

EXHIBIT 1  
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PURPOSE OF APPLICATION

Cleveland State University  
Cleveland, OH

WCSB is presently licensed to operate on FM Channel 207A with a nondirectional effective radiated power of 0.63 kilowatts at 62 meters above average terrain. The attached application proposes to modify the WCSB license to reflect the replacement of the station's antenna.<sup>1</sup> The WCSB license authorizes the use of a Jampro JLLP-2D circularly polarized full wave spaced nondirectional antenna. This antenna was replaced with a Jampro JLLP-3D (RFR) three bay, half wave spaced, circularly polarized nondirectional antenna which was installed in place of the presently licensed antenna. This replacement antenna was installed at the exact same height and location as the previously authorized antenna on the roof of Rhodes Tower on the Cleveland State University campus. Since the center of radiation for the replacement antenna is identical to that for the licensed antenna and since this substitution involves the replacement of a nondirectional antenna, this antenna replacement can be accomplished in the context of a license modification application, pursuant to Section 73.1690(c)(1) of the FCC Rules. Figure 1.0 presents a vertical plan view depicting this modified antenna system. The Antenna Structure Registration Number for this rooftop tower is 1023143.

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<sup>1</sup>Pursuant to special temporary authority granted by the FCC, WCSB has been operating since November of 2000 utilizing a temporary antenna located on a temporary adjacent rooftop tower. These temporary operating facilities were originally implemented to permit an extensive overhaul of the rooftop cooling towers on this building and have been employed since that time to alleviate the university's concerns over exposing maintenance personnel working around these cooling towers to excessive levels of nonionizing radiation. The installation of this new antenna for WCSB and the filing of the attached license modification application represents the final step in the process of returning WCSB to its licensed mode of operation and eliminates the need for this special temporary authority.

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There are no AM broadcast facilities located within 3.2 kilometers of the WCSB transmitter site. Thus, it is not necessary to demonstrate compliance with Section 73.1692 of the FCC Rules as a part of this application.

The modified WCSB operating facilities fully comply with the current FCC Standard with regard to human exposure to nonionizing radiation. The antenna center of radiation for the modified WCSB facilities is located 16.1 meters above the roof of Rhodes Tower and 7.0 meters above the highest non-tower appurtenances<sup>2</sup> located on this roof. There are no other RF generating facilities located in the immediate vicinity of this site which must be considered in conjunction with WCSB to establish compliance with this exposure standard. The power density levels at two meters above the highest of these rooftop appurtenances were calculated for the modified WCSB facilities using the FCC's "FM Model" computer program. The results of these calculations are shown in Figure 1.1. As shown by this figure, the maximum power density predicted for the modified WCSB facilities at two meters above these rooftop appurtenances is  $83.8 \mu\text{W}/\text{cm}^2$ , which will occur at a horizontal distance of 14 meters from this rooftop tower. Since the permitted power density for uncontrolled exposure in the FM band is  $200 \mu\text{W}/\text{cm}^2$ , this amounts to only 41.9 % of the permitted level. Thus, the operation of the modified WCSB facilities will not result in power density levels on the roof of this building or atop any of these rooftop appurtenances that will be in excess of the permitted level for uncontrolled exposure.

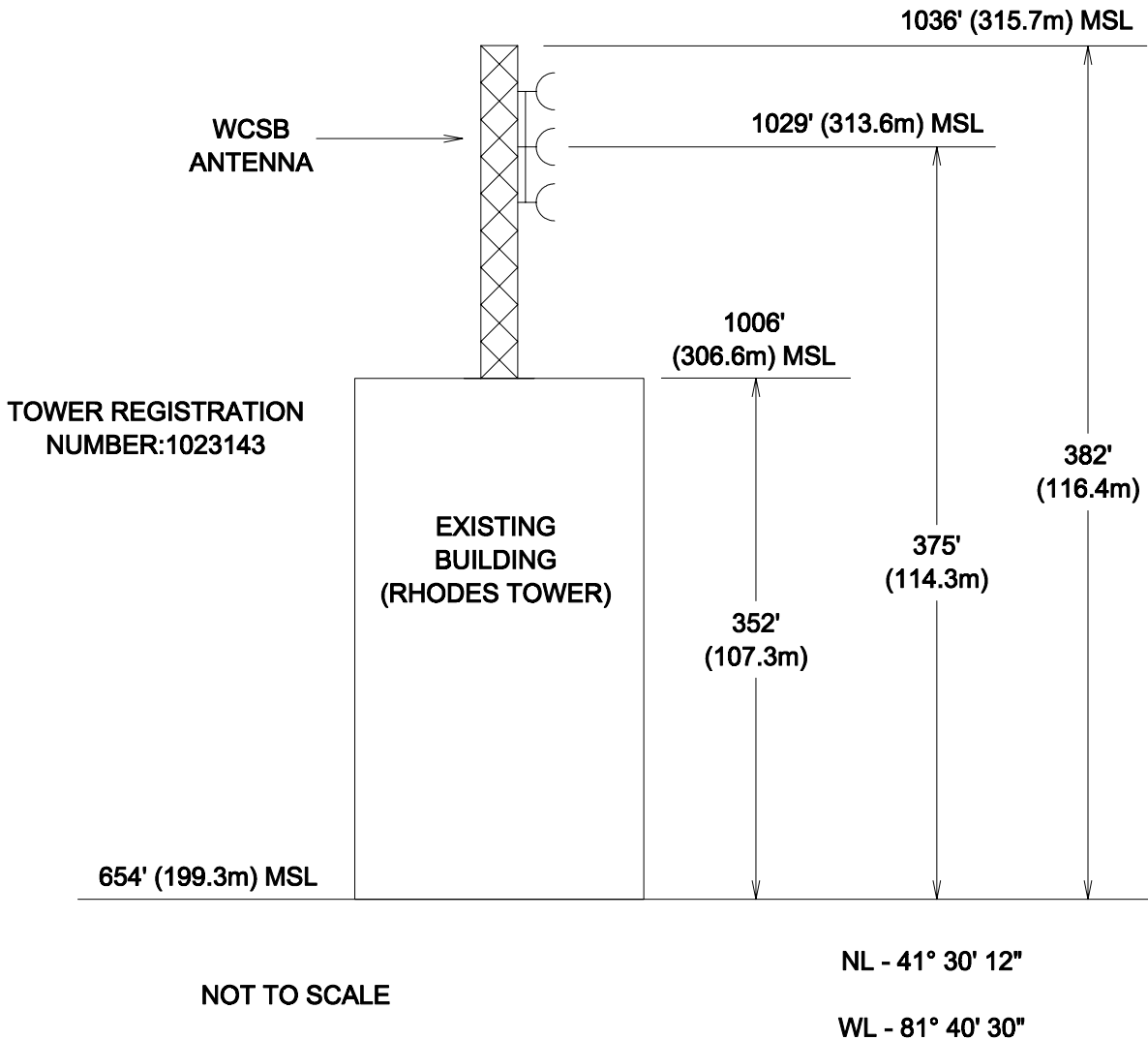
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<sup>2</sup>The highest of these appurtenances are an ornamental parapet which extends around the perimeter of the roof and rooftop cooling towers. Both of these appurtenances extend 30 feet (9.1 meters) above the building roof.

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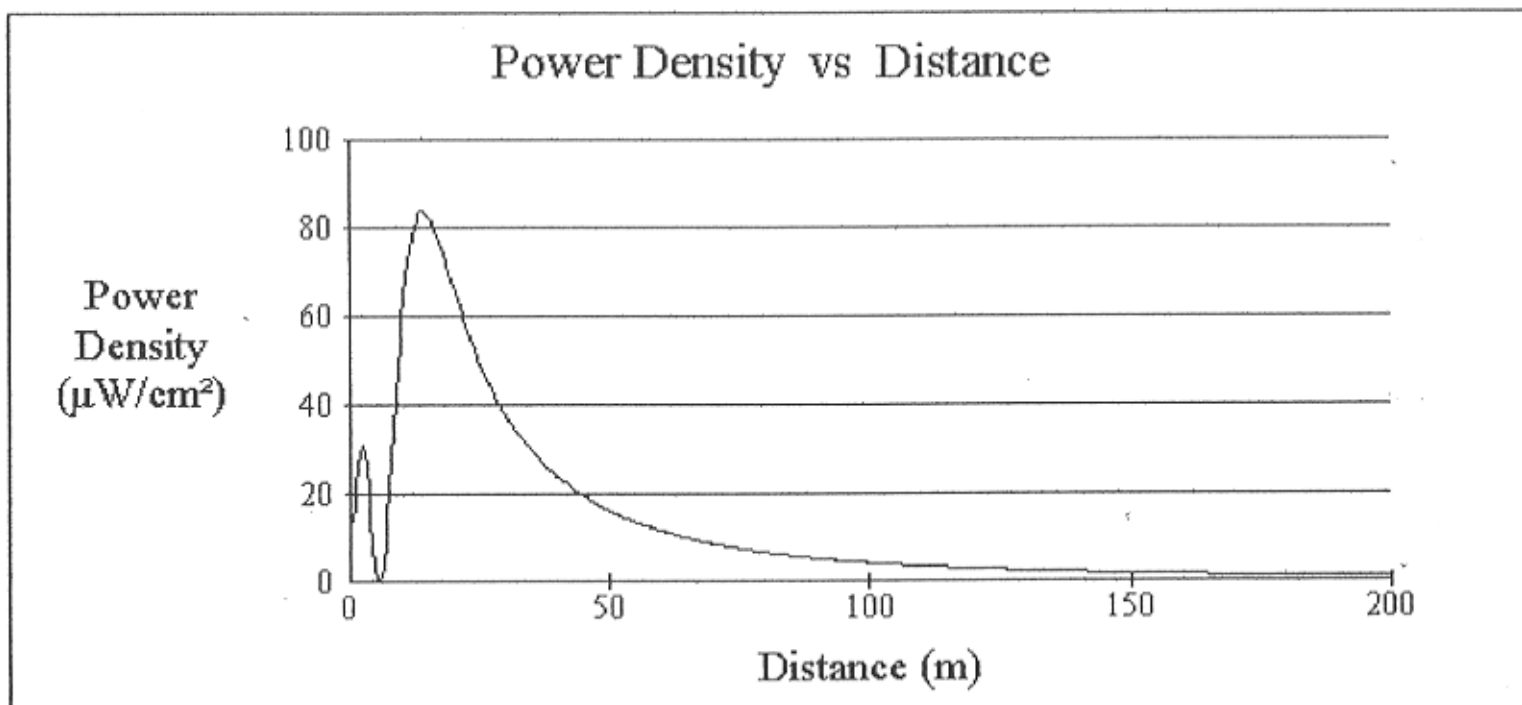
WCSB will also continue to take appropriate steps to insure that workers that must be on this tower will not be exposed to levels of nonionizing radiation that are in excess of the permitted level for controlled exposure. These steps will include the cessation of operation or a reduction in power, as appropriate, when work becomes necessary in the areas on this tower where the power density levels will be in excess of the permitted level for controlled exposure.

NOTE: BUILDING HEIGHT  
SHOWN IN THIS FIGURE  
INCLUDES THE HEIGHT  
OF AN ORNIMENTAL  
PARAPET THAT SURROUNDS  
THE BUILDING ROOF.



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FIG. 1.0  
VERTICAL PLAN VIEW  
CLEVELAND STATE UNIVERSITY  
CLEVELAND, OH



Office of Engineering and Technology

Distance (m):	200	Antenna Type:	Jampro "Double V" (EPA)
Horizontal ERP (W):	630	Number of Elements:	3
Vertical ERP (W):	630	Element Spacing:	.5
Antenna Height (m):	7		

FIG. 1.1

WCSB POWER DENSITY CALCULATIONS

Cleveland State University  
Cleveland, OH