



January 14, 2021

Monica Striker
Capital Design Services
2101 4th Avenue E, Suite 202
Olympia, WA 98506

Re: Acoustical Report – AT&T BR0306 Bainbridge Lynwood Center
Site: Tax Lot 042402-1-504-2005, Bainbridge Island, WA 98110

Dear Monica,

This report presents a noise survey performed in the immediate vicinity of the proposed AT&T telecommunications facility at Tax Lot 042402-1-504-2005 in Bainbridge Island, 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.

Ambient Conditions

Existing ambient noise levels were measured on site with a Svantek 971 sound level meter on April 15, 2020. 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 49 dBA, due primarily to local traffic.

Code Requirements

The site is located within the City of Bainbridge Island Zoning jurisdiction on property with an R-5 zoning designation, in a residential district. All of the receiving properties are residential.

The proposed new equipment consists of equipment support cabinets which are expected to run 24 hours a day.

Bainbridge Island Municipal Code Chapter 6.16.020 adopts WAC 173-60-020, 173-60-040 and 173-60-090.

Under WAC 173-60-040, noise from equipment on a Class A EDNA (Residential) property is limited 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 support cabinets are expected to operate 24 hours a day, they must meet the 45 dBA nighttime limit.

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
Delta ESOFO20-HCV02 WUC	65 dBA @ 5 ft	1	65
Emerson NetXtend Flex Battery Enclosure	65 dBA @ 5 ft	1	65
Total dBA (All cabinets combined)			68

Methods established by ARI 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 at grade to the southeast of an existing equipment shelter and is surrounded by a chain-link fence. The land is located on a hill that sloping up to the east. The nearest receiving properties are approximately 65 feet east and 60 feet west of the equipment. The following table presents the predicted sound levels at the nearest receiving properties:

Table 2: Predicted Noise Levels: Proposed Equipment Cabinets

Line	Application Factor	E	W
1	Sound Pressure Level at 5 ft (dBA), Lp1	68	68
2	Noise Reduction – Shelter / Hill	-3	-3
3	Distance Factor (DF) Inverse-Square Law (Free Field): $DF = 20 \cdot \log(d1/d2)$	-22 (65 ft)	-21 (60 ft)
4	New Equipment Sound Pressure Level at Receiver, Lpr (Add lines 1 and 2)	43	44

As shown in Table 2, the sound pressure level from the proposed equipment is predicted to be 43 dBA at the nearest receiving property to the east and 44 dBA at the nearest receiving property to the west. These noise levels meet the 45 dBA nighttime code limit.

Please contact us if you have any questions or require further information.

Sincerely,
SSA Acoustics, LLP



Steven Hedback
Acoustical Consultant

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