	492330.65	3664825.65	2.FI	5	65.3	62.4	58.8	67.2
7	492330.65	3664825.65	3.FI	8.5	67.3	64.5	60.8	69.2
7	492330.65	3664825.65	4.FI	12	66.8	64.0	60.4	68.7
7	492330.65	3664825.65	5.FI	15.5	66.8	63.9	60.3	68.7
8	492319.01	3664844.70	1.FI	1.5	67.7	64.8	61.2	69.6
8	492319.01	3664844.70	2.FI	5	69.0	66.2	62.5	70.9
8	492319.01	3664844.70	3.FI	8.5	68.7	65.9	62.2	70.6
8	492319.01	3664844.70	4.FI	12	68.4	65.6	61.9	70.3
8	492319.01	3664844.70	5.FI	15.5	68.0	65.2	61.5	69.9
9	492259.67	3664815.67	1.FI	6.1	61.8	59.0	55.3	63.7
10	492263.30	3664803.60	1.FI	6.1	50.8	47.9	44.3	52.7
11	492257.13	3664799.07	1.FI	6.1	50.2	47.3	43.7	52.1
12	492264.95	3664790.36	1.FI	6.1	54.0	51.2	47.6	55.9
13	492270.51	3664793.10	1.FI	6.1	52.9	50.1	46.5	54.8
14	492276.75	3664783.22	1.FI	6.1	57.3	54.5	50.9	59.2
15	492284.84	3664831.31	1.FI	6.1	62.6	59.7	56.1	64.5
16	492295.68	3664822.87	1.FI	6.1	49.0	46.1	42.5	50.9
17	492297.95	3664814.09	1.FI	6.1	50.9	48.0	44.4	52.8
18	492299.80	3664807.71	1.FI	6.1	55.0	52.1	48.5	56.9
19	492307.69	3664805.79	1.FI	6.1	56.3	53.4	49.8	58.2
20	492303.53	3664797.81	1.FI	6.1	58.6	55.7	52.1	60.5

Receivers

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

										Noise Level			
Source name										Day	Evening	Night	CNEL
										dB(A)	dB(A)	dB(A)	dB(A)
1	1.FI	73.3	70.4	66.8	75.2	0.0	0.0	0.0	0.0	55.8	53.0	49.3	57.7
	Broadway									45.5	42.7	39.0	47.4
	Escondido Boulevard									21.2	18.3	14.7	23.1
	Grand Avenue									73.2	70.3	66.7	75.1
1	2.FI	72.4	69.6	65.9	74.3	0.0	0.0	0.0	0.0	55.4	52.5	48.9	57.3
	Broadway									44.6	41.8	38.2	46.5
	Escondido Boulevard									22.4	19.6	15.9	24.3
	Grand Avenue									72.3	69.5	65.8	74.2
1	3.FI	71.0	68.1	64.5	72.9	0.0	0.0	0.0	0.0	56.4	53.5	49.9	58.3
	Broadway									45.4	42.5	38.9	47.3
	Escondido Boulevard									23.0	20.2	16.6	24.9
	Grand Avenue									70.8	68.0	64.3	72.7
1	4.FI	70.1	67.2	63.6	72.0	0.0	0.0	0.0	0.0	57.5	54.6	51.0	59.4
	Broadway									45.8	42.9	39.3	47.7
	Escondido Boulevard									25.6	22.8	19.1	27.5
	Grand Avenue									69.8	67.0	63.3	71.7
1	5.FI	69.3	66.5	62.9	71.2	0.0	0.0	0.0	0.0	58.0	55.2	51.5	59.9
	Broadway									46.3	43.4	39.8	48.2
	Escondido Boulevard									30.3	27.4	23.8	32.2
	Grand Avenue									69.0	66.1	62.5	70.9
2	1.FI	72.9	70.1	66.5	74.8	0.0	0.0	0.0	0.0	51.9	49.1	45.4	53.8
	Broadway									49.6	46.8	43.2	51.5
	Escondido Boulevard									23.7	20.9	17.2	25.6
	Grand Avenue									72.9	70.0	66.4	74.8
2	2.FI	72.3	69.4	65.8	74.2	0.0	0.0	0.0	0.0	52.0	49.2	45.5	53.9
	Broadway									49.3	46.5	42.9	51.2
	Escondido Boulevard									27.2	24.3	20.7	29.1
	Grand Avenue									72.2	69.4	65.7	74.1
2	3.FI	70.6	67.7	64.1	72.5	0.0	0.0	0.0	0.0	51.9	49.1	45.4	53.8
	Broadway									49.0	46.1	42.5	50.9
	Escondido Boulevard									37.6	34.8	31.1	39.5
	Grand Avenue									70.5	67.6	64.0	72.4
2	4.FI	69.4	66.5	62.9	71.3	0.0	0.0	0.0	0.0	52.8	49.9	46.3	54.7
	Broadway									48.4	45.5	41.9	50.3
	Escondido Boulevard									41.4	38.5	34.9	43.3
	Grand Avenue									69.2	66.4	62.7	71.1
2	5.FI	68.5	65.7	62.1	70.4	0.0	0.0	0.0	0.0	53.6	50.7	47.1	55.5
	Broadway									48.9	46.1	42.5	50.8
	Escondido Boulevard									42.6	39.8	36.2	44.5
	Grand Avenue									68.3	65.5	61.9	70.2
3	1.FI	66.5	63.7	60.0	68.4	0.0	0.0	0.0	0.0	20.8	18.0	14.4	22.7
	Broadway									51.7	48.8	45.2	53.6
	Escondido Boulevard									49.7	46.9	43.2	51.6
	Grand Avenue									66.3	63.4	59.8	68.2
3	2.FI	68.4	65.6	62.0	70.3	0.0	0.0	0.0	0.0	23.9	21.0	17.4	25.8
	Broadway									52.4	49.6	45.9	54.3
	Escondido Boulevard									51.4	48.5	44.9	53.3
	Grand Avenue									68.2	65.4	61.8	70.1
3	3.FI	67.6	64.7	61.1	69.5	0.0	0.0	0.0	0.0	26.6	23.8	20.1	28.5
	Broadway									52.4	49.6	45.9	54.3
	Escondido Boulevard												

Contributions

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

Grand Avenue										52.9	50.1	46.4	54.8
Valley Parkway										67.3	64.5	60.8	69.2
3	4.FI	66.1	63.2	59.6	68.0	0.0	0.0	0.0	0.0				
Broadway										29.2	26.4	22.8	31.1
Escondido Boulevard										52.9	50.0	46.4	54.8
Grand Avenue										54.4	51.5	47.9	56.3
Valley Parkway										65.5	62.7	59.1	67.4
3	5.FI	65.7	62.9	59.3	67.6	0.0	0.0	0.0	0.0				
Broadway										32.4	29.6	26.0	34.3
Escondido Boulevard										53.7	50.8	47.2	55.6
Grand Avenue										55.3	52.4	48.8	57.2
Valley Parkway										65.0	62.2	58.5	66.9
4	1.FI	60.0	57.2	53.5	61.9	0.0	0.0	0.0	0.0				
Broadway										20.0	17.1	13.5	21.9
Escondido Boulevard										49.7	46.8	43.2	51.6
Grand Avenue										51.8	48.9	45.3	53.7
Valley Parkway										58.8	56.0	52.3	60.7
4	2.FI	62.4	59.6	56.0	64.3	0.0	0.0	0.0	0.0				
Broadway										20.6	17.8	14.1	22.5
Escondido Boulevard										50.6	47.7	44.1	52.5
Grand Avenue										53.5	50.7	47.0	55.4
Valley Parkway										61.5	58.7	55.0	63.4
4	3.FI	63.5	60.7	57.1	65.4	0.0	0.0	0.0	0.0				
Broadway										20.7	17.8	14.2	22.6
Escondido Boulevard										52.0	49.1	45.5	53.9
Grand Avenue										55.2	52.4	48.7	57.1
Valley Parkway										62.5	59.6	56.0	64.4
4	4.FI	63.7	60.9	57.3	65.6	0.0	0.0	0.0	0.0				
Broadway										23.3	20.4	16.8	25.2
Escondido Boulevard										52.9	50.1	46.4	54.8
Grand Avenue										56.5	53.7	50.0	58.4
Valley Parkway										62.4	59.5	55.9	64.3
4	5.FI	63.9	61.1	57.4	65.8	0.0	0.0	0.0	0.0				
Broadway										27.7	24.8	21.2	29.6
Escondido Boulevard										53.8	51.0	47.4	55.7
Grand Avenue										57.1	54.3	50.6	59.0
Valley Parkway										62.3	59.4	55.8	64.2
5	1.FI	57.1	54.2	50.6	59.0	0.0	0.0	0.0	0.0				
Broadway										50.7	47.9	44.2	52.6
Escondido Boulevard										43.1	40.2	36.6	45.0
Grand Avenue										55.7	52.8	49.2	57.6
Valley Parkway										26.6	23.8	20.1	28.5
5	2.FI	58.3	55.4	51.8	60.2	0.0	0.0	0.0	0.0				
Broadway										51.9	49.0	45.4	53.8
Escondido Boulevard										45.0	42.2	38.6	46.9
Grand Avenue										56.9	54.0	50.4	58.8
Valley Parkway										33.3	30.5	26.9	35.2
5	3.FI	59.5	56.7	53.1	61.4	0.0	0.0	0.0	0.0				
Broadway										52.3	49.5	45.9	54.3
Escondido Boulevard										46.3	43.5	39.8	48.2
Grand Avenue										58.3	55.5	51.8	60.2
Valley Parkway										37.4	34.5	30.9	39.3
5	4.FI	60.5	57.7	54.1	62.4	0.0	0.0	0.0	0.0				
Broadway										53.6	50.7	47.1	55.5
Escondido Boulevard										46.8	43.9	40.3	48.7
Grand Avenue										59.3	56.5	52.8	61.2
Valley Parkway										38.5	35.7	32.0	40.4
5	5.FI	61.0	58.1	54.5	62.9	0.0	0.0	0.0	0.0				
Broadway										54.5	51.7	48.0	56.4
Escondido Boulevard										47.6	44.7	41.1	49.5
Grand Avenue										59.5	56.7	53.1	61.4
Valley Parkway										40.6	37.8	34.2	42.5
6	1.FI	60.3	57.5	53.8	62.2	0.0	0.0	0.0	0.0				
Broadway										56.6	53.8	50.2	58.5
Escondido Boulevard										40.4	37.6	33.9	42.3
Grand Avenue										57.8	54.9	51.3	59.7

Contributions

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

Valley Parkway										22.0	19.2	15.5	23.9
6	2.FI	61.7	58.8	55.2	63.6	0.0	0.0	0.0	0.0				
Broadway										58.4	55.6	51.9	60.3
Escondido Boulevard										41.6	38.8	35.1	43.5
Grand Avenue										58.9	56.0	52.4	60.8
Valley Parkway										23.5	20.6	17.0	25.4
6	3.FI	63.1	60.3	56.6	65.0	0.0	0.0	0.0	0.0				
Broadway										59.8	57.0	53.4	61.7
Escondido Boulevard										43.0	40.1	36.5	44.9
Grand Avenue										60.3	57.4	53.8	62.2
Valley Parkway										25.2	22.3	18.7	27.1
6	4.FI	64.0	61.1	57.5	65.9	0.0	0.0	0.0	0.0				
Broadway										60.6	57.8	54.1	62.5
Escondido Boulevard										43.9	41.0	37.4	45.8
Grand Avenue										61.2	58.3	54.7	63.1
Valley Parkway										27.1	24.2	20.6	29.0
6	5.FI	64.2	61.3	57.7	66.1	0.0	0.0	0.0	0.0				
Broadway										60.8	57.9	54.3	62.7
Escondido Boulevard										44.6	41.7	38.1	46.5
Grand Avenue										61.4	58.6	54.9	63.3
Valley Parkway										31.9	29.0	25.4	33.8
7	1.FI	63.1	60.3	56.6	65.0	0.0	0.0	0.0	0.0				
Broadway										60.5	57.6	54.0	62.4
Escondido Boulevard										16.0	13.1	9.5	17.9
Grand Avenue										52.9	50.1	46.5	54.8
Valley Parkway										58.6	55.8	52.2	60.5
7	2.FI	65.3	62.4	58.8	67.2	0.0	0.0	0.0	0.0				
Broadway										62.5	59.7	56.1	64.4
Escondido Boulevard										17.1	14.3	10.7	19.0
Grand Avenue										54.4	51.5	47.9	56.3
Valley Parkway										61.2	58.3	54.7	63.1
7	3.FI	67.3	64.5	60.8	69.2	0.0	0.0	0.0	0.0				
Broadway										64.8	61.9	58.3	66.7
Escondido Boulevard										16.9	14.0	10.4	18.8
Grand Avenue										56.3	53.5	49.9	58.2
Valley Parkway										62.8	60.0	56.4	64.7
7	4.FI	66.8	64.0	60.4	68.7	0.0	0.0	0.0	0.0				
Broadway										64.4	61.5	57.9	66.3
Escondido Boulevard										19.0	16.2	12.6	20.9
Grand Avenue										57.4	54.5	50.9	59.3
Valley Parkway										61.9	59.1	55.4	63.8
7	5.FI	66.8	63.9	60.3	68.7	0.0	0.0	0.0	0.0				
Broadway										64.2	61.4	57.7	66.1
Escondido Boulevard										24.2	21.3	17.7	26.1
Grand Avenue										57.9	55.0	51.4	59.8
Valley Parkway										61.8	59.0	55.3	63.7
8	1.FI	67.7	64.8	61.2	69.6	0.0	0.0	0.0	0.0				
Broadway										61.6	58.8	55.2	63.5
Escondido Boulevard										16.0	13.2	9.6	17.9
Grand Avenue										50.7	47.8	44.2	52.6
Valley Parkway										66.3	63.4	59.8	68.2
8	2.FI	69.0	66.2	62.5	70.9	0.0	0.0	0.0	0.0				
Broadway										62.8	59.9	56.3	64.7
Escondido Boulevard										16.0	13.1	9.5	17.9
Grand Avenue										52.0	49.1	45.5	53.9
Valley Parkway										67.7	64.9	61.2	69.6
8	3.FI	68.7	65.9	62.2	70.6	0.0	0.0	0.0	0.0				
Broadway										64.4	61.6	57.9	66.3
Escondido Boulevard										16.9	14.0	10.4	18.8
Grand Avenue										54.2	51.4	47.8	56.1
Valley Parkway										66.4	63.6	59.9	68.3
8	4.FI	68.4	65.6	61.9	70.3	0.0	0.0	0.0	0.0				
Broadway										64.4	61.5	57.9	66.3
Escondido Boulevard										20.0	17.2	13.5	21.9
Grand Avenue										54.5	51.6	48.0	56.4
Valley Parkway										65.9	63.1	59.5	67.8

Contributions

10483 Kingsbarn Escondido  
SoundPLAN Data - Traffic

8	5.FI	68.0	65.2	61.5	69.9	0.0	0.0	0.0	0.0				
	Broadway									64.2	61.4	57.7	66.1
	Escondido Boulevard									24.2	21.4	17.8	26.1
	Grand Avenue									55.3	52.4	48.8	57.2
	Valley Parkway									65.2	62.4	58.7	67.1
9	1.FI	61.8	59.0	55.3	63.7	0.0	0.0	0.0	0.0				
	Broadway									47.4	44.6	40.9	49.3
	Escondido Boulevard									39.4	36.6	32.9	41.3
	Grand Avenue									43.3	40.5	36.9	45.2
	Valley Parkway									61.6	58.7	55.1	63.5
10	1.FI	50.8	47.9	44.3	52.7	0.0	0.0	0.0	0.0				
	Broadway									41.6	38.8	35.1	43.5
	Escondido Boulevard									23.4	20.5	16.9	25.3
	Grand Avenue									48.2	45.4	41.7	50.1
	Valley Parkway									45.9	43.0	39.4	47.8
11	1.FI	50.2	47.3	43.7	52.1	0.0	0.0	0.0	0.0				
	Broadway									40.9	38.1	34.5	42.8
	Escondido Boulevard									27.1	24.2	20.6	29.0
	Grand Avenue									49.2	46.3	42.7	51.1
	Valley Parkway									39.2	36.3	32.7	41.1
12	1.FI	54.0	51.2	47.6	55.9	0.0	0.0	0.0	0.0				
	Broadway									47.7	44.8	41.2	49.6
	Escondido Boulevard									34.1	31.2	27.6	36.0
	Grand Avenue									52.7	49.8	46.2	54.6
	Valley Parkway									38.5	35.6	32.0	40.4
13	1.FI	52.9	50.1	46.5	54.8	0.0	0.0	0.0	0.0				
	Broadway									44.8	41.9	38.3	46.7
	Escondido Boulevard									27.7	24.9	21.2	29.6
	Grand Avenue									52.0	49.1	45.5	53.9
	Valley Parkway									39.5	36.7	33.1	41.4
14	1.FI	57.3	54.5	50.9	59.2	0.0	0.0	0.0	0.0				
	Broadway									49.7	46.9	43.2	51.6
	Escondido Boulevard									43.6	40.7	37.1	45.5
	Grand Avenue									56.2	53.4	49.8	58.1
	Valley Parkway									36.0	33.2	29.5	37.9
15	1.FI	62.6	59.7	56.1	64.5	0.0	0.0	0.0	0.0				
	Broadway									48.4	45.5	41.9	50.3
	Escondido Boulevard									41.4	38.6	34.9	43.3
	Grand Avenue									42.3	39.5	35.8	44.2
	Valley Parkway									62.3	59.5	55.9	64.2
16	1.FI	49.0	46.1	42.5	50.9	0.0	0.0	0.0	0.0				
	Broadway									41.8	38.9	35.3	43.7
	Escondido Boulevard									20.3	17.5	13.9	22.2
	Grand Avenue									46.4	43.6	39.9	48.3
	Valley Parkway									43.0	40.1	36.5	44.9
17	1.FI	50.9	48.0	44.4	52.8	0.0	0.0	0.0	0.0				
	Broadway									44.3	41.5	37.8	46.2
	Escondido Boulevard									20.5	17.6	14.0	22.4
	Grand Avenue									49.2	46.3	42.7	51.1
	Valley Parkway									41.0	38.2	34.5	42.9
18	1.FI	55.0	52.1	48.5	56.9	0.0	0.0	0.0	0.0				
	Broadway									50.7	47.9	44.2	52.6
	Escondido Boulevard									26.6	23.7	20.1	28.5
	Grand Avenue									52.8	49.9	46.3	54.7
	Valley Parkway									38.4	35.5	31.9	40.3
19	1.FI	56.3	53.4	49.8	58.2	0.0	0.0	0.0	0.0				
	Broadway									49.4	46.6	43.0	51.3
	Escondido Boulevard									35.1	32.2	28.6	37.0
	Grand Avenue									55.2	52.3	48.7	57.1
	Valley Parkway									36.2	33.3	29.7	38.1
20	1.FI	58.6	55.7	52.1	60.5	0.0	0.0	0.0	0.0				
	Broadway									54.3	51.4	47.8	56.2
	Escondido Boulevard									37.9	35.0	31.4	39.8
	Grand Avenue									56.5	53.6	50.0	58.4
	Valley Parkway									36.4	33.6	30.0	38.3

Contributions

10483 Kingsbarn Escondido

SoundPLAN Data - Traffic

Receiver	1st Fl	2nd Fl	3rd Fl	4th Fl	5th Fl	Location
1	75.2	74.3	72.9	72.0	71.2	Building Façade
2	74.8	74.2	72.5	71.3	70.4	Building Façade
3	68.4	70.3	69.5	68.0	67.6	Building Façade
4	61.9	64.3	65.4	65.6	65.8	Building Façade
5	59.0	60.2	61.4	62.4	62.9	Building Façade
6	62.2	63.6	65.0	65.9	66.1	Building Façade
7	65.0	67.2	69.2	68.7	68.7	Building Façade
8	69.6	70.9	70.6	70.3	69.9	Building Façade
9		63.7				Seating Area
10		52.7				BBQ Area
11		52.1				BBQ Area
12		55.9				Pool
13		54.8				Pool
14		59.2				Pool
15		64.5				Seating Area
16		50.9				BBQ/Dining Area
17		52.8				Open Space
18		56.9				Lawn and Game Area
19		58.2				Lounge
20		60.5				Seating Area

## ATTACHMENT 5

FHWA RD-77-108 – Off-Site Traffic Noise Increase

FHWA RD-77-108  
Traffic Noise Prediction Model

Data Input Sheet

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Existing

Surface Refelction: CNEL  
Assessment Metric: Hard  
Peak ratio to ADT: 10.00  
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway Name	Traffic Vol.	Speed	Distance	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
			(Mph)	to CL							
1	Valley Parkway	15,522	35	50	95.00	3.00	2.00	77.00	10.00	13.00	
2	Valley Parkway	16,519	35	50	95.00	3.00	2.00	77.00	10.00	13.00	

FHWA RD-77-108  
Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Existing  
Assessment Metric: Hard

Segment	Roadway Name	Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Valley Parkway	66.3	61.0	64.4	69.2	13	42	132	416	1,315	4,159
2	Valley Parkway	66.5	61.2	64.7	69.4	14	44	138	435	1,377	4,355

FHWA RD-77-108  
Traffic Noise Prediction Model

Data Input Sheet

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Near-Term

Surface Refelction: CNEL  
Assessment Metric: Hard  
Peak ratio to ADT: 10.00  
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway Name	Traffic Vol.	Speed	Distance	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
			(Mph)	to CL							
1	Valley Parkway	16,657	35	50	95.00	3.00	2.00	77.00	10.00	13.00	
2	Valley Parkway	17,654	35	50	95.00	3.00	2.00	77.00	10.00	13.00	

FHWA RD-77-108  
Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Near-Term  
Assessment Metric: Hard

Segment	Roadway Name	Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Valley Parkway	66.6	61.3	64.7	69.5	14	45	141	446	1,409	4,456
2	Valley Parkway	66.8	61.5	65.0	69.7	15	47	148	467	1,476	4,666

FHWA RD-77-108  
Traffic Noise Prediction Model

Data Input Sheet

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Near-Term + Project

Surface Refelction: CNEL  
Assessment Metric: Hard  
Peak ratio to ADT: 10.00  
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway Name	Traffic Vol.	Speed	Distance	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
			(Mph)	to CL							
1	Valley Parkway	16,886	35	50	95.00	3.00	2.00	77.00	10.00	13.00	
2	Valley Parkway	17,849	35	50	95.00	3.00	2.00	77.00	10.00	13.00	

FHWA RD-77-108  
Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Kingsbarn Escondido  
Project Number : 10483  
Modeled Condition : Near-Term + Project  
Assessment Metric: Hard

Segment	Roadway Name	Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Valley Parkway	66.6	61.3	64.8	69.5	14	45	141	446	1,409	4,456
2	Valley Parkway	66.9	61.6	65.0	69.8	15	48	151	477	1,510	4,775

## ATTACHMENT 6

SoundPLAN Data – Operational Noise

10483 Kingsbarn Escondido  
SoundPLAN Data - Operation

Source name	Reference	Level	dB(A)	Frequency spectrum [dB(A)]									
				31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz
HVAC Amenity 1	Lw/unit	Day	78.5	-	59.4	68.6	71.9	72.8	72.4	69.2	63.8	58.2	-
HVAC Amenity 1		Night	75.5	-	56.4	65.6	68.9	69.8	69.4	66.2	60.8	55.2	-
HVAC Amenity 2	Lw/unit	Day	78.5	-	59.4	68.6	71.9	72.8	72.4	69.2	63.8	58.2	-
HVAC Amenity 2		Night	75.5	-	56.4	65.6	68.9	69.8	69.4	66.2	60.8	55.2	-
Boiler	Lw/unit	Day	84.9	38.6	51.8	72.9	70.4	78.8	81	78.2	65	68.9	51.4
Boiler		Night	84.9	38.6	51.8	72.9	70.4	78.8	81	78.2	65	68.9	51.4
HVAC 2-1	Lw/unit	Day	72										
HVAC 2-1		Night	69										
HVAC 2-2	Lw/unit	Day	72										
HVAC 2-2		Night	69										
HVAC 2-3	Lw/unit	Day	72										
HVAC 2-3		Night	69										
HVAC 2-4	Lw/unit	Day	72										
HVAC 2-4		Night	69										
HVAC 2-5	Lw/unit	Day	72										
HVAC 2-5		Night	69										
HVAC 2-6	Lw/unit	Day	72										
HVAC 2-6		Night	69										
HVAC 2-7	Lw/unit	Day	72										
HVAC 2-7		Night	69										
HVAC 2-8	Lw/unit	Day	72										
HVAC 2-8		Night	69										
HVAC 2-9	Lw/unit	Day	72										
HVAC 2-9		Night	69										
HVAC 2-10	Lw/unit	Day	72										
HVAC 2-10		Night	69										
HVAC 2-11	Lw/unit	Day	72										
HVAC 2-11		Night	69										
HVAC 2-12	Lw/unit	Day	72										
HVAC 2-12		Night	69										
HVAC 2-13	Lw/unit	Day	72										
HVAC 2-13		Night	69										
HVAC 2-14	Lw/unit	Day	72										
HVAC 2-14		Night	69										
HVAC 2-15	Lw/unit	Day	72										
HVAC 2-15		Night	69										
HVAC 2-16	Lw/unit	Day	72										
HVAC 2-16		Night	69										
HVAC 2-17	Lw/unit	Day	72										
HVAC 2-17		Night	69										
HVAC 2-18	Lw/unit	Day	72										
HVAC 2-18		Night	69										
HVAC 2-19	Lw/unit	Day	72										
HVAC 2-19		Night	69										
HVAC 2-20	Lw/unit	Day	72										
HVAC 2-20		Night	69										
HVAC 2-21	Lw/unit	Day	72										
HVAC 2-21		Night	69										
HVAC 2-22	Lw/unit	Day	72										
HVAC 2-22		Night	69										
HVAC 2-23	Lw/unit	Day	72										
HVAC 2-23		Night	69										
HVAC 2-24	Lw/unit	Day	72										
HVAC 2-24		Night	69										
HVAC 2-25	Lw/unit	Day	72										
HVAC 2-25		Night	69										
HVAC 2-26	Lw/unit	Day	72										
HVAC 2-26		Night	69										
HVAC 2-27	Lw/unit	Day	72										
HVAC 2-27		Night	69										

10483 Kingsbarn Escondido  
SoundPLAN Data - Operation

HVAC 3-1	Lw/unit	Day	72
HVAC 3-1		Night	69
HVAC 3-2	Lw/unit	Day	72
HVAC 3-2		Night	69
HVAC 3-3	Lw/unit	Day	72
HVAC 3-3		Night	69
HVAC 3-4	Lw/unit	Day	72
HVAC 3-4		Night	69
HVAC 3-5	Lw/unit	Day	72
HVAC 3-5		Night	69
HVAC 3-6	Lw/unit	Day	72
HVAC 3-6		Night	69
HVAC 3-7	Lw/unit	Day	72
HVAC 3-7		Night	69
HVAC 3-8	Lw/unit	Day	72
HVAC 3-8		Night	69
HVAC 3-9	Lw/unit	Day	72
HVAC 3-9		Night	69
HVAC 3-10	Lw/unit	Day	72
HVAC 3-10		Night	69
HVAC 3-11	Lw/unit	Day	72
HVAC 3-11		Night	69
HVAC 3-12	Lw/unit	Day	72
HVAC 3-12		Night	69
HVAC 3-13	Lw/unit	Day	72
HVAC 3-13		Night	69
HVAC 3-14	Lw/unit	Day	72
HVAC 3-14		Night	69
HVAC 3-15	Lw/unit	Day	72
HVAC 3-15		Night	69
HVAC 3-16	Lw/unit	Day	72
HVAC 3-16		Night	69
HVAC 3-17	Lw/unit	Day	72
HVAC 3-17		Night	69
HVAC 3-18	Lw/unit	Day	72
HVAC 3-18		Night	69
HVAC 3-19	Lw/unit	Day	72
HVAC 3-19		Night	69
HVAC 3-20	Lw/unit	Day	72
HVAC 3-20		Night	69
HVAC 3-21	Lw/unit	Day	72
HVAC 3-21		Night	69
HVAC 3-22	Lw/unit	Day	72
HVAC 3-22		Night	69
HVAC 3-23	Lw/unit	Day	72
HVAC 3-23		Night	69
HVAC 3-24	Lw/unit	Day	72
HVAC 3-24		Night	69
HVAC 3-25	Lw/unit	Day	72
HVAC 3-25		Night	69
HVAC 3-26	Lw/unit	Day	72
HVAC 3-26		Night	69
HVAC 3-27	Lw/unit	Day	72
HVAC 3-27		Night	69
HVAC 3-28	Lw/unit	Day	72
HVAC 3-28		Night	69
HVAC 3-29	Lw/unit	Day	72
HVAC 3-29		Night	69

10483 Kingsbarn Escondido  
SoundPLAN Data - Operation

HVAC 4-1	Lw/unit	Day	72
HVAC 4-1		Night	69
HVAC 4-2	Lw/unit	Day	72
HVAC 4-2		Night	69
HVAC 4-3	Lw/unit	Day	72
HVAC 4-3		Night	69
HVAC 4-4	Lw/unit	Day	72
HVAC 4-4		Night	69
HVAC 4-5	Lw/unit	Day	72
HVAC 4-5		Night	69
HVAC 4-6	Lw/unit	Day	72
HVAC 4-6		Night	69
HVAC 4-7	Lw/unit	Day	72
HVAC 4-7		Night	69
HVAC 4-8	Lw/unit	Day	72
HVAC 4-8		Night	69
HVAC 4-9	Lw/unit	Day	72
HVAC 4-9		Night	69
HVAC 4-10	Lw/unit	Day	72
HVAC 4-10		Night	69
HVAC 4-11	Lw/unit	Day	72
HVAC 4-11		Night	69
HVAC 4-12	Lw/unit	Day	72
HVAC 4-12		Night	69
HVAC 4-13	Lw/unit	Day	72
HVAC 4-13		Night	69
HVAC 4-14	Lw/unit	Day	72
HVAC 4-14		Night	69
HVAC 4-15	Lw/unit	Day	72
HVAC 4-15		Night	69
HVAC 4-16	Lw/unit	Day	72
HVAC 4-16		Night	69
HVAC 4-17	Lw/unit	Day	72
HVAC 4-17		Night	69
HVAC 4-18	Lw/unit	Day	72
HVAC 4-18		Night	69
HVAC 4-19	Lw/unit	Day	72
HVAC 4-19		Night	69
HVAC 4-20	Lw/unit	Day	72
HVAC 4-20		Night	69
HVAC 4-21	Lw/unit	Day	72
HVAC 4-21		Night	69
HVAC 4-22	Lw/unit	Day	72
HVAC 4-22		Night	69
HVAC 4-23	Lw/unit	Day	72
HVAC 4-23		Night	69
HVAC 4-24	Lw/unit	Day	72
HVAC 4-24		Night	69
HVAC 4-25	Lw/unit	Day	72
HVAC 4-25		Night	69
HVAC 4-26	Lw/unit	Day	72
HVAC 4-26		Night	69
HVAC 4-27	Lw/unit	Day	72
HVAC 4-27		Night	69
HVAC 4-28	Lw/unit	Day	72
HVAC 4-28		Night	69
HVAC 4-29	Lw/unit	Day	72
HVAC 4-29		Night	69

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SoundPLAN Data - Operation

HVAC 5-1	Lw/unit	Day	72
HVAC 5-1		Night	69
HVAC 5-2	Lw/unit	Day	72
HVAC 5-2		Night	69
HVAC 5-3	Lw/unit	Day	72
HVAC 5-3		Night	69
HVAC 5-4	Lw/unit	Day	72
HVAC 5-4		Night	69
HVAC 5-5	Lw/unit	Day	72
HVAC 5-5		Night	69
HVAC 5-6	Lw/unit	Day	72
HVAC 5-6		Night	69
HVAC 5-7	Lw/unit	Day	72
HVAC 5-7		Night	69
HVAC 5-8	Lw/unit	Day	72
HVAC 5-8		Night	69
HVAC 5-9	Lw/unit	Day	72
HVAC 5-9		Night	69
HVAC 5-10	Lw/unit	Day	72
HVAC 5-10		Night	69
HVAC 5-11	Lw/unit	Day	72
HVAC 5-11		Night	69
HVAC 5-12	Lw/unit	Day	72
HVAC 5-12		Night	69
HVAC 5-13	Lw/unit	Day	72
HVAC 5-13		Night	69
HVAC 5-14	Lw/unit	Day	72
HVAC 5-14		Night	69
HVAC 5-15	Lw/unit	Day	72
HVAC 5-15		Night	69
HVAC 5-16	Lw/unit	Day	72
HVAC 5-16		Night	69
HVAC 5-17	Lw/unit	Day	72
HVAC 5-17		Night	69
HVAC 5-18	Lw/unit	Day	72
HVAC 5-18		Night	69
HVAC 5-19	Lw/unit	Day	72
HVAC 5-19		Night	69
HVAC 5-20	Lw/unit	Day	72
HVAC 5-20		Night	69
HVAC 5-21	Lw/unit	Day	72
HVAC 5-21		Night	69
HVAC 5-22	Lw/unit	Day	72
HVAC 5-22		Night	69
HVAC 5-23	Lw/unit	Day	72
HVAC 5-23		Night	69
HVAC 5-24	Lw/unit	Day	72
HVAC 5-24		Night	69
HVAC 5-25	Lw/unit	Day	72
HVAC 5-25		Night	69
HVAC 5-26	Lw/unit	Day	72
HVAC 5-26		Night	69
HVAC 5-27	Lw/unit	Day	72
HVAC 5-27		Night	69
HVAC 5-28	Lw/unit	Day	72
HVAC 5-28		Night	69
HVAC 5-29	Lw/unit	Day	72
HVAC 5-29		Night	69

10483 Kingsbarn Escondido  
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No.	Coordinates		Noise Level	
	X (meters)	Y	Day dB(A)	Night dB(A)
1	492290.17	3664864.54	49.4	46.4
2	492251.28	3664842.05	50.1	47.1
3	492214.76	3664820.62	47.8	44.8
4	492211.59	3664778.81	47.6	44.6
5	492222.70	3664760.82	48.0	45.0
6	492275.09	3664764.26	53.3	52.4
7	492298.11	3664786.49	49.0	46.9
8	492321.92	3664800.25	48.1	45.2
9	492348.64	3664816.39	47.2	44.2
10	492326.68	3664839.67	50.7	47.7

Source name						Noise Level	
						Day dB(A)	Night dB(A)
1	1.FI	49.4	46.4	0.0	0.0		
	Boiler					14.3	14.3
	HVAC 2-1					-1.5	-4.5
	HVAC 2-2					-0.8	-3.8
	HVAC 2-3					-0.1	-3.1
	HVAC 2-4					-0.2	-3.2
	HVAC 2-5					13.6	10.6
	HVAC 2-6					25.6	22.6
	HVAC 2-7					29.5	26.5
	HVAC 2-8					33.1	30.1
	HVAC 2-9					33.5	30.5
	HVAC 2-10					36.6	33.6
	HVAC 2-11					37.9	34.9
	HVAC 2-12					37.5	34.5
	HVAC 2-13					11.2	8.2
	HVAC 2-14					9.3	6.3
	HVAC 2-15					8.8	5.8
	HVAC 2-16					7.0	4.0
	HVAC 2-17					3.4	0.4
	HVAC 2-18					6.8	3.8
	HVAC 2-19					8.6	5.6
	HVAC 2-20					7.7	4.7
	HVAC 2-21					7.5	4.5
	HVAC 2-22					5.7	2.7
	HVAC 2-23					2.9	-0.1
	HVAC 2-24					3.3	0.3
	HVAC 2-25					5.7	2.7
	HVAC 2-26					3.9	0.9
	HVAC 2-27					4.0	1.0
	HVAC 3-1					-1.5	-4.5
	HVAC 3-2					-0.8	-3.8
	HVAC 3-3					0.0	-3.0
	HVAC 3-4					17.4	14.4
	HVAC 3-5					14.6	11.6
	HVAC 3-6					26.8	23.8
	HVAC 3-7					31.4	28.4
	HVAC 3-8					33.9	30.9
	HVAC 3-9					34.2	31.2
	HVAC 3-10					36.3	33.3
	HVAC 3-11					37.6	34.6
	HVAC 3-12					37.3	34.3
	HVAC 3-13					11.5	8.5
	HVAC 3-14					9.0	6.0
	HVAC 3-15					5.7	2.7
	HVAC 3-16					4.7	1.7
	HVAC 3-17					8.1	5.1
	HVAC 3-18					9.4	6.4
	HVAC 3-19					19.3	16.3
	HVAC 3-20					18.3	15.3
	HVAC 3-21					5.8	2.8
	HVAC 3-22					3.3	0.3
	HVAC 3-23					4.0	1.0
	HVAC 3-24					6.2	3.2
	HVAC 3-25					4.1	1.1
	HVAC 3-26					4.3	1.3
	HVAC 3-27					2.7	-0.3
	HVAC 3-28					2.0	-1.0
	HVAC 3-29					3.1	0.1
	HVAC 4-1					-1.4	-4.4
	HVAC 4-2					-0.7	-3.7
	HVAC 4-3					0.1	-2.9
	HVAC 4-4					18.1	15.1
	HVAC 4-5					15.5	12.5
	HVAC 4-6					27.8	24.8
	HVAC 4-7					31.6	28.6
	HVAC 4-8					33.8	30.8
	HVAC 4-9					34.0	31.0
	HVAC 4-10					36.1	33.1
	HVAC 4-11					37.3	34.3
	HVAC 4-12					37.0	34.0
	HVAC 4-13					11.4	8.4
	HVAC 4-14					9.2	6.2
	HVAC 4-15					6.2	3.2
	HVAC 4-16					5.1	2.1
	HVAC 4-17					8.1	5.1
	HVAC 4-18					9.2	6.2
	HVAC 4-19					19.2	16.2
	HVAC 4-20					18.3	15.3
	HVAC 4-21					5.9	2.9

HVAC 4-22						3.4	0.4
HVAC 4-23						4.6	1.6
HVAC 4-24						6.7	3.7
HVAC 4-25						4.3	1.3
HVAC 4-26						4.5	1.5
HVAC 4-27						3.2	0.2
HVAC 4-28						2.1	-0.9
HVAC 4-29						3.1	0.1
HVAC 5-1						-1.4	-4.4
HVAC 5-2						-0.1	-3.1
HVAC 5-3						1.8	-1.2
HVAC 5-4						19.0	16.0
HVAC 5-5						16.5	13.5
HVAC 5-6						27.7	24.7
HVAC 5-7						31.5	28.5
HVAC 5-8						33.6	30.6
HVAC 5-9						33.8	30.8
HVAC 5-10						35.7	32.7
HVAC 5-11						36.8	33.8
HVAC 5-12						36.6	33.6
HVAC 5-13						11.5	8.5
HVAC 5-14						9.1	6.1
HVAC 5-15						6.8	3.8
HVAC 5-16						5.5	2.5
HVAC 5-17						8.0	5.0
HVAC 5-18						9.8	6.8
HVAC 5-19						19.3	16.3
HVAC 5-20						18.3	15.3
HVAC 5-21						7.0	4.0
HVAC 5-22						3.7	0.7
HVAC 5-23						5.3	2.3
HVAC 5-24						7.8	4.8
HVAC 5-25						4.8	1.8
HVAC 5-26						5.0	2.0
HVAC 5-27						5.7	2.7
HVAC 5-28						3.6	0.6
HVAC 5-29						3.3	0.3
HVAC Amenity 1						14.1	11.1
HVAC Amenity 2						14.1	11.1
2	1.FI	50.1	47.1	0.0	0.0		
Boiler						18.2	18.2
HVAC 2-1						1.7	-1.3
HVAC 2-2						5.2	2.2
HVAC 2-3						4.8	1.8
HVAC 2-4						13.4	10.4
HVAC 2-5						27.4	24.4
HVAC 2-6						38.8	35.8
HVAC 2-7						38.1	35.1
HVAC 2-8						37.3	34.3
HVAC 2-9						37.1	34.1
HVAC 2-10						33.4	30.4
HVAC 2-11						21.5	18.5
HVAC 2-12						25.9	22.9
HVAC 2-13						3.3	0.3
HVAC 2-14						2.5	-0.5
HVAC 2-15						2.3	-0.7
HVAC 2-16						1.2	-1.8
HVAC 2-17						1.7	-1.3
HVAC 2-18						7.0	4.0
HVAC 2-19						4.6	1.6
HVAC 2-20						5.8	2.8
HVAC 2-21						5.5	2.5
HVAC 2-22						6.0	3.0
HVAC 2-23						2.4	-0.6
HVAC 2-24						2.7	-0.3
HVAC 2-25						7.4	4.4
HVAC 2-26						8.4	5.4
HVAC 2-27						6.5	3.5
HVAC 3-1						1.8	-1.2
HVAC 3-2						5.3	2.3
HVAC 3-3						5.1	2.1
HVAC 3-4						30.1	27.1
HVAC 3-5						27.2	24.2
HVAC 3-6						37.0	34.0
HVAC 3-7						37.8	34.8
HVAC 3-8						37.0	34.0
HVAC 3-9						36.9	33.9
HVAC 3-10						34.9	31.9
HVAC 3-11						22.4	19.4
HVAC 3-12						27.1	24.1
HVAC 3-13						3.1	0.1
HVAC 3-14						1.9	-1.1

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HVAC 3-15	1.0	-2.0
HVAC 3-16	1.8	-1.2
HVAC 3-17	15.7	12.7
HVAC 3-18	4.6	1.6
HVAC 3-19	9.0	6.0
HVAC 3-20	8.7	5.7
HVAC 3-21	7.4	4.4
HVAC 3-22	4.1	1.1
HVAC 3-23	2.8	-0.2
HVAC 3-24	13.8	10.8
HVAC 3-25	16.6	13.6
HVAC 3-26	16.0	13.0
HVAC 3-27	5.3	2.3
HVAC 3-28	5.4	2.4
HVAC 3-29	4.3	1.3
HVAC 4-1	2.6	-0.4
HVAC 4-2	5.6	2.6
HVAC 4-3	5.5	2.5
HVAC 4-4	30.0	27.0
HVAC 4-5	27.0	24.0
HVAC 4-6	36.6	33.6
HVAC 4-7	37.4	34.4
HVAC 4-8	36.7	33.7
HVAC 4-9	36.5	33.5
HVAC 4-10	34.7	31.7
HVAC 4-11	22.3	19.3
HVAC 4-12	28.0	25.0
HVAC 4-13	3.2	0.2
HVAC 4-14	2.0	-1.0
HVAC 4-15	1.0	-2.0
HVAC 4-16	2.0	-1.0
HVAC 4-17	16.6	13.6
HVAC 4-18	19.2	16.2
HVAC 4-19	8.9	5.9
HVAC 4-20	8.6	5.6
HVAC 4-21	7.7	4.7
HVAC 4-22	4.8	1.8
HVAC 4-23	12.6	9.6
HVAC 4-24	14.2	11.2
HVAC 4-25	16.5	13.5
HVAC 4-26	15.9	12.9
HVAC 4-27	5.6	2.6
HVAC 4-28	5.3	2.3
HVAC 4-29	7.8	4.8
HVAC 5-1	2.9	-0.1
HVAC 5-2	5.6	2.6
HVAC 5-3	5.9	2.9
HVAC 5-4	29.9	26.9
HVAC 5-5	26.9	23.9
HVAC 5-6	36.3	33.3
HVAC 5-7	37.0	34.0
HVAC 5-8	36.3	33.3
HVAC 5-9	36.2	33.2
HVAC 5-10	34.4	31.4
HVAC 5-11	22.4	19.4
HVAC 5-12	27.9	24.9
HVAC 5-13	3.8	0.8
HVAC 5-14	2.5	-0.5
HVAC 5-15	1.1	-1.9
HVAC 5-16	3.3	0.3
HVAC 5-17	16.8	13.8
HVAC 5-18	19.2	16.2
HVAC 5-19	9.2	6.2
HVAC 5-20	8.9	5.9
HVAC 5-21	7.7	4.7
HVAC 5-22	4.9	1.9
HVAC 5-23	12.9	9.9
HVAC 5-24	14.1	11.1
HVAC 5-25	16.2	13.2
HVAC 5-26	15.9	12.9
HVAC 5-27	7.0	4.0
HVAC 5-28	6.6	3.6
HVAC 5-29	8.2	5.2
HVAC Amenity 1	17.1	14.1
HVAC Amenity 2	17.1	14.1
3 1.FI 47.8 44.8 0.0 0.0		
Boiler	13.7	13.7
HVAC 2-1	11.4	8.4
HVAC 2-2	14.5	11.5
HVAC 2-3	15.3	12.3
HVAC 2-4	20.1	17.1
HVAC 2-5	39.5	36.5

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HVAC 2-6	31.7	28.7
HVAC 2-7	29.2	26.2
HVAC 2-8	28.5	25.5
HVAC 2-9	28.2	25.2
HVAC 2-10	22.9	19.9
HVAC 2-11	11.6	8.6
HVAC 2-12	14.9	11.9
HVAC 2-13	-0.9	-3.9
HVAC 2-14	-1.3	-4.3
HVAC 2-15	-1.4	-4.4
HVAC 2-16	-2.0	-5.0
HVAC 2-17	1.4	-1.6
HVAC 2-18	2.0	-1.0
HVAC 2-19	2.7	-0.3
HVAC 2-20	3.6	0.6
HVAC 2-21	3.6	0.6
HVAC 2-22	4.3	1.3
HVAC 2-23	1.8	-1.2
HVAC 2-24	3.8	0.8
HVAC 2-25	6.3	3.3
HVAC 2-26	6.0	3.0
HVAC 2-27	6.1	3.1
HVAC 3-1	12.4	9.4
HVAC 3-2	15.7	12.7
HVAC 3-3	15.6	12.6
HVAC 3-4	36.4	33.4
HVAC 3-5	37.5	34.5
HVAC 3-6	31.9	28.9
HVAC 3-7	30.4	27.4
HVAC 3-8	29.9	26.9
HVAC 3-9	29.6	26.6
HVAC 3-10	24.7	21.7
HVAC 3-11	12.4	9.4
HVAC 3-12	15.6	12.6
HVAC 3-13	-1.0	-4.0
HVAC 3-14	-1.5	-4.5
HVAC 3-15	-1.9	-4.9
HVAC 3-16	1.4	-1.6
HVAC 3-17	4.0	1.0
HVAC 3-18	2.7	-0.3
HVAC 3-19	4.0	1.0
HVAC 3-20	4.2	1.2
HVAC 3-21	4.7	1.7
HVAC 3-22	2.4	-0.6
HVAC 3-23	4.0	1.0
HVAC 3-24	6.3	3.3
HVAC 3-25	12.7	9.7
HVAC 3-26	13.3	10.3
HVAC 3-27	6.8	3.8
HVAC 3-28	3.6	0.6
HVAC 3-29	3.4	0.4
HVAC 4-1	13.2	10.2
HVAC 4-2	15.9	12.9
HVAC 4-3	15.5	12.5
HVAC 4-4	37.4	34.4
HVAC 4-5	37.3	34.3
HVAC 4-6	31.7	28.7
HVAC 4-7	30.2	27.2
HVAC 4-8	30.7	27.7
HVAC 4-9	30.5	27.5
HVAC 4-10	25.5	22.5
HVAC 4-11	13.2	10.2
HVAC 4-12	16.3	13.3
HVAC 4-13	-0.9	-3.9
HVAC 4-14	-1.5	-4.5
HVAC 4-15	-1.9	-4.9
HVAC 4-16	2.1	-0.9
HVAC 4-17	5.2	2.2
HVAC 4-18	3.9	0.9
HVAC 4-19	4.7	1.7
HVAC 4-20	4.9	1.9
HVAC 4-21	5.0	2.0
HVAC 4-22	2.9	-0.1
HVAC 4-23	4.2	1.2
HVAC 4-24	6.9	3.9
HVAC 4-25	13.4	10.4
HVAC 4-26	14.0	11.0
HVAC 4-27	6.7	3.7
HVAC 4-28	3.5	0.5
HVAC 4-29	3.5	0.5
HVAC 5-1	13.4	10.4
HVAC 5-2	15.9	12.9

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HVAC 5-3						15.5	12.5
HVAC 5-4						36.9	33.9
HVAC 5-5						37.0	34.0
HVAC 5-6						31.5	28.5
HVAC 5-7						30.1	27.1
HVAC 5-8						30.6	27.6
HVAC 5-9						30.4	27.4
HVAC 5-10						26.3	23.3
HVAC 5-11						14.3	11.3
HVAC 5-12						17.2	14.2
HVAC 5-13						0.5	-2.5
HVAC 5-14						-0.6	-3.6
HVAC 5-15						-1.4	-4.4
HVAC 5-16						3.6	0.6
HVAC 5-17						6.7	3.7
HVAC 5-18						6.3	3.3
HVAC 5-19						6.5	3.5
HVAC 5-20						6.5	3.5
HVAC 5-21						5.6	2.6
HVAC 5-22						3.6	0.6
HVAC 5-23						4.8	1.8
HVAC 5-24						8.0	5.0
HVAC 5-25						13.8	10.8
HVAC 5-26						14.4	11.4
HVAC 5-27						8.8	5.8
HVAC 5-28						5.1	2.1
HVAC 5-29						3.6	0.6
HVAC Amenity 1						16.4	13.4
HVAC Amenity 2						16.4	13.4
4	1.FI	47.6	44.6	0.0	0.0		
Boiler						15.6	15.6
HVAC 2-1						31.2	28.2
HVAC 2-2						37.5	34.5
HVAC 2-3						37.8	34.8
HVAC 2-4						17.1	14.1
HVAC 2-5						12.8	9.8
HVAC 2-6						8.8	5.8
HVAC 2-7						6.6	3.6
HVAC 2-8						4.2	1.2
HVAC 2-9						4.9	1.9
HVAC 2-10						2.4	-0.6
HVAC 2-11						0.8	-2.2
HVAC 2-12						-0.5	-3.5
HVAC 2-13						-2.4	-5.4
HVAC 2-14						-2.5	-5.5
HVAC 2-15						-2.5	-5.5
HVAC 2-16						-2.6	-5.6
HVAC 2-17						1.3	-1.7
HVAC 2-18						1.4	-1.6
HVAC 2-19						1.4	-1.6
HVAC 2-20						0.9	-2.1
HVAC 2-21						0.9	-2.1
HVAC 2-22						0.5	-2.5
HVAC 2-23						1.9	-1.1
HVAC 2-24						4.8	1.8
HVAC 2-25						5.1	2.1
HVAC 2-26						5.6	2.6
HVAC 2-27						5.6	2.6
HVAC 3-1						31.6	28.6
HVAC 3-2						37.5	34.5
HVAC 3-3						37.5	34.5
HVAC 3-4						35.0	32.0
HVAC 3-5						12.6	9.6
HVAC 3-6						9.9	6.9
HVAC 3-7						7.3	4.3
HVAC 3-8						4.7	1.7
HVAC 3-9						5.3	2.3
HVAC 3-10						2.8	-0.2
HVAC 3-11						1.1	-1.9
HVAC 3-12						-0.2	-3.2
HVAC 3-13						-2.3	-5.3
HVAC 3-14						-2.4	-5.4
HVAC 3-15						-2.1	-5.1
HVAC 3-16						1.5	-1.5
HVAC 3-17						1.6	-1.4
HVAC 3-18						2.3	-0.7
HVAC 3-19						1.1	-1.9
HVAC 3-20						1.0	-2.0
HVAC 3-21						0.6	-2.4
HVAC 3-22						2.0	-1.0
HVAC 3-23						5.0	2.0
HVAC 3-24						5.2	2.2

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HVAC 3-25	5.7	2.7
HVAC 3-26	5.8	2.8
HVAC 3-27	6.7	3.7
HVAC 3-28	6.1	3.1
HVAC 3-29	7.7	4.7
HVAC 4-1	31.4	28.4
HVAC 4-2	37.3	34.3
HVAC 4-3	37.2	34.2
HVAC 4-4	34.6	31.6
HVAC 4-5	12.5	9.5
HVAC 4-6	10.1	7.1
HVAC 4-7	10.6	7.6
HVAC 4-8	5.3	2.3
HVAC 4-9	5.8	2.8
HVAC 4-10	3.2	0.2
HVAC 4-11	1.3	-1.7
HVAC 4-12	0.0	-3.0
HVAC 4-13	-2.3	-5.3
HVAC 4-14	-2.3	-5.3
HVAC 4-15	-2.1	-5.1
HVAC 4-16	1.6	-1.4
HVAC 4-17	1.6	-1.4
HVAC 4-18	2.4	-0.6
HVAC 4-19	1.2	-1.8
HVAC 4-20	1.1	-1.9
HVAC 4-21	0.7	-2.3
HVAC 4-22	2.1	-0.9
HVAC 4-23	6.6	3.6
HVAC 4-24	7.9	4.9
HVAC 4-25	12.8	9.8
HVAC 4-26	13.8	10.8
HVAC 4-27	6.6	3.6
HVAC 4-28	6.0	3.0
HVAC 4-29	7.7	4.7
HVAC 5-1	31.3	28.3
HVAC 5-2	37.0	34.0
HVAC 5-3	36.7	33.7
HVAC 5-4	34.2	31.2
HVAC 5-5	13.2	10.2
HVAC 5-6	10.0	7.0
HVAC 5-7	10.7	7.7
HVAC 5-8	5.8	2.8
HVAC 5-9	6.2	3.2
HVAC 5-10	3.6	0.6
HVAC 5-11	1.7	-1.3
HVAC 5-12	0.3	-2.7
HVAC 5-13	-2.2	-5.2
HVAC 5-14	-2.3	-5.3
HVAC 5-15	-2.0	-5.0
HVAC 5-16	1.6	-1.4
HVAC 5-17	3.2	0.2
HVAC 5-18	10.1	7.1
HVAC 5-19	2.7	-0.3
HVAC 5-20	2.5	-0.5
HVAC 5-21	0.9	-2.1
HVAC 5-22	2.3	-0.7
HVAC 5-23	7.2	4.2
HVAC 5-24	8.5	5.5
HVAC 5-25	13.1	10.1
HVAC 5-26	14.0	11.0
HVAC 5-27	7.6	4.6
HVAC 5-28	7.2	4.2
HVAC 5-29	7.9	4.9
HVAC Amenity 1	19.5	16.5
HVAC Amenity 2	19.5	16.5
5 1.FI 48.0 45.0 0.0 0.0		
Boiler	18.8	18.8
HVAC 2-1	37.6	34.6
HVAC 2-2	38.2	35.2
HVAC 2-3	36.7	33.7
HVAC 2-4	12.0	9.0
HVAC 2-5	8.4	5.4
HVAC 2-6	5.7	2.7
HVAC 2-7	2.9	-0.1
HVAC 2-8	1.2	-1.8
HVAC 2-9	1.1	-1.9
HVAC 2-10	-0.3	-3.3
HVAC 2-11	-1.2	-4.2
HVAC 2-12	-2.6	-5.6
HVAC 2-13	-2.5	-5.5
HVAC 2-14	-2.4	-5.4
HVAC 2-15	-2.4	-5.4

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HVAC 2-16	-1.8	-4.8
HVAC 2-17	3.0	0.0
HVAC 2-18	1.5	-1.5
HVAC 2-19	1.7	-1.3
HVAC 2-20	2.2	-0.8
HVAC 2-21	2.2	-0.8
HVAC 2-22	2.4	-0.6
HVAC 2-23	2.7	-0.3
HVAC 2-24	8.1	5.1
HVAC 2-25	6.2	3.2
HVAC 2-26	6.8	3.8
HVAC 2-27	6.8	3.8
HVAC 3-1	37.3	34.3
HVAC 3-2	37.8	34.8
HVAC 3-3	36.7	33.7
HVAC 3-4	27.2	24.2
HVAC 3-5	8.7	5.7
HVAC 3-6	6.0	3.0
HVAC 3-7	3.4	0.4
HVAC 3-8	1.4	-1.6
HVAC 3-9	1.2	-1.8
HVAC 3-10	-0.2	-3.2
HVAC 3-11	-1.1	-4.1
HVAC 3-12	-2.5	-5.5
HVAC 3-13	-2.3	-5.3
HVAC 3-14	-2.0	-5.0
HVAC 3-15	-0.1	-3.1
HVAC 3-16	3.2	0.2
HVAC 3-17	1.5	-1.5
HVAC 3-18	1.7	-1.3
HVAC 3-19	2.2	-0.8
HVAC 3-20	2.2	-0.8
HVAC 3-21	2.4	-0.6
HVAC 3-22	3.1	0.1
HVAC 3-23	8.5	5.5
HVAC 3-24	6.4	3.4
HVAC 3-25	7.3	4.3
HVAC 3-26	7.3	4.3
HVAC 3-27	6.5	3.5
HVAC 3-28	6.1	3.1
HVAC 3-29	12.2	9.2
HVAC 4-1	37.0	34.0
HVAC 4-2	37.4	34.4
HVAC 4-3	36.4	33.4
HVAC 4-4	27.0	24.0
HVAC 4-5	8.8	5.8
HVAC 4-6	6.2	3.2
HVAC 4-7	3.6	0.6
HVAC 4-8	1.5	-1.5
HVAC 4-9	1.3	-1.7
HVAC 4-10	-0.1	-3.1
HVAC 4-11	-1.0	-4.0
HVAC 4-12	-2.4	-5.4
HVAC 4-13	-2.2	-5.2
HVAC 4-14	-2.0	-5.0
HVAC 4-15	0.1	-2.9
HVAC 4-16	3.4	0.4
HVAC 4-17	1.5	-1.5
HVAC 4-18	1.8	-1.2
HVAC 4-19	2.5	-0.5
HVAC 4-20	2.5	-0.5
HVAC 4-21	2.5	-0.5
HVAC 4-22	3.6	0.6
HVAC 4-23	9.3	6.3
HVAC 4-24	7.1	4.1
HVAC 4-25	7.5	4.5
HVAC 4-26	7.5	4.5
HVAC 4-27	6.4	3.4
HVAC 4-28	5.9	2.9
HVAC 4-29	12.1	9.1
HVAC 5-1	36.6	33.6
HVAC 5-2	37.0	34.0
HVAC 5-3	36.1	33.1
HVAC 5-4	26.9	23.9
HVAC 5-5	8.8	5.8
HVAC 5-6	6.3	3.3
HVAC 5-7	4.1	1.1
HVAC 5-8	1.6	-1.4
HVAC 5-9	1.5	-1.5
HVAC 5-10	0.0	-3.0
HVAC 5-11	-1.0	-4.0
HVAC 5-12	-2.4	-5.4

HVAC 5-13						-2.2	-5.2
HVAC 5-14						-1.9	-4.9
HVAC 5-15						0.4	-2.6
HVAC 5-16						3.8	0.8
HVAC 5-17						1.7	-1.3
HVAC 5-18						2.3	-0.7
HVAC 5-19						2.6	-0.4
HVAC 5-20						2.5	-0.5
HVAC 5-21						2.7	-0.3
HVAC 5-22						4.0	1.0
HVAC 5-23						9.7	6.7
HVAC 5-24						7.2	4.2
HVAC 5-25						7.9	4.9
HVAC 5-26						7.8	4.8
HVAC 5-27						7.5	4.5
HVAC 5-28						7.1	4.1
HVAC 5-29						11.9	8.9
HVAC Amenity 1						20.5	17.5
HVAC Amenity 2						20.5	17.5
6	1.FI	53.3	52.4	0.0	0.0		
Boiler						51.3	51.3
HVAC 2-1						28.0	25.0
HVAC 2-2						10.5	7.5
HVAC 2-3						9.4	6.4
HVAC 2-4						5.2	2.2
HVAC 2-5						6.6	3.6
HVAC 2-6						6.3	3.3
HVAC 2-7						5.8	2.8
HVAC 2-8						3.2	0.2
HVAC 2-9						3.1	0.1
HVAC 2-10						2.1	-0.9
HVAC 2-11						1.2	-1.8
HVAC 2-12						-0.1	-3.1
HVAC 2-13						3.2	0.2
HVAC 2-14						1.8	-1.2
HVAC 2-15						1.9	-1.1
HVAC 2-16						6.3	3.3
HVAC 2-17						29.6	26.6
HVAC 2-18						6.1	3.1
HVAC 2-19						5.2	2.2
HVAC 2-20						6.3	3.3
HVAC 2-21						5.3	2.3
HVAC 2-22						9.2	6.2
HVAC 2-23						23.2	20.2
HVAC 2-24						39.2	36.2
HVAC 2-25						10.0	7.0
HVAC 2-26						24.6	21.6
HVAC 2-27						24.5	21.5
HVAC 3-1						27.7	24.7
HVAC 3-2						10.5	7.5
HVAC 3-3						9.6	6.6
HVAC 3-4						6.0	3.0
HVAC 3-5						6.6	3.6
HVAC 3-6						6.4	3.4
HVAC 3-7						6.2	3.2
HVAC 3-8						3.5	0.5
HVAC 3-9						3.4	0.4
HVAC 3-10						2.1	-0.9
HVAC 3-11						1.3	-1.7
HVAC 3-12						-0.1	-3.1
HVAC 3-13						1.4	-1.6
HVAC 3-14						2.5	-0.5
HVAC 3-15						15.8	12.8
HVAC 3-16						31.0	28.0
HVAC 3-17						6.0	3.0
HVAC 3-18						8.2	5.2
HVAC 3-19						6.7	3.7
HVAC 3-20						5.8	2.8
HVAC 3-21						9.8	6.8
HVAC 3-22						23.6	20.6
HVAC 3-23						38.8	35.8
HVAC 3-24						28.4	25.4
HVAC 3-25						27.1	24.1
HVAC 3-26						26.9	23.9
HVAC 3-27						14.3	11.3
HVAC 3-28						17.5	14.5
HVAC 3-29						39.7	36.7
HVAC 4-1						27.4	24.4
HVAC 4-2						10.3	7.3
HVAC 4-3						9.5	6.5
HVAC 4-4						6.1	3.1
HVAC 4-5						7.2	4.2

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HVAC 4-6						9.9	6.9
HVAC 4-7						22.9	19.9
HVAC 4-8						3.6	0.6
HVAC 4-9						3.5	0.5
HVAC 4-10						2.1	-0.9
HVAC 4-11						1.3	-1.7
HVAC 4-12						0.0	-3.0
HVAC 4-13						1.5	-1.5
HVAC 4-14						2.7	-0.3
HVAC 4-15						16.7	13.7
HVAC 4-16						31.4	28.4
HVAC 4-17						6.0	3.0
HVAC 4-18						8.7	5.7
HVAC 4-19						6.7	3.7
HVAC 4-20						5.8	2.8
HVAC 4-21						10.3	7.3
HVAC 4-22						23.5	20.5
HVAC 4-23						38.3	35.3
HVAC 4-24						28.1	25.1
HVAC 4-25						31.6	28.6
HVAC 4-26						31.4	28.4
HVAC 4-27						14.1	11.1
HVAC 4-28						17.7	14.7
HVAC 4-29						40.5	37.5
HVAC 5-1						27.2	24.2
HVAC 5-2						10.2	7.2
HVAC 5-3						9.6	6.6
HVAC 5-4						6.8	3.8
HVAC 5-5						7.5	4.5
HVAC 5-6						10.7	7.7
HVAC 5-7						22.9	19.9
HVAC 5-8						3.5	0.5
HVAC 5-9						3.4	0.4
HVAC 5-10						2.1	-0.9
HVAC 5-11						1.3	-1.7
HVAC 5-12						0.1	-2.9
HVAC 5-13						1.6	-1.4
HVAC 5-14						3.2	0.2
HVAC 5-15						17.5	14.5
HVAC 5-16						31.3	28.3
HVAC 5-17						7.1	4.1
HVAC 5-18						8.8	5.8
HVAC 5-19						6.8	3.8
HVAC 5-20						5.7	2.7
HVAC 5-21						10.9	7.9
HVAC 5-22						23.6	20.6
HVAC 5-23						37.8	34.8
HVAC 5-24						27.9	24.9
HVAC 5-25						31.4	28.4
HVAC 5-26						31.2	28.2
HVAC 5-27						16.2	13.2
HVAC 5-28						18.6	15.6
HVAC 5-29						39.6	36.6
HVAC Amenity 1						22.5	19.5
HVAC Amenity 2						22.5	19.5
7	1.FI	49.0	46.9	0.0	0.0		
Boiler						42.4	42.4
HVAC 2-1						16.9	13.9
HVAC 2-2						4.8	1.8
HVAC 2-3						3.6	0.6
HVAC 2-4						3.2	0.2
HVAC 2-5						5.0	2.0
HVAC 2-6						6.8	3.8
HVAC 2-7						7.2	4.2
HVAC 2-8						5.7	2.7
HVAC 2-9						5.7	2.7
HVAC 2-10						7.5	4.5
HVAC 2-11						7.1	4.1
HVAC 2-12						3.8	0.8
HVAC 2-13						7.7	4.7
HVAC 2-14						7.8	4.8
HVAC 2-15						8.0	5.0
HVAC 2-16						12.3	9.3
HVAC 2-17						36.5	33.5
HVAC 2-18						15.9	12.9
HVAC 2-19						11.7	8.7
HVAC 2-20						12.0	9.0
HVAC 2-21						19.5	16.5
HVAC 2-22						23.3	20.3
HVAC 2-23						38.6	35.6
HVAC 2-24						33.0	30.0
HVAC 2-25						23.8	20.8

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HVAC 2-26	11.0	8.0
HVAC 2-27	10.8	7.8
HVAC 3-1	18.3	15.3
HVAC 3-2	5.1	2.1
HVAC 3-3	3.7	0.7
HVAC 3-4	3.5	0.5
HVAC 3-5	5.0	2.0
HVAC 3-6	6.8	3.8
HVAC 3-7	7.2	4.2
HVAC 3-8	5.7	2.7
HVAC 3-9	5.7	2.7
HVAC 3-10	7.5	4.5
HVAC 3-11	7.1	4.1
HVAC 3-12	3.9	0.9
HVAC 3-13	7.6	4.6
HVAC 3-14	7.9	4.9
HVAC 3-15	22.2	19.2
HVAC 3-16	38.5	35.5
HVAC 3-17	15.6	12.6
HVAC 3-18	14.9	11.9
HVAC 3-19	13.2	10.2
HVAC 3-20	21.5	18.5
HVAC 3-21	26.5	23.5
HVAC 3-22	37.0	34.0
HVAC 3-23	32.3	29.3
HVAC 3-24	26.3	23.3
HVAC 3-25	11.6	8.6
HVAC 3-26	11.3	8.3
HVAC 3-27	7.9	4.9
HVAC 3-28	8.8	5.8
HVAC 3-29	32.4	29.4
HVAC 4-1	18.5	15.5
HVAC 4-2	5.1	2.1
HVAC 4-3	3.8	0.8
HVAC 4-4	3.5	0.5
HVAC 4-5	5.0	2.0
HVAC 4-6	6.8	3.8
HVAC 4-7	7.5	4.5
HVAC 4-8	5.6	2.6
HVAC 4-9	5.6	2.6
HVAC 4-10	7.4	4.4
HVAC 4-11	7.1	4.1
HVAC 4-12	3.9	0.9
HVAC 4-13	7.6	4.6
HVAC 4-14	7.8	4.8
HVAC 4-15	22.1	19.1
HVAC 4-16	38.1	35.1
HVAC 4-17	15.5	12.5
HVAC 4-18	15.6	12.6
HVAC 4-19	12.4	9.4
HVAC 4-20	23.2	20.2
HVAC 4-21	27.3	24.3
HVAC 4-22	35.6	32.6
HVAC 4-23	31.6	28.6
HVAC 4-24	24.1	21.1
HVAC 4-25	12.0	9.0
HVAC 4-26	11.8	8.8
HVAC 4-27	7.8	4.8
HVAC 4-28	8.6	5.6
HVAC 4-29	34.3	31.3
HVAC 5-1	18.6	15.6
HVAC 5-2	5.5	2.5
HVAC 5-3	3.7	0.7
HVAC 5-4	3.7	0.7
HVAC 5-5	4.9	1.9
HVAC 5-6	7.3	4.3
HVAC 5-7	7.9	4.9
HVAC 5-8	5.4	2.4
HVAC 5-9	6.0	3.0
HVAC 5-10	7.2	4.2
HVAC 5-11	6.9	3.9
HVAC 5-12	3.9	0.9
HVAC 5-13	7.4	4.4
HVAC 5-14	7.7	4.7
HVAC 5-15	22.0	19.0
HVAC 5-16	37.6	34.6
HVAC 5-17	29.2	26.2
HVAC 5-18	19.9	16.9
HVAC 5-19	13.8	10.8
HVAC 5-20	24.7	21.7
HVAC 5-21	30.7	27.7
HVAC 5-22	34.2	31.2

Contributions

HVAC 5-23						30.9	27.9
HVAC 5-24						27.9	24.9
HVAC 5-25						12.0	9.0
HVAC 5-26						11.8	8.8
HVAC 5-27						8.0	5.0
HVAC 5-28						9.8	6.8
HVAC 5-29						34.1	31.1
HVAC Amenity 1						15.8	12.8
HVAC Amenity 2						15.8	12.8
8	1.FI	48.1	45.2	0.0	0.0		
Boiler						33.5	33.5
HVAC 2-1						12.0	9.0
HVAC 2-2						1.2	-1.8
HVAC 2-3						0.5	-2.5
HVAC 2-4						-0.6	-3.6
HVAC 2-5						1.2	-1.8
HVAC 2-6						3.5	0.5
HVAC 2-7						5.7	2.7
HVAC 2-8						6.5	3.5
HVAC 2-9						6.7	3.7
HVAC 2-10						5.5	2.5
HVAC 2-11						5.8	2.8
HVAC 2-12						6.2	3.2
HVAC 2-13						11.4	8.4
HVAC 2-14						12.8	9.8
HVAC 2-15						12.9	9.9
HVAC 2-16						23.2	20.2
HVAC 2-17						39.2	36.2
HVAC 2-18						24.5	21.5
HVAC 2-19						11.4	8.4
HVAC 2-20						10.4	7.4
HVAC 2-21						10.6	7.6
HVAC 2-22						10.9	7.9
HVAC 2-23						36.5	33.5
HVAC 2-24						21.3	18.3
HVAC 2-25						8.5	5.5
HVAC 2-26						7.0	4.0
HVAC 2-27						6.9	3.9
HVAC 3-1						12.9	9.9
HVAC 3-2						1.3	-1.7
HVAC 3-3						0.6	-2.4
HVAC 3-4						-0.2	-3.2
HVAC 3-5						1.3	-1.7
HVAC 3-6						3.5	0.5
HVAC 3-7						5.9	2.9
HVAC 3-8						6.7	3.7
HVAC 3-9						6.8	3.8
HVAC 3-10						5.6	2.6
HVAC 3-11						5.8	2.8
HVAC 3-12						6.6	3.6
HVAC 3-13						12.1	9.1
HVAC 3-14						14.6	11.6
HVAC 3-15						34.2	31.2
HVAC 3-16						37.4	34.4
HVAC 3-17						26.9	23.9
HVAC 3-18						11.2	8.2
HVAC 3-19						18.0	15.0
HVAC 3-20						18.5	15.5
HVAC 3-21						10.7	7.7
HVAC 3-22						38.9	35.9
HVAC 3-23						21.9	18.9
HVAC 3-24						8.7	5.7
HVAC 3-25						7.2	4.2
HVAC 3-26						7.1	4.1
HVAC 3-27						3.8	0.8
HVAC 3-28						4.3	1.3
HVAC 3-29						28.6	25.6
HVAC 4-1						13.6	10.6
HVAC 4-2						1.5	-1.5
HVAC 4-3						0.6	-2.4
HVAC 4-4						-0.2	-3.2
HVAC 4-5						1.3	-1.7
HVAC 4-6						3.5	0.5
HVAC 4-7						5.9	2.9
HVAC 4-8						6.6	3.6
HVAC 4-9						6.7	3.7
HVAC 4-10						5.5	2.5
HVAC 4-11						5.7	2.7
HVAC 4-12						6.8	3.8
HVAC 4-13						11.9	8.9
HVAC 4-14						14.2	11.2
HVAC 4-15						33.2	30.2

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HVAC 4-16						35.9	32.9
HVAC 4-17						31.0	28.0
HVAC 4-18						12.5	9.5
HVAC 4-19						17.8	14.8
HVAC 4-20						18.4	15.4
HVAC 4-21						29.7	26.7
HVAC 4-22						38.4	35.4
HVAC 4-23						21.8	18.8
HVAC 4-24						8.7	5.7
HVAC 4-25						7.1	4.1
HVAC 4-26						7.0	4.0
HVAC 4-27						3.8	0.8
HVAC 4-28						4.3	1.3
HVAC 4-29						29.6	26.6
HVAC 5-1						14.5	11.5
HVAC 5-2						1.6	-1.4
HVAC 5-3						0.7	-2.3
HVAC 5-4						-0.2	-3.2
HVAC 5-5						1.3	-1.7
HVAC 5-6						3.5	0.5
HVAC 5-7						6.1	3.1
HVAC 5-8						6.5	3.5
HVAC 5-9						6.6	3.6
HVAC 5-10						7.9	4.9
HVAC 5-11						6.3	3.3
HVAC 5-12						6.6	3.6
HVAC 5-13						11.7	8.7
HVAC 5-14						14.2	11.2
HVAC 5-15						32.3	29.3
HVAC 5-16						34.4	31.4
HVAC 5-17						30.8	27.8
HVAC 5-18						12.4	9.4
HVAC 5-19						23.3	20.3
HVAC 5-20						25.3	22.3
HVAC 5-21						29.4	26.4
HVAC 5-22						37.8	34.8
HVAC 5-23						21.8	18.8
HVAC 5-24						8.8	5.8
HVAC 5-25						7.0	4.0
HVAC 5-26						6.9	3.9
HVAC 5-27						4.0	1.0
HVAC 5-28						4.6	1.6
HVAC 5-29						29.8	26.8
HVAC Amenity 1						13.3	10.3
HVAC Amenity 2						13.3	10.3
9	1.FI	47.2	44.2	0.0	0.0		
Boiler						22.5	22.5
HVAC 2-1						8.5	5.5
HVAC 2-2						-1.6	-4.6
HVAC 2-3						-2.1	-5.1
HVAC 2-4						-2.9	-5.9
HVAC 2-5						-1.2	-4.2
HVAC 2-6						-0.4	-3.4
HVAC 2-7						3.2	0.2
HVAC 2-8						1.9	-1.1
HVAC 2-9						2.0	-1.0
HVAC 2-10						5.2	2.2
HVAC 2-11						4.5	1.5
HVAC 2-12						21.9	18.9
HVAC 2-13						30.3	27.3
HVAC 2-14						34.3	31.3
HVAC 2-15						34.8	31.8
HVAC 2-16						39.8	36.8
HVAC 2-17						22.3	19.3
HVAC 2-18						9.6	6.6
HVAC 2-19						7.1	4.1
HVAC 2-20						7.7	4.7
HVAC 2-21						7.3	4.3
HVAC 2-22						6.8	3.8
HVAC 2-23						28.4	25.4
HVAC 2-24						14.0	11.0
HVAC 2-25						4.1	1.1
HVAC 2-26						3.5	0.5
HVAC 2-27						3.4	0.4
HVAC 3-1						9.1	6.1
HVAC 3-2						-1.5	-4.5
HVAC 3-3						-2.0	-5.0
HVAC 3-4						-2.5	-5.5
HVAC 3-5						-1.2	-4.2
HVAC 3-6						-0.4	-3.4
HVAC 3-7						3.2	0.2
HVAC 3-8						2.0	-1.0

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HVAC 3-9	2.2	-0.8		
HVAC 3-10	5.6	2.6		
HVAC 3-11	5.0	2.0		
HVAC 3-12	23.3	20.3		
HVAC 3-13	30.4	27.4		
HVAC 3-14	35.5	32.5		
HVAC 3-15	34.1	31.1		
HVAC 3-16	22.3	19.3		
HVAC 3-17	9.7	6.7		
HVAC 3-18	7.7	4.7		
HVAC 3-19	9.4	6.4		
HVAC 3-20	9.6	6.6		
HVAC 3-21	7.0	4.0		
HVAC 3-22	31.6	28.6		
HVAC 3-23	14.9	11.9		
HVAC 3-24	4.5	1.5		
HVAC 3-25	3.6	0.6		
HVAC 3-26	3.5	0.5		
HVAC 3-27	0.9	-2.1		
HVAC 3-28	1.2	-1.8		
HVAC 3-29	24.0	21.0		
HVAC 4-1	9.6	6.6		
HVAC 4-2	-1.5	-4.5		
HVAC 4-3	-2.0	-5.0		
HVAC 4-4	-2.4	-5.4		
HVAC 4-5	-1.1	-4.1		
HVAC 4-6	-0.3	-3.3		
HVAC 4-7	3.3	0.3		
HVAC 4-8	2.1	-0.9		
HVAC 4-9	2.2	-0.8		
HVAC 4-10	5.8	2.8		
HVAC 4-11	5.1	2.1		
HVAC 4-12	23.2	20.2		
HVAC 4-13	30.4	27.4		
HVAC 4-14	35.1	32.1		
HVAC 4-15	38.4	35.4		
HVAC 4-16	22.1	19.1		
HVAC 4-17	9.6	6.6		
HVAC 4-18	7.6	4.6		
HVAC 4-19	9.7	6.7		
HVAC 4-20	9.9	6.9		
HVAC 4-21	6.9	3.9		
HVAC 4-22	31.8	28.8		
HVAC 4-23	15.7	12.7		
HVAC 4-24	5.2	2.2		
HVAC 4-25	3.7	0.7		
HVAC 4-26	3.7	0.7		
HVAC 4-27	0.9	-2.1		
HVAC 4-28	1.1	-1.9		
HVAC 4-29	24.6	21.6		
HVAC 5-1	10.3	7.3		
HVAC 5-2	-1.4	-4.4		
HVAC 5-3	-2.0	-5.0		
HVAC 5-4	-2.4	-5.4		
HVAC 5-5	-1.1	-4.1		
HVAC 5-6	-0.3	-3.3		
HVAC 5-7	3.3	0.3		
HVAC 5-8	2.2	-0.8		
HVAC 5-9	2.4	-0.6		
HVAC 5-10	5.7	2.7		
HVAC 5-11	5.0	2.0		
HVAC 5-12	23.3	20.3		
HVAC 5-13	30.3	27.3		
HVAC 5-14	34.6	31.6		
HVAC 5-15	37.8	34.8		
HVAC 5-16	22.1	19.1		
HVAC 5-17	9.5	6.5		
HVAC 5-18	7.5	4.5		
HVAC 5-19	9.6	6.6		
HVAC 5-20	9.8	6.8		
HVAC 5-21	7.0	4.0		
HVAC 5-22	31.6	28.6		
HVAC 5-23	16.6	13.6		
HVAC 5-24	6.0	3.0		
HVAC 5-25	3.8	0.8		
HVAC 5-26	3.7	0.7		
HVAC 5-27	0.9	-2.1		
HVAC 5-28	1.5	-1.5		
HVAC 5-29	25.2	22.2		
HVAC Amenity 1	10.2	7.2		
HVAC Amenity 2	10.2	7.2		
10 1.FI	50.7	47.7	0.0	0.0

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Boiler	13.5	13.5
HVAC 2-1	0.9	-2.1
HVAC 2-2	1.0	-2.0
HVAC 2-3	-1.2	-4.2
HVAC 2-4	-1.7	-4.7
HVAC 2-5	2.8	-0.2
HVAC 2-6	1.8	-1.2
HVAC 2-7	3.1	0.1
HVAC 2-8	5.3	2.3
HVAC 2-9	5.6	2.6
HVAC 2-10	9.7	6.7
HVAC 2-11	12.6	9.6
HVAC 2-12	33.2	30.2
HVAC 2-13	41.8	38.8
HVAC 2-14	40.1	37.1
HVAC 2-15	39.5	36.5
HVAC 2-16	34.1	31.1
HVAC 2-17	9.5	6.5
HVAC 2-18	11.5	8.5
HVAC 2-19	12.4	9.4
HVAC 2-20	10.1	7.1
HVAC 2-21	10.1	7.1
HVAC 2-22	9.2	6.2
HVAC 2-23	8.9	5.9
HVAC 2-24	5.8	2.8
HVAC 2-25	6.0	3.0
HVAC 2-26	6.3	3.3
HVAC 2-27	6.4	3.4
HVAC 3-1	0.9	-2.1
HVAC 3-2	1.0	-2.0
HVAC 3-3	-1.2	-4.2
HVAC 3-4	-0.9	-3.9
HVAC 3-5	2.8	-0.2
HVAC 3-6	2.0	-1.0
HVAC 3-7	3.3	0.3
HVAC 3-8	5.7	2.7
HVAC 3-9	5.9	2.9
HVAC 3-10	9.7	6.7
HVAC 3-11	12.6	9.6
HVAC 3-12	32.6	29.6
HVAC 3-13	42.9	39.9
HVAC 3-14	40.2	37.2
HVAC 3-15	22.3	19.3
HVAC 3-16	9.6	6.6
HVAC 3-17	11.4	8.4
HVAC 3-18	12.2	9.2
HVAC 3-19	10.1	7.1
HVAC 3-20	10.1	7.1
HVAC 3-21	9.2	6.2
HVAC 3-22	9.0	6.0
HVAC 3-23	5.9	2.9
HVAC 3-24	6.1	3.1
HVAC 3-25	6.4	3.4
HVAC 3-26	6.4	3.4
HVAC 3-27	1.9	-1.1
HVAC 3-28	3.5	0.5
HVAC 3-29	4.6	1.6
HVAC 4-1	0.9	-2.1
HVAC 4-2	1.0	-2.0
HVAC 4-3	-1.2	-4.2
HVAC 4-4	-0.8	-3.8
HVAC 4-5	2.9	-0.1
HVAC 4-6	2.1	-0.9
HVAC 4-7	3.5	0.5
HVAC 4-8	5.7	2.7
HVAC 4-9	5.9	2.9
HVAC 4-10	9.7	6.7
HVAC 4-11	12.4	9.4
HVAC 4-12	32.0	29.0
HVAC 4-13	41.8	38.8
HVAC 4-14	39.6	36.6
HVAC 4-15	22.0	19.0
HVAC 4-16	9.6	6.6
HVAC 4-17	11.2	8.2
HVAC 4-18	11.9	8.9
HVAC 4-19	10.0	7.0
HVAC 4-20	10.0	7.0
HVAC 4-21	9.1	6.1
HVAC 4-22	8.9	5.9
HVAC 4-23	5.9	2.9
HVAC 4-24	6.1	3.1
HVAC 4-25	6.4	3.4

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HVAC 4-26	6.4	3.4
HVAC 4-27	1.9	-1.1
HVAC 4-28	3.5	0.5
HVAC 4-29	4.6	1.6
HVAC 5-1	1.0	-2.0
HVAC 5-2	1.0	-2.0
HVAC 5-3	-1.1	-4.1
HVAC 5-4	-0.7	-3.7
HVAC 5-5	2.9	-0.1
HVAC 5-6	2.3	-0.7
HVAC 5-7	3.6	0.6
HVAC 5-8	5.6	2.6
HVAC 5-9	5.9	2.9
HVAC 5-10	9.5	6.5
HVAC 5-11	12.1	9.1
HVAC 5-12	31.4	28.4
HVAC 5-13	40.6	37.6
HVAC 5-14	38.9	35.9
HVAC 5-15	21.9	18.9
HVAC 5-16	9.4	6.4
HVAC 5-17	10.9	7.9
HVAC 5-18	12.3	9.3
HVAC 5-19	9.8	6.8
HVAC 5-20	9.8	6.8
HVAC 5-21	8.9	5.9
HVAC 5-22	8.8	5.8
HVAC 5-23	5.9	2.9
HVAC 5-24	6.1	3.1
HVAC 5-25	6.4	3.4
HVAC 5-26	6.4	3.4
HVAC 5-27	1.9	-1.1
HVAC 5-28	3.5	0.5
HVAC 5-29	4.6	1.6
HVAC Amenity 1	9.0	6.0
HVAC Amenity 2	9.0	6.0