Exhibit D

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Environmental Noise Analysis

Highway 101 Sala Cellular Facility

Salinas (Monterey County), California

BAC Job # 2017-095

Prepared For:

Complete Wireless Consulting

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Introduction

The Highway 101 Sala Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the construction of a monopole tower, and the installation of outdoor equipment cabinets inside a fenced area located at 603 El Camino Real North in Salinas (Monterey County), California. The outdoor equipment cabinets have been identified as the primary noise sources associated with the project. Please see Figure 1 for the project site vicinity. The studied site design is dated April 20, 2017.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

Monterey County General Plan Safety Element

The Monterey County General Plan identifies noise sensitive land uses within the county as all single- and multi-family residential uses, schools, and long-term care medical facilities, such as hospitals and rest homes. The Safety Element identifies goals and policies to protect the residents of Monterey County from the harmful effects of exposure to excessive noise and attempt to protect areas within the county where the present noise environment is considered acceptable. The land use compatibility guidelines contained within the General Plan identify acceptable noise levels for residential uses, provided below in Table 1. These levels are a guide to acceptable/unacceptable noise levels for the nearest residences that could be affected by this project.

Table 1
Exterior Noise Level Standards for Residential Uses
Monterey County General Plan

Category	Noise Level, L_{dn} (dBA)
Normally Acceptable	<60
Conditionally Acceptable	60-70
Normally Unacceptable	70-75
Clearly Unacceptable	>75

Source: Monterey County General Plan

Legend

- # — Nearest Noise-Sensitive Receivers
- Proposed Cellular Equipment Lease Area
- Parcel Boundaries

N

0 125 250 Feet

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Figure 1
Proposed Cellular Equipment Lease Area & Site Vicinity
Highway 101 Sala Cellular Facility
Salinas (Monterey County), California

Monterey County Code

Chapter 10.60 of the Monterey County Code (Noise Control) provides noise level standards applicable to the proposed project. Specifically, Section 10.60.030 requires that no machinery exceed 85 dBA when measured from 50 feet away. In addition, Section 10.60.040 provides exterior nighttime (10 p.m. to 7 a.m.) noise level standards that are applied at the property line of the receiving noise-sensitive land use. The exterior nighttime noise level standards are summarized below in Table 2.

Table 2
Monterey County Code – Section 10.60.040
Exterior Noise Level Standards (Nighttime Only)

Descriptor	Noise Level (dBA)
Hourly L_{eq}	45
Maximum, L_{max}	65

Source: Monterey County Code, Section 10.60.040, Regulation of nighttime noise

Noise Standards Applied to this Project

Noise would be generated by this project by the ongoing operation of the cellular equipment cabinets' cooling systems. These systems utilize fans to circulate cooling air through the electric circuitry. During warmer periods, the cooling requirements will be greater and the fans will run continuously. During cooler periods, however, the heat transfer requirements are diminished and the fans will run intermittently as needed. Because the fan operation is a normal aspect of the project, and because the fans could run continuously during warm nighttime hours, the noise standards applied to the equipment cabinets are as follows:

- 60 dB L_{dn} at property lines of noise-sensitive land uses (Table 1)
- Not exceed 85 dB at 50 feet (Section 10.60.030 of the County Code)
- 45 dB Hourly L_{eq} at property lines of noise-sensitive land uses (Table 2)

Project Noise Generation

The project proposes the installation of three equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: two Charles Industries 48V Power Plants and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided in Table 3. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 3
Reference Noise Level Data of Proposed Equipment Cabinets

Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Charles Industries 48V Power Plant	2	60	5
McLean T-20	1	66	5

Notes: Manufacturer specification sheets provided as Appendix C.

Predicted Facility Noise Levels at Nearest Noise-Sensitive Receptor Property Line

The project parcel is zoned Light Commercial (LC). The surrounding parcels are zoned Farmlands - 40 Acre (F-40) and Light Commercial (LC). Farmland/agricultural and commercial land uses are not typically considered noise-sensitive, but rather noise-generating. However, the nearby commercially zoned parcel APN: 113-081-002 contains an existing noise-sensitive receptor (residence), which would be considered noise-sensitive. As a result, the County's noise level standards were conservatively applied at the property line of this residence.

Assessment Relative to Monterey County General Plan:

As indicated in Figure 1, the project equipment lease area maintains a separation of approximately 400 feet from the nearest noise-sensitive receptors property line, identified as receiver 1. Assuming standard spherical spreading loss (-6 dB per doubling of distance), project-equipment noise exposure at the nearest noise-sensitive receptors property line was calculated and the results of those calculations are presented in Table 4.

In order to calculate project-related noise generation relative to the Monterey County L_{dn} noise criteria, the number of hours the equipment is in operation must be known. For the purposes of this analysis, the cooling fans of the equipment cabinets were conservatively assumed to be operating continuously for 24 hours.

Table 4
Summary of Project-Related Noise Exposure at Nearest Noise-Sensitive Receptor Property Line
Highway 101 Sala Verizon Wireless Telecommunications Facility Project

Nearest Noise Sensitive Receiver[1]	Distance from Cellular Equipment Lease Area (feet)[2]	Predicted Noise Levels, L_{dn} (dBA)[3]
1	400	36

Notes:
1. Nearest noise-sensitive receiver is shown on Figure 1.
2. Distance measured from project equipment lease area to property line of nearest noise-sensitive receptor.
3. Equipment cabinet L_{dn} was calculated by conservatively assuming 24 continuous hours of operation.

As indicated in Table 4, the predicted outdoor equipment cabinet noise level of 36 dB L_{dn} at the nearest noise-sensitive property line would satisfy the County's 60 dB L_{dn} noise level standard

by a wide margin. As a result, no additional consideration of noise mitigation measures would be warranted for the project relative to the General Plan noise level criteria (Table 1).

Assessment Relative to Monterey County Code:

As stated previously, the proposed equipment lease area maintains a separation of approximately 400 feet from the property line of the nearest noise-sensitive receptor. Assuming standard spherical spreading loss (-6 dB per doubling of distance), nighttime noise exposure of the outdoor equipment cabinets was calculated to be 30 dB L_{eq} at the nearest noise-sensitive receptors property line. The predicted outdoor equipment cabinet noise level of 30 dB L_{eq} would satisfy the Monterey County Code 45 dB L_{eq} noise level criteria (Table 2).

The Monterey County Code prohibits the operation of any piece of machinery exceeding 85 dB measured at a distance of 50 feet. The combined noise exposure of the equipment cabinets was calculated to be 68 dB at a reference distance of 5 feet, which equates to 48 dB at 50 feet, assuming standard spherical loss. As a result, the proposed project equipment would not exceed the noise Monterey County Code limit of 85 dB at 50 feet (Section 10.60.030).

Conclusions

Based on the equipment noise level data and analyses presented above, project-related equipment noise exposure is expected to satisfy the applicable Monterey County noise exposure limits at the nearest noise-sensitive property line. As a result, no additional noise mitigation measures would be warranted for this project.

This concludes our environmental noise assessment for the proposed Highway 101 Sala Cellular Facility in Salinas (Monterey County), California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions or requests for additional information.

Appendix A

Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

Ldn Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

Leq Equivalent or energy-averaged sound level.

Lmax The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

Sabin The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.

SEL A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.

Threshold of Hearing The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.

Threshold of Pain Approximately 120 dB above the threshold of hearing.

Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources