November 25, 2024

Chris DeVoist
Technology Associates EC
9725 3rd Avenue NE, Suite 410
Seattle, WA 98115

Re: Acoustical Report – T-Mobile SE01458B West Bakerview – Schlosser - Snopud
Site: 4822 103rd Place SW, Mukilteo, WA 98275

Dear Chris,

This report presents a noise survey performed in the immediate vicinity of the proposed T-Mobile telecommunications facility at 4822 103rd Place in Mukilteo, Washington. This noise survey extends from the proposed equipment to the nearest properties. The purpose of this report is to document the existing conditions and the impacts of the acoustical changes due to the proposed equipment. This report contains data on the existing and predicted noise environments, impact criteria and an evaluation of the predicted sound levels as they relate to the criteria.

Code Requirements

The site is located within the City of Mukilteo zoning jurisdiction on a property with an RD 7.2 zoning. The receiving properties are all zoned RD 7.2 and MR. The RD 7.2 properties are all in residential use, and the MR property is in use as a school. WAC 173-60-030 identifies residences as Class A EDNA and schools as Class B EDNA.

The proposed new equipment includes equipment within a shelter served by air conditioning units. The air conditioning units are expected to run 24 hours a day.

Mukilteo Municipal Code Chapter 8.18.010 adopts WAC 173-60 by reference. WAC 173-60-040 limits noise from a Class A EDNA receiver as follows:

Class A EDNA Receiver: Noise is limited to 55 dBA during daytime hours. During nighttime, defined as the hours between 10 p.m. and 7 a.m., maximum sound levels are reduced by 10 dBA for receiving properties within Class A EDNA's. Since the equipment is expected to operate 24 hours a day, they must meet the 45 dBA nighttime limit.

Class B EDNA Receiver: Noise is limited to 57 dBA 24 hours a day.

Ambient Conditions

Existing ambient noise levels were measured on site with a Svantek 971 sound level meter on November 20, 2024. Measurements were conducted as close to the proposed location as possible and the property lines in accordance with the State of Washington code for Maximum Environmental Noise Levels WAC 173-60-020. The average ambient noise level was 45 dBA.

Predicted Equipment Sound Levels

24-Hour Operation Equipment

The following table presents a summary of the equipment and their associated noise levels:

Table 1: Equipment Noise Levels

Equipment	dBA (each)	Quantity	Combined dBA @ 5 ft
Mitsubishi PUY-A36NKA7 Outdoor Condenser	52 dBA @ 3.3 ft	1	48
Total dBA (All sources combined)			**48**

Methods established by AHRI Standard 275-2010 and ASHRAE were used in predicting equipment noise levels to the receiving properties. Application factors such as location, height, and reflective surfaces are accounted for in the calculations.

The equipment will be located on the south side of the proposed equipment shelter surrounded by a wood fence. The nearest Class B EDNA receiving property is approximately 63 feet south of the equipment, and the nearest Class A EDNA receiving properties are approximately 76 feet west and 8 feet east of the equipment. The following table presents the predicted sound level at the nearest receiving property:

Table 2: Predicted Noise Levels: Proposed Equipment

Line	Application Factor	Class B EDNA S	Class A EDNA W	Class A EDNA E
1	Sound Pressure Level at 5 ft (dBA), Lp1	48	48	48
2	Noise Amplification – Equipment Near Reflective Surface	+3	+3	+3
3	Noise Reduction – Wood Fence	-3	-3	-3
4	Distance Factor (DF) Inverse-Square Law (Free Field): DF = 20*log (d1/d2)	-22 (63 ft)	-24 (76 ft)	-4 (8 ft)
5	New Equipment Sound Pressure Level at Receiver, Lpr (Add lines 1 through 4)	**26**	**24**	**44**

As shown in Table 2, the predicted sound level from the proposed equipment is 26 dBA at the nearest Class B EDNA receiving property to the south, which meets the 57 dBA code limit.

The predicted sound level from the proposed equipment is 24 dBA at the nearest Class A EDNA receiving property to the west and 44 dBA at the nearest Class A EDNA receiving property to the east. These noise levels meet the 45 dBA nighttime code limit.

Noise levels at other receiving properties, which are further away, will be lower and within code limits.

Please contact our office if you have questions or need further information.

Sincerely,
SSA Acoustics, LLP

Joshua Wah-Blumberg
Technician

Reviewed by:

Steven Hedback
Acoustical Consultant